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**Evaluating the Effectiveness of
ESP Course Content in the Algerian University in Terms of its
Relevance to the Students' Needs
The Case of Ouargla University**

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Declaration of Originality

I hereby declare that the submission of this dissertation is entirely the result of my investigation and that due reference or acknowledgement is made, whenever necessary, to the work of other authors.

Madjid Doufene



I DEDICATE THIS STUDY TO:

THE FOND MEMORY OF

MY WIFE

MAY ALLAH SHOWER HIS ILLIMITABLE MERCY ON HEAVEN

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ABSTRACT

The study investigates the difficulties facing the English for Specific Purposes (ESP) course in the faculty of Petroleum, Renewable Energies and Earth and Universe Science, at the University of Ouargla, in Algeria. As a part of their responsibility for improvement of quality education, the University of Ouargla is working to better prepare students for employment so that they may function well in workplace. It is the aim of this study to conduct an evaluation of the course using a needs analysis of the students' wants and necessities. To achieve this, a demographic approach was undertaken focusing on the dual reality of two groups of stakeholders at this institution, students and instructors. Largely, the findings reveal the failure of ESP courses delivered to petroleum, renewable energies and earth science undergraduate students in the faculty. In other words, the study proves that there is a negative opinion among students about their ESP courses. Data also indicates that students' need to develop the four skills altogether ranking reading, speaking and writing of prior importance. This confirms that within the university as a whole, at the faculty level and in classrooms, the situation is negative with many difficulties, and consequently, it inhibits the relevance of the ESP course as is currently taught in the faculty. It suggests some appropriate measures and practices to be implemented in ESP instruction at the university as a whole and faculty in particular in order to achieve ESP course quality and cope with students' target needs. It also proposes a set of recommendations about conducting a comprehensive needs analysis as an evidence-based practice for all the stages of the course development process, specifying clear goals and understandable objectives, selecting and organising contents based on students' needs.

Keywords: *English for specific purposes (ESP), needs analysis, ESP Course, students' needs, teachers' views*

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LIST OF ABBREVIATIONS

AFEQ	Appui Formation Emploi Qualification
BET	Business English Teaching
EAP	English for Academic Purposes
EBE	English for Business and Economics
EBP	English for Business 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
ESS	English for Social Studies
EST	English FOR Science and Technology
EVP	English for Vocational Purposes
FHREEUS	Faculty of Hydrocarbons, Renewable Energies and Earth and Universe Science
GAP	General Academic Purpose
GE	General English
ICT	Information Communication Technology

i.e.	That is.
IT	Information Technology
MESRS	Ministère de l'Enseignement Supérieur et de la Recherche Scientifique
NA	Needs Analysis
NIA	Needs Identification and Analysis
Q	Question
PhD	Philosophy Doctor
PSA	Present Situation Analysis
TEFL	Teaching English as a Foreign Language
TESL	Teaching English as a Second Language
TSA	Target Situation Analysis
UK	United Kingdom
USA	United States of America

Overview

In recent decades, a large quantity of needs analysis studies of specific learning situations in various contexts has addressed and investigated the learners' perceived and real-life English language needs (e.g., Johnson, Ferris, 1998; L. Flowerdew, 2013; Spence & Liu, 2013; Symon and Cassell (2012)). Latest ESP research is principally has been engaged in higher education level learners' needs in specific learning situations. To methodically delineate and elucidate "the specific subject content and sets of skills, texts, linguistic forms, and communicative practices" (Hyland, 2006, p. 380) that Algerian tertiary education English language students must achieve is of paramount importance for this study as it "informs the course and materials design underlining its pragmatic engagement with occupational realities" (Hyland, 2006, p. 380). Needs analysis is the most particular feature of ESP, it is commonly considered as a main characteristic of ESP which is formerly emphasised rather entirely on target of course requirement, and it is often to take into account of students' first needs, comprising learning needs.

Within ESP situations, course evaluation focuses on the effectiveness of learning whether the objectives defined through needs analysis (if there is any) have been met, whether students' learning has been increased, or if materials have been employed to the most sufficient and their best. It also demonstrates whether the methodology adopted by the ESP practitioner has matched learners' needs, and thus has facilitated their learning and make easier their achievements (Dudley-Evans and St John 1998; Hutchinson and Waters 1987). Hence, the study is an attempt to investigate the needs of ESP students for appropriate English communication, with reference to the learners of petroleum,

renewable energies and earth and universe science disciplines. In other words, it aims to reveal what the students need in order to function effectively through English either as a way to learn petroleum engineering and other related subjects and cope with academic concepts and facts of the subject specialization or as a medium of communication in occupational settings.

The research topic has been preferred out of inherent interest and curiosity to gain an accurate understanding and description of students' needs for ESP instruction.

Moreover, the motivation behind conducting this study derives from the researcher's previous professional activities in the language teaching area. This study addresses the issue of ESP course effectiveness by applying a thorough needs and situation analysis in effort to find out the gaps because of a little research that has been done on Algerian ELT and more particularly on the development of ESP course.

The Scope and Delimitation of the Study

The scope and delimitations section provides the limits of the study. It is generally acknowledged that learning/teaching English for Specific Purposes (ESP learning/teaching diverges from the process of learning/teaching General English, as it involves special vocabulary based on the subject area that students study and specialise. With the expansion of the student-centred approach and the uninterrupted growth of international contacts in different domains, much interest has been shown to the development of ESP courses that provide students with professional communication skills. There are studies that indicate how the use of special content courses could be more challenging to students of ESP, e.g. Dörnyei, Z. (2020), Kubanyiova, M. (2014) and Gardner, R. C. (2010). Therefore, the particularity of the learning situation and the

implementation of special content courses could be viewed as students' needs within an ESP learning situation.

However, this view is not always reflecting reality. ESP instructors have been attempting to use different teaching methods and materials in their class by delivering a course that can best meet students' interests, lacks and wants, but such attempts and methods do not meet students' interests and ends up in low students' poor performance. Hence, this study is devoted to investigating the process of teaching and learning English language within the University of Ouargla and particularly in FHREEUS. This is the reason why this issue truly poses a problem, which students encounter in using technical literature in ESP/EST course and even after graduation feeling limited and disabled in the workplace.

Despite the importance of ESP course for students in Algeria, particularly FHREEUS learners, there have been very rare studies that generally and specifically examine the English language needs of the subject areas. Thus, the major concern in the present research is to emphasize the need of an effective ESP course for FHREEUS students at the University of Ouargla. Yet, the implementation of such a course requires many efforts, and needs the contribution of the students, the instructors and other educational decision makers.

It has been noted that all the departments in FHREEUS at the University of Ouargla offer no relevant English courses to undergraduate students, who are in vital need to learn the language for either academic needs or future occupational purposes. Even if one or two departments do, they are no more than teaching English terminology courses, which do not really consider the students' expectations in communication and social interaction within the petroleum, renewable energies and earth and universe

science fields. Thus, the researcher tries, throughout this study, to call for offering English courses to students in FHREEUS based on appropriate methods, clarity and understandable objectives, effective materials and aids, and suitable assessment tasks. The researcher also attempts to draw the attention of educational decision makers in the importance of developing an in-service training for teachers in order to support the professional learning of ESP instructors who are already employed and working in classroom, and ensuring the constant and objective evaluation of the situation of ESP/EST teaching for improvement.

According to Hutchinson and Waters (1987), there are different purpose oriented ESP courses such as English for Science and Technology, English for Business and Economics, English for Technicians, English for Psychology and many more. They added, “ESP is an approach to language teaching in which all decisions as to content and method are based on the learner’s reasons for learning”. Thus, as an approach to English Language Teaching (ELT), the ESP course needs to be intermittently evaluated in order to determine if the set goals have been fulfilled or not. Another important reason for assessing students’ learning needs is that it enables teachers to explore any improvements in learning outcomes that need to be addressed.

This study is based on theories of ESP/EST teaching. The limitations related to the respondents and tools of the study are determined and discussed. The sample of students and teachers were chosen as per purposive non-random sampling to cover all FHREEUS departments. The instruments of the study were limited to students’ questionnaire survey and teachers’ semi- structured interview .The results of the study are therefore based on the ground situation prevailing in FHREEUS at Ouargla University and thus cannot be generalized in all its aspects.

The study depends on information collected through a questionnaire administered to ninety-eight (98) students and a semi-structured interview conducted with four (4) teachers who taught the course and are currently teaching it in the same faculty. As the study is confined to one single case, it cannot not give a broader conclusion to the usefulness of the ESP/EST course in Algeria, but it would supply some answers to the demands of the curriculum. Therefore, the findings from this study cannot be asserted as indisputable and extensional. It is expected that future research will include more participants in a wider scope of study.

To terminate, this study was undertaken in order to help develop the course of the English for science and technology (EST) as required by scientific research, petroleum, renewable energy, earth and universe science engineering. The researcher also tried to describe thoroughly the benefits and deficiencies of the course. Having assessed all the course components, the course can be either maintained, removed or modified and enhanced.

Statement of the Problem

The current situation of ESP teaching for the FHREEUS students does not augur any satisfactory outcome. There seems to be a discrepancy between the learners' needs and teachers' classroom practices. This gap is the result of the irrelevance of a course designed according to students' needs and desires, and the inadequacy of teaching materials as well as outdated adopted methods.

While it is recognised to be vitally important in the current university instruction, ESP course has been considered secondary or supplementary in kasdi Merbah Ouargla

University that actually neglect its status not convincing students to seriously follow ESP instruction. This is demonstrated in all course aspects as the entire inappropriate of any typical syllabus and specific course contents. As far as Ouargla University is concerned, the situation is unsuitable. From a relatively short experience in teaching English for technical purposes at the University of Continuing Education (UFC), Ouargla Centre, instructors including the researcher were endowed with no particular educational instructions and course syllabus that outlines all the essential information about ESP course. In other words, teachers have been granted the total freedom to teach what they believe is appropriate for students without being oriented and supported by any well-defined curriculum or programme.

In our particular case, the current situation of ESP teaching at the University is incomplete and pessimistic. There seems to be a mismatch between the learners' needs and teachers' classroom practices. This disparity gap is the result of the non-availability of a well-designed course, lack of appropriate materials, practical methods and the inexistence of instructor training. Therefore, the absence of designed syllabuses besides the non-clarity of teaching goals and objectives for this course put learners as well as instructors in an awkward situation that affects students' achievement and their proficiency level.

A wide range of academic studies is recounted in ESP literature (Kennedy & Bolitho 1984; Hutchison & Waters 1987; Robinson 1991; West 1994; Jordan 1997; Dudley-Evans, T., & St John, M. 1998; Harding 2007; Basturkmen 2010). These studies seek to establish the discipline's guiding principles and practices and synchronise the ESP instruction with its objectives and methods. Furthermore, the above-mentioned research all emphasize the concept of needs analysis (NA) in the context of ESP classroom practice, wherein students' needs are determined in accordance with their

preferences and linguistic demands. To ensure successful implementation of ESP course, decisions about course objectives, course content design, choice of materials, teaching supports and suitable class assessments related to ESP instruction must be carefully reconsidered.

Students also showed lack interest to learn English and see little value in the current ESP course or its content in the FHREEUS at Ouargla University has encouraged the researcher to conduct this study and identify the needs of petroleum, renewable energies, and earth and universe science undergraduates. This is because research on English language needs of Petroleum, renewable energies and earth and universe science students in Algeria is scarce. Therefore, the evaluation of the ongoing ESP course in the FHREEUS can be justified by two main reasons. First, the English language has been approved universally as contact language (Crystal, 2003). In the aforementioned disciplines, students need appropriate English language skills to meet the requirements of their academic and professional fields. Although Algerian learners normally spend six to seven years studying English as a compulsory subject in intermediate and secondary school, they often lack sufficient proficiency in using English in real situations. They do not know how to start a formal e-mail request, and they absolutely neglect that such requests are usually short and to the point as noticed by (Swales, 1990).

Aim of the Study

This study examines a particular ESP programme for Algerian tertiary undergraduate students in an academic setting and reveals the specific features of both students' needs and instructors' views for English for Specific Purposes (ESP). Essentially, the aim of the study is to evaluate a current ESP course from students' needs

and instructors' perspectives; the evaluation of the course has conducted and sought whether the present ESP course should be continued, remodelled or improved.

The study is to evaluate the process of teaching and learning ESP courses at FHREEUS at the University of Ouargla that will help teachers find a solution to some of the problems they may encounter in designing a substitute ESP course.

Research Questions

To proceed with the aims of the current study, there are four main research questions raised to follow the directions of this investigation.

1. What are the present and target situation needs as perceived by the undergraduate students of the Faculty of Petroleum, Renewable Energies and Geological Engineering at the University of Ouargla as well as their teachers
2. To what extent is the current ESP course in terms of objectives, content, teaching materials, methodology, evaluation system, aids and time allocation in the FHREEUS at the University of Ouargla appropriate and effective?
3. What English language skills do the students and instructors perceive as necessary for an ESP course for FHREEUS undergraduate students?
4. Which aspects of the present English language course (goals, content, materials used, technology involved, aids and teacher's training etc.) in FHREEUS need to be improved in order to meet the undergraduate students' learning and target needs?

Methodology Implemented in the Study

The present study is, in its many aspects and for practical purposes, a case study of Ouargla University in Algeria. A case study enables detailed and integral analysis of a single whole that has set limits, for example an institution or similar (Yin, 2014). Specifically, the Faculty of Hydrocarbons, Renewable Energies, and Earth and Universe Sciences (FHREEUS) was chosen for this study. While dealing with the issue of the ESP course effectiveness, perceptions and attitudes of two academic groups, namely undergraduate students and their English instructors were investigated. To study their needs, perceptions and perspectives about the current ESP course offered in their faculty, this research employed a descriptive survey sequential mixed method approach combining quantitative and qualitative phases. With more focus on quantitative over qualitative analysis in the sequential mixed approach, data were gathered consecutively in two stages, proceeding with the questionnaire quantitative data collection and then amassing the qualitative data from instructors' semi-structured interview and using it to elucidate and support the quantitative findings (Cresswell, J.W., & Plano Clark, 2011). In the quantitative questionnaire phase, 93 participants answered and submitted the questionnaire, including undergraduate students of the four departments of FHREEUS (n = 93). In the second step of the study, qualitative interview, conducted as face-to-face semi-structured interviews, were done with four (4) instructors, to which a descriptive analysis was utilised to interpret the interview data. In the final analysis, the data were combined, compared and discussed together in order to answer the research questions previously established in the study.

Needs Analysis

Needs Analysis (henceforth NA) performs a vital role in designing and completing any course or programme within the field of English for Specific Purposes (ESP) (Munby, 1978; West, 1994). However, NA should not only be applied as a pre-phase process to investigate students' needs and to plan language courses (Lowe, 2009; Basturkmen, 2010), but it should be a continuing process conducted in assessing and refining language programmes (Basturkmen, 2010).

In this study, the NA approach has been applied to determine the academic and professional language needs of FHREEUS students. The data for this study were gathered by administering a questionnaire and a semi-structured interview. The methods of data analysis diverge, as there are two types of research tools implemented in the study. The analysis of the questionnaire was reported in terms of frequency counts and percentages and depicted using tables. The data collected from the two instruments were analysed, summarized and then interpreted.

Significance of the Study

It is obvious that the effectiveness of ESP course is an important factor in determining student achievement. Therefore, to keep track of international developments, the ESP programme should be regularly assessed and evaluated. ESP course changes and improvements play a critical role in the teaching and learning process. Since its emergence in the late 1960s, ESP has continuously been developed; expanding its scope, adapting its approach, rearranging its objectives and orientations and improving its assessment tools. Hence, an ESP curriculum that advances and constantly improves can easily manage the current needs, interests, and perceptions of

the students, and facilitate the achievement of the students. This study is important for a number of reasons. The necessity of such a study at the faculty of Hydrocarbons, Renewable Energies and Earth Science at the University of Ouargla come to be evident by cause of researcher's observations and informal assessment carried out by the instructors themselves about the deficiencies related to the provision of ESP courses in the faculty. Moreover, this study is the first detailed analysis project planned and implemented for enhancing the ESP course since the foundation of the faculty. Therefore, it is compelling to find out how the existing course is evolving, what its present situation is and how learners and instructors assess its relevance to the students' needs.

Many recent ESP researchers have supported Long's (2005) argues that a course not constructed on the basis of needs analysis does not include precise or specific goals that are necessary to give the focus needed for effective results. He affirmed that ESP courses prepared without the implementation of a needs analysis often contain too much or too little instruction to fulfil the learners' demands.

A specific aim for this study is that it bridges some of the gap in empirical research on needs assessment and situation analysis so that operational objectives of an ESP course can be established (Basturkmen, 2006). However, needs analysis in research before designing language courses is, in practice, almost inexistent in Algerian universities.

The current study will incorporate the analysis of correlated factors involving the content of the course, its objectives, skills, methodologies, teaching materials and aids, time allocation, and assessment tools used in ESP courses, from the students' desires and needs. The study purposefully seeks to achieve the following specific objectives:

1. It attempts to analyse the current ESP course taught to petroleum , renewable energies and Earth science students at FHREEUS and subsequently conduct a needs assessment survey so that the students' English language requirements for the academic and professional contexts are adequately addressed.
2. This study will supply language instructors with more appropriate guidelines and specific procedures, which they can apply in their classroom to enhance their students' achievement in English in the engineering curriculum.
3. The results of the study can be shared with instructors and decision-makers (administrative staff) in order to increase FHREESUS students' performance in English language in their required academic and professional fields.

Structure of the Study

The study contains five chapters. The first chapter explores the existing theories and concepts of English for Specific Purposes (ESP) that the researcher used to gather relevant data and yield relevant empirical findings. It also provides various definitions of ESP, factors of its emergence, its types and sub-types with a focus on English for science and technology (EST). Additionally, ESP course design models, course specificity, and the development of learning materials are discussed and explained in this chapter. Furthermore, I established the relationship of ESP to language theories and approaches to course design process in a historical perspective, exploring recent research developments in the area. This chapter, therefore, emphasizes how theoretical and empirical movements have influenced the evolution of the area of ESP and how these have shaped instructors' views on the most essential issues of ESP.

The second chapter includes the description of needs analysis conceptions and models and attitudes of students towards ESP instruction, with particular reference to the ESP assessment and considers how they can be evaluated in this study.

The third chapter describes the methodology, which is followed in the study. It explains how the approaches, whether quantitatively or qualitatively are implemented, then the survey's instruments, the questionnaire and the semi- interview, are debated as well as the techniques of analysis. In few words, this chapter helps elucidate the methodological aspects and procedures used to explore the answers to the research questions.

The fourth chapter recounts the results of the questionnaire and the semi-structured interview. The quantitative analysis of the questionnaire has two dimensions. The first dimension is mere percentages of response recurrences. The first section is correlation analysis, in order to look for the association between some responses. The second section presents the qualitative analysis of interview and its findings. And it ends with discussion comparing the results of the study with previous works of famous researchers.

Finally, the fifth chapter comprises general conclusion and recommendations. The researcher attempts to answer the research questions of the study, and give an account of the findings and their significant addition to the area of ESP/EST. The study includes a chapter for general conclusion and some recommendations specifically for the examined situation, additional proposals for further investigations.

Chapter One

A Review of the Literature: ESP Research, Practices and Related Concepts

Introduction

This chapter focuses on the description of the theoretical aspects of ESP (English for Specific Purposes) pertaining to the fundamental aims of the study. It critically processes the literature related to the areas of this research and is split into two main sections. Additionally, this chapter discusses and contrasts definitions, categories and approaches of ESP to emphasise the aspects of the field relevant to the present investigation. The review of the theoretical background incorporates positions on what role specificity plays in the teaching and research practices of the field. Moreover, the chapter highlights the interdependence of ESP research and practice and explains what philosophical and empirical rationale influenced its development. The purpose of the chapter is to argue that ESP is primarily concerned with its learners' highly specific needs, which are informed by the instruction of particular discourse practices, and communicative needs.

Definitions of ESP

Internationalisation of education, extension of science and technology and corresponding learners' needs, have brought about the development of ESP and, consequently, different definitions are revealed. The term ESP has been defined by several scholars (e.g., Basturkmen, 2006, 2010; Belcher, 2009; Dudley-Evans & St John, 1998; Hutchinson and Waters, 1987; Hyland, 2007; Robinson, 1991; Strevens, 1988; Swales, 1990, 1993). These definitions involve a number of continual and varying characteristics. These include delineating the discourse to be taught, specifying the

features of the discourse community, describing the target language facts and topics to be handled by the discourse community, determining students' needs with their instructional material, measuring the gap between students' needs and what they need to do in order to achieve the learning aims. According to Belcher (2009), the most frequently included components of ESP definitions have been the notions of needs and specificity. García Mayo (2000) noted that it is not an easy task to define ESP because it can be applied to any situation and depends on what students are facing. Munby views ESP courses as “those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learner.” (1978).

As for a broader definition of ESP, Hutchinson and Waters (1987: 19) explain, “ESP is an approach to language teaching in which all decisions as to content and method are based on the learner’s reason for learning”. They consider ESP as an “approach” rather than a “product”– meaning that ESP does not necessarily involve any particular kind of language, teaching material or methodology. The fundamental function of ESP is: “Why does this learner need to learn a foreign language” (Milavic, 2006 cf. Hutchinson and Waters, 1987). The rationale of learning English, therefore, becomes the cornerstone of ESP.

Furthermore, ESP is described by Robinson (1980) as the teaching of English to students with particular objectives. In her opinion, objectives could be academic, professional, scientific, and more. According to Mackay and Mountford (1978, p. 4), teaching English for "clearly utilitarian purposes" constitutes special language instruction. These definitions acknowledge ESP's wider scope of use and do not restrict it to any specific discipline, field, or occupation.

More elaborate definitions of ESP have been proposed by Stevens (1988) and Dudley-Evans and St Johns (1998). By identifying its absolute and variable characteristics. Stevens (1988) makes a distinction between four absolute and two variable characteristics. He finds that the absolute features of ESP courses are:

1. Developed to meet the needs of the learner,
2. Relevant to specific disciplines and professions,
3. Established on the language, which is pertinent in syntax, text, discourse, semantics and analysis of the discourse,
4. At variance with General English.

Regarding the changing features, ESP courses may be, but are not necessarily...:

- a. limited to the learning skills to be acquired (for instance, reading only,
- b. delivered according to any predestined methodology (Gatehouse, 2001 cf. Stevens, 1998, pp. 1-2).

This definition tries to differentiate ESP from General English. Hence, the focus is on Specific English that appertains to some particular field of study, profession or activity. This definition makes it mandatory that ESP courses should concentrate on the language, i.e. syntax, lexis, discourse, semantics etc., which fits in with some specific domain.

As for Dudley-Evans and St John (1998), they have suggested an extended definition of ESP in terms of “absolute” and “variable” characteristics. They attempt to apply a series of features, some absolute and others variable, to arrange the major elements of ESP. In regard to Absolute Characteristics, they are enumerated as follows: ESP is defined to respond to specific needs of the learner; ESP makes use of the essential methodology and activities of the field it serves. ESP is based on the language (grammar, lexis, and register), skills, discourse and genres appropriate to these activities. In the matter of variable attributes: ESP may refer to or be planned for specific fields; ESP may use, in specific teaching situations, a distinct methodology from that of general English;

ESP is probably to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could be, however, for learners at secondary school level; ESP course is generally constructed for Intermediate or advanced students; Most ESP courses assume some basic knowledge of the language system, but it can be used with beginners (Dudley-Evans and St John (1998: 4- 5)). This definition recognises that ESP is applied to encounter learner's specific needs but it has removed the characteristic mentioned in Strevens' definition that "ESP is in contrast with General English" and adds more variable characteristics. They emphasise the fact that ESP is not systematically related to a specific discipline. This modified definition has extended the scope of ESP by allowing it to encompass the specific needs of the students who are not necessarily associated to any specific profession or field of study. Contrary to the idea of restricting ESP courses for adult learners (Widdowson, 1983; Robinson, 1991; McKay and Tom, 1999), Dudley-Evans and St John state that ESP courses are "likely to be designed for adult learners 'but may be planned' for learners at secondary school level". Similarly, they indicate that ESP courses may be prepared for the beginners along with intermediate or advanced students.

According to Basturkmen (2006: 18), ESP is a language that is learned to facilitate access or increase linguistic efficiency in academic, professional, or work settings rather than for its own purpose or to achieve a general education. This suggests that the purpose of ESP is to help language learners acquire the necessary abilities for use in a specific area of study, occupation, or career. These definitions are consistent with the growth of ESP through the years.

Sarré and Whyte (2017) who described the subject study within English language studies, which focusses on discourse, language, and culture of professional communities

and specialised groups that use English language, as well as the teaching and learning of this subject provided the most recent definitions. (p. 150). Additionally, Saber (2016: 2), defined it as a variant of English that can be found within specific social borders, delimited by professional or disciplinary boundaries.

From the above definitions, it is clear that the definitions tend to be really closer to the objectives of ESP teaching although they are stated differently and scholars may express different perceptions and opinions about ESP. Despite the fact that there is controversy about the definition and extension of ESP, a big majority of ESP proponents seems to agree that ESP, is a very flexible approach of teaching English as a second language (TESL) and teaching English as a foreign language (TEFL).). This means that it is integrally linked not only with special disciplines and profession, but it also accommodates for the special needs in the realm of EAP as well. It seems that ESP is not limited to any specific discipline but intended for the specific needs of the learners because ESP is (or should naturally be) integrally associated with areas of activity (academic, vocational, professional) which have already been defined and which represent the learners' aspirations. The learning of ESP is in consequence an essentially dependent activity, a parasitic process, and it follows that the pedagogy of ESP must be dependent too. It has no purpose of its own; it exists only to serve those that have been specified elsewhere" (Widdowson, 1983, pp. 108-109).

ESP Course Types

Clarifying the link between ESP and ELT, it is essential before moving on to discussing the different types of ESP courses. Scholars and researchers agree that ELT existed before ESP, just as it came before English for General Purposes (EGP) and every other subfields of EL. Furthermore, as ESP is principally split into multiple divisions

depending on students' tendency towards the utilisation of English language, the students' aims for learning English have commonly been served as a theoretical indicator of the suitability of the typical English language to the situational purpose. As a result, ESP disciplines are many and arise with a wide range of specific requirements, regardless of the subject at hand. David Carter (1983) and Hutchinson & Waters (1987) reduced the types of ESP courses into three:

David Carter's ESP Classification

David Carter (1983) proposes three types of ESP: English as a restricted language, English for Academic and Occupational Purposes and English with special topics. The language used by air traffic controllers, flight attendants or by hotel waiters are examples of English as a Limited Language. Mackay and Mountford (1978) plainly explain the difference between restricted language and language when they assert that the language of international flight control could be recognised as 'special', with the meaning that the linguistic repertoire needed by the air-controller is fully limited and properly specified situationally, as might be the linguistic demands of flight attendant or a hotel waiter. That said, such limited repertoires are not languages, equally as a travel phrasebook is not syntax. On this account, a restricted 'language' would not assist the speaker to communicate successfully in a different new situation, or in settings outside the vocational environment.

The second type of ESP identified by Carter (1983) is English for Academic and Occupational Purposes. He specifies that English for Academic and Occupational Purposes fulfil professional and vocational purposes, such as, English for medical technicians, petroleum engineers or business managers etc.

The third and last kind of ESP identified by Carter, 1983, is English with specific topics (EST). Carter explains that it is only with this type where focus changes from purpose to topic. This type of ESP is particularly concerned with anticipated prospective English needs of, for example, science students requiring English for postgraduate reading studies, participating in conferences or entering employment in foreign companies.

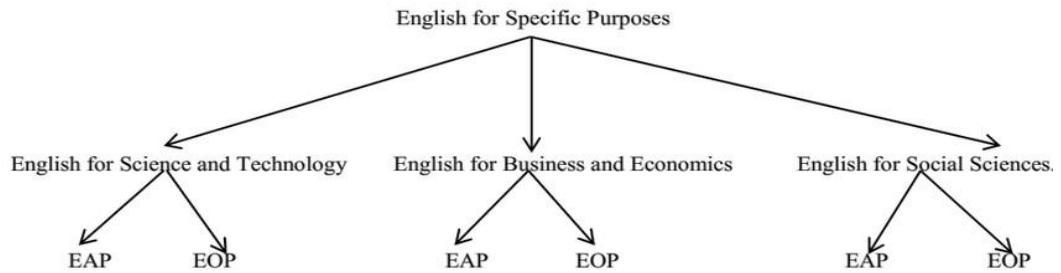
Hutchinson and Waters' ESP Categories

Hutchinson and Waters (1987: 17) consider ESP as a one whole branch stemming from English as a foreign language. They portray the whole picture as a tree of ELT, with three main branches: 1. English for Science and Technology (EST) 2. English for Business and Economics (EBE) 3. English for Social Sciences (ESS). Within each of these types, we can identify further subcategories, such as English for academic purposes (EAP) and English for occupational purposes (EOP). This way of classifying ESP types, although uncomplicated, can lead to overlapping or confusion. This might be ascribed to its simplicity; because the distinction between EAP and EOP is not always valid. For example, English for Science and Technology (EST) may be for either academic purposes or occupational purposes. Hutchinson and Waters (1987) state that there is not an explicit distinction between EAP and EOP: learners can work and study concomitantly; it is highly probable that in many situations the language learnt for immediate usage in a learning environment will be practised later when the student joins employment place (p. 16). This explains Carter's rationale for classifying EAP and EOP under the same type of ESP. It appears that Carter infers that the end purpose of both EAP and EOP are one and they are the same: job career. Meaning that both EAP and

EOP overlap significantly because the ESP learner can practise both of them at the same place (work and study, or study and work) at present time or in future.

Figure 1

The tree model of English for specific purposes by Hutchinson and Waters, 1987



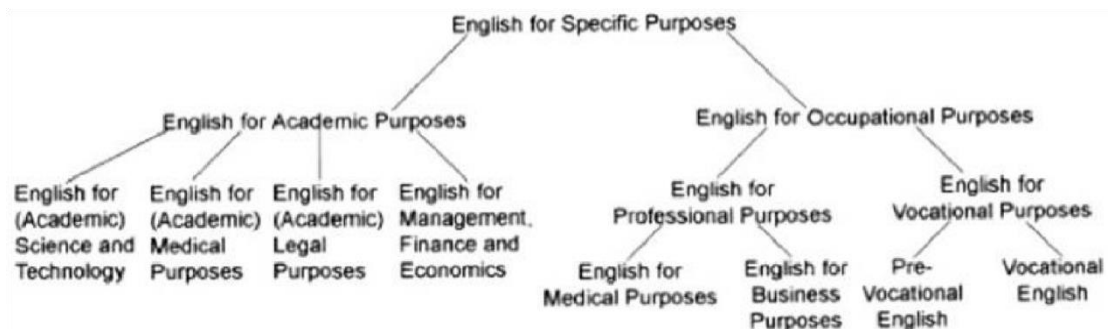
Note. The tree model of ESP by Hutchinson and Waters (1987). From. *English for specific purposes: A learning centred approach*, by Hutchinson, T. and Waters, A., 1987, Cambridge University Press

Dudley-Evans and St John’s Categories of ESP, 1998

Dudley-Evans and St John (1998) in their analysis of ESP tried to resolve the debate of what ESP sections and sub-sections in terms of discipline and profession areas, which are exhibited in Figure two (2) below:

Figure 2

Dudley-Evans and St John’s Classification of ESP



Note. The classification of ESP by Dudley Evans and St John, 1998. From *Developments in English for Specific Purposes: Multi-Disciplinary Approach*, by Dudley-Evans, T. and St John, M.J., 1998: p. 6. Cambridge University Press.

Dudley-Evans and St John (1998, p. 6) classify ESP by professional area. EAP covers the areas of Science and Technology (EST, the main branch), Medicine and Health Sciences (EMP), Law and Administration (ELP), and Business and Economics (. EOP covers two areas: (1) English for Professional Purposes (EPP), which has two branches: Medicine (EMP) and Business (EBP); and (2) English for Vocational Purposes (EVP), which has two subsections: pre-vocational English, which is concerned with finding a job and interview skills; and Vocational English (VE), which is concerned with the language of specific occupations. Most interestingly, these authors place ESP at one end of the ELT continuum, the other end being General English.

Other ESP classifications

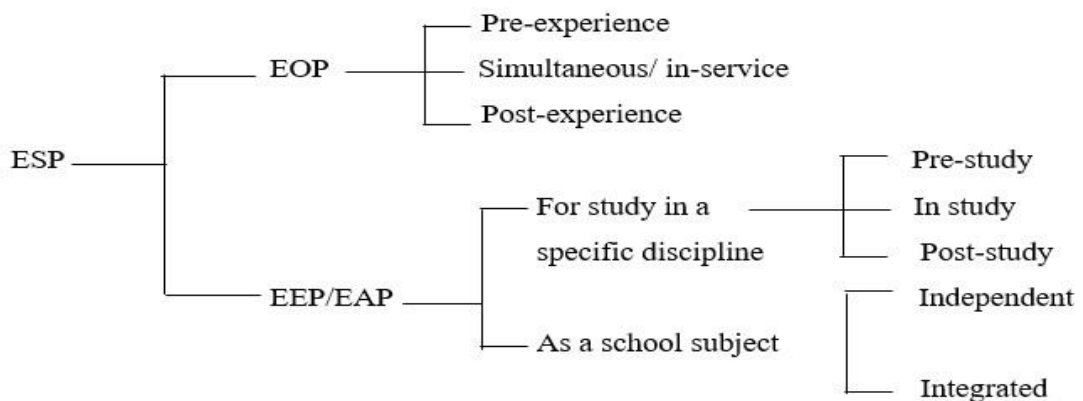
Robinson (1991) proposes two absolute criteria that determine the ESP course: The primary criterion is that ESP course is logically goal oriented. The second is that it is based on a needs analysis that will delineate as precisely as possible what the student needs to do when speaking and writing the language. The variable features of ESP courses signify that the course may be restricted in the skills to be learnt and may not be delivered according to a specific methodology that is related to or designed for specific subject areas. The course may use methodologies in particular situations different from general English. Moreover, the course is possibly to be designed for adult learners in either academic context workplace, as mentioned above, these courses are specifically constructed for either intermediate or advanced students. In another way, Robinson (1991, pp. 3-6) views ESP as an area of ELT split into EAP and EOP, cutting through

these is EST, which can refer to the English demanded for both academic and workplace purposes. Her ESP “family tree” differs from Strevens in that the English required in a particular discipline can also be delivered after the student has specialized.

Traditionally, ESP is categorised into two fundamental sub-areas: English for Academic Purpose (EAP) and English for Occupational Purpose (EOP). Robinson (1991) presents the categorisation in a tree diagram as in: English for Academic Purposes (EAP) and English for Occupational Purposes (EOP), as exhibited in figure 3 (pp. 3-4)

Figure 3

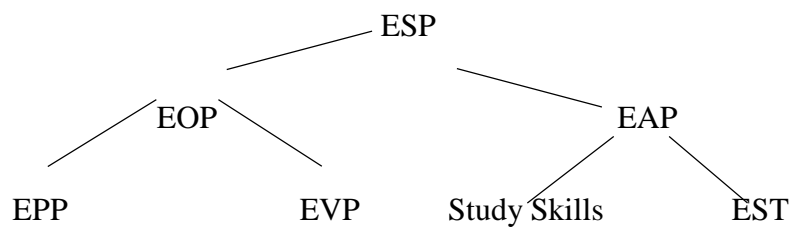
ESP categorisation by experience (Robinson, 1991:3-4)



Note. Robison’s ESP tree model by experience. From *ESP today: Practitioner’s guide*, by Robinson P. C., 1991: 3-4, Prentice Hall.

This diagram reveals the split of ESP into EAP and EOP, a division of courses according to where and when they occur and teach.

Johns (1991) suggests the following tree model (figure 3) of ESP types, one that has largely been used in the US (the United States of America)

Figure 4*Johns' ESP categories*

Note. Categories of ESP by Johns, 1991. From *English for Specific Purposes: Its history and contribution*, by Johns, A. M., 1991: 105-110. TESOL Quarterly, 25(1),

Hence, ESP comprises two types of instruction: EOP and EAP. English for Occupational Purposes to train learners to perform at the workplace, using English to interact. This type of course would be useful for airline controllers, or hotel waiters who are required to utilise English in order to fulfil their professional communicative functions. Conversely, English for Academic Purposes performs principally common skills labelled as “study skills” such as academic writing and following lectures, note-taking, note-making, making oral presentations, which enable the students to acquire the needed proficiency in English-language academic context. In an EAP course, students are expected to acquire receptive and insightful academic skills parallel to developing learning strategies and study skills (Jordan, 1997).

English for Science and Technology (EST)

ESP is viewed by a number of scholars as an umbrella (supported by its ribs) of teaching and learning English in a number of fields for specific purposes. Most scholars focus on two or three major types of ESP. Robinson (1991 et al.) described two great distinctions: English for Occupational Purposes (EOP), and English for Academic Purposes (EAP) with English for Science and Technology (EST) cutting across the two

of them. Kennedy and Bolitho (1985) regards EST as an additional branch in the ESP family tree. They claim that it is essential to acknowledge that EST has really boosted the development of ESP because engineers and technologists are expected if not required to study English to come up with linguistic tasks mostly related to the nature of their disciplines and professions.

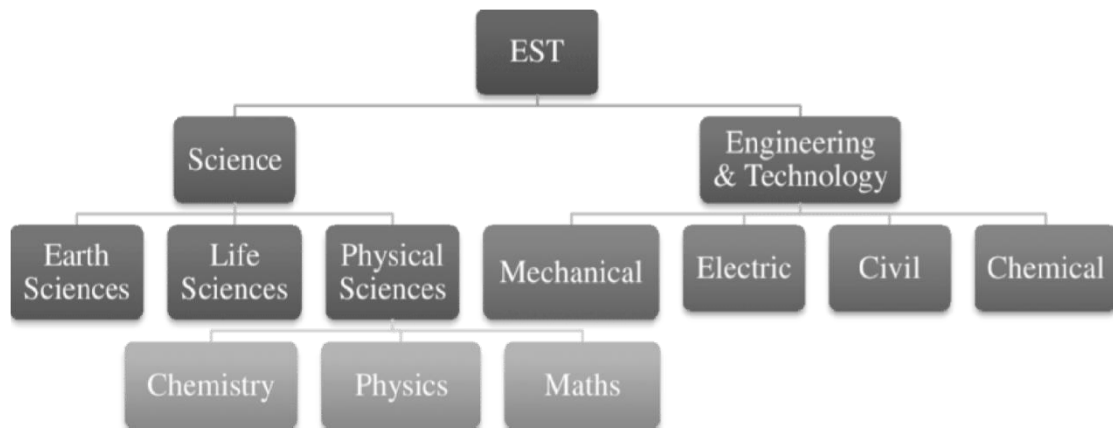
As previously mentioned, English is recognised as an international language that may be utilised for a variety of objectives across a wide range of academic fields. Furthermore, it has since been accepted as the primary language of science and technology internationally. It has been also considered the language of modern robotics and technology, in advance of all other languages in terms of science and technology of the twenty-first century. EST is considered the main branch of ESP due to its strong prominence. According to Mackay and Mountford (1978), the field of ESP has ranked EST as its principal branch. The main benefit of EST is that, it helps the scientists and technologists to communicate appropriately with their co-workers about the specialized field of studies through conversation or messaging.

It appears that EST is both theoretical and practical, or probably more accurately, educational and occupational. From an educational perspective, university students studying Earth Sciences, Petroleum, Renewable Energies, Chemistry, Medicine, Mathematics, and Engineering through the medium of English are found all over the world EST, especially, from the EEP (English for Educational Purposes) perspective, the most has the highest level of ESP development. From an occupational point of view, its use by engineers, computer programmers, and oil field personnel occupies an important place in their professional careers. Selinker et al. (1976) assume that EST can be related to both work and study related needs.

However, there has been disagreement among scholars regarding whether to consider EST as a separate field or as a subfield that is utilised across EAP and EOP. According to Swales (1985, p. 6), who views it as a branch that is connected to both (EAP) and (EOP). This covers the areas of English written for academic and professional purposes as well as English written for vocational purposes, including the frequently informal written discourse found in trade journals and in scientific and technical materials written for the non-specialist people. There are two main subfields in (EST), which are split in view of subject matter, “Science” and “Engineering and Technology” as established in diagram 5:

Figure 5

EST Categories as Suggested by John Swales



Note: The EST tree model by Swales, 1985. From *Episodes in ESP: A Genre-based Approach to Language in Us*, by J. Swales, 1985, Cambridge University Press.

Types of ESP have grown largely based on real communication demands. Each category has its proper features. However, one instrument that ESP implements in finding the learner’s real needs is Needs Analysis (NA).

Approaches to ESP Course Design

As part of this study, this section aims to examine the significant advancements in ESP (English for Specific Purposes) and, thus, identify how the learner's needs have been addressed in learning materials and classroom activities. ESP has evolved over time, drawing advantage from language theories and course design approaches, leading to certain distinctions in approaching ESP in teaching and learning. Most ESP researchers, such as Dudley-Evans & St John (1998), Hutchinson & Waters (1987), Nelson (2000), and West (1994), state that five major approaches have shaped the development of ESP: a) register analysis of ESP texts, b) discourse analysis approach, c) the skills-centred approach, d) the learning and learner-oriented approach, and e) needs analysis. Subsequently, a detailed description of these distinct approaches is provided in this study.

Register Analysis of ESP Texts

The first stage in ESP teaching is known as the Register Analysis of ESP Texts, and it emerged in the 1960s and early 1970s. It started with the continuing preoccupations regarding language variation within specific settings and areas of knowledge focused by the linguists such as Firth (made famous by Halliday), McIntosh, and Strevens (1964). Moreover, scholars such as Peter Strevens (1964) and Jack Ewer (1969) influenced this stage; the presumption is that ESP forms a different register from general English. This method seeks to identify the lexical and grammatical features of these registers. This method looks at identifying the lexical and grammatical features of these registers. It attempts to create a curriculum that prioritises language forms related to students' science studies while minimising emphasis on patterns outside of their scope. In this way, this approach aims to make ESP courses more relevant to students' needs.

In fact, it shows that there is no clear relationship between sentence structure and knowledge specialisation, and that there is little linguistic justification for using exaggeratedly specialised texts.

A Course in Basic Scientific English by Ewer and Latorre's (1967) most effectively demonstrate the implementation of this approach in ESP courses. The book reflects significant preoccupations and practices of that period; it derived from an extensive investigation into the patterns and lexis of a comprehensive scientific literature corpus.

The predominant belief in that period was that once students have identified the structures and vocabulary of their specialized area, they would intrinsically be able of applying these structures and effectively meet the communication requirements of their specific situation. However, critics assert that this strategy emphasises only specialized phraseology and lexicon, disregarding the broader communicative context. They, further, explain that while register analysis focuses on connecting language to learners' specialized situations, it often teaches language points extrinsically and separately, neglecting the interactive nature of context. In other words, the interactional nature of context of use, which generates forms, lexis and functions, was neglected in both language selection and language teaching. This has been more clarified by Hatch (1978). It is not enough to look at input and to look at frequency; the important thing is to look at the corpus as a whole and examine the interactions that take place within conversations to see how that interaction, itself, determines frequency of forms and how it shows language functions evolving. (p. 403).

Critics also indicate that this strategy tends to describe language rather than explain it, focusing more on the quantified linguistic feature ‘form’ than function or use (Coffey 1984; Hutchinson and Waters 1987 and Robinson 1991). Another problem in register analysis and frequency studies is that they show restrictions in selecting items of an ESP syllabus, in the way that it is difficult to determine the distinctive characteristics of a language register. Additionally, critics raise issues with early ESP textbooks, as lacking originality, supportive materials, and variety in activities making them almost impractical for classroom use. Dudley-Evans and St John (1998) cite Swales’ (1988) comment on one of the first significant ESP (EST) textbooks, The Structure of Technical English (1965): it was good at including all the aspects of the language, half-technical vocabulary, but not as effective as a classroom resource. "The passages were dense and lacking authenticity, the accompanying diagrams were not very supportive and worst of all, and the exercises were repetitive and lacking in variety” and that it is a very complex book to implement.

Discourse Analysis Theory

Theory of discourse analysis, another stage in ESP planning, embodies a functional approach to language instruction that appeared in the late 1970s. It probably developed as a response to the previously used approach of register analysis, seeking for a more exhaustive analysis that go beyond sentence-level patterns. This has derived from some notable restrictions in the approach of register analysis. Dudley Evans and St John (1998:22) explain that the work of 'lexico-staticians' investigated language of some particular registers, but they provide little justification of why some grammatical structures are chosen and privileged in the English of Science and Technology, nor of how sentences are structured and organised to make paragraphs and full texts of 'discourses'.

The theory's assumption is that language proficiency expands beyond the ability to understand the syntactic patterns or isolated language functions, but increasing the skill to understand and explain longer stretches of language. In this vein, Savignon (1983) notices: "Discourse competence is concerned not with the interpretation of isolated sentences or utterances but with the connection of a series of sentences or utterances to form a meaningful whole" (p. 38).

ESP has been at the vanguard of implementing discourse terms to language instruction, with much discourse analysis of written works deriving from ESP contexts. Fulfilling the specific needs of science scholars have produced immeasurable research on the pretentious discourse of EST/EAP discourse. This approach is demonstrated by textbooks such as the English in Focus series (1974–1978) and Widdowson's Reading and Thinking in English series (1979–1980), which seek to increase students' proficiency in understanding and communicating scientific concepts in written discourse.

The above materials assume that students had already the language proficiency and precise scientific data necessary to understand scientific terms and facts in written texts. As a result, the emphasis is on "competent performance," or learning how to communicate using the language the learners have already acquired, as opposed to "communicative competence," or learning as learners communicate. Howatt (1984) calls the 'weak' and 'strong' approach to communicative language teaching (CLT)). However, the reading texts are designed more as instructional materials than as genuine scientific books. Thus, there is debate over their validity and authenticity. According to Howatt (1984), the psycholinguistics of reading would not be too much imbalanced, if any, by texts especially prepared and inscribed for students (presupposing they are well done)

(p. 280). According to Widdowson (1978), authenticity is less about materials and greater about the relationship between the reader and the text.

Furthermore, critics believe that this strategy disregards the requirement that the course materials should be informative and compelling to students, possibly resulting in boredom and uninspiring classroom experiences. Furthermore, learners' exposure to rhetorical functions in reading passages may not accurately reflect the complexity of authentic scientific communication.

Skills-centred Method

The aim of this method is to focus on the mental processes that underlie language use. It suggests that thinking and interpretation processes underlie language use, allowing extracting meaning from discourse regardless of its external structures. As a result, the emphasis should be put on the underlying interpretive techniques that help students to pass over surface patterns.

The skills-based approach, which concentrates on certain language skills including speaking, writing, listening, and reading, becomes more and more popular by the 1980s. This method utilises certain skills pertinent to specific work environments. For instance, reading skills is given higher priority in nations where English is not the primary language of teaching.

This method holds that teaching language by itself is insufficient to build the skills required for situations in higher education. Rather, it puts equal emphasis on competence and performance based on the mental mechanisms that underlie language

use. It is not intended to teach a great deal of language, but rather to improve particular skills and learning strategies that may be applied beyond the ESP course.

In the skills-based approach, reading is given top priority, and this includes reading reports, technical journals, and instruction manuals. Beyond textual authenticity, task authenticity is added to be another component of authenticity, requiring students to interact with texts, as they would be in real-world situations.

With the introduction of discourse, genre, and rhetorical analysis in the 1980s, ESP reading instruction became more focused and dominant in class use. Grammar analysis is substituted by an understanding of text structure, information, and discourse groups. Discourse analysis skills and specialised vocabulary instruction have become essential components of reading instruction.

Due to discipline-specific language and a lack of genre awareness, ESP listening skills presented difficulties. Similarly, the interplay between English as a lingua franca research and contemporary communication demands affected ESP speaking skills, casting doubt on the predominance of native speaker models in instruction.

The Learning-Oriented Strategy

An investigation of learning strategies and cognitive styles led to the shift towards learner-centred approaches. This method acknowledges that students have a variety of attitudes and ideas about language and language learning, which should guide the choice of instructional materials and activities. The learner-centred approach, first introduced by Hutchinson and Waters (1981, 1984), recognises that learning is a process that involves more than simply the learner. Furthermore, Nunan (1991: 178), states that

such a type of approach centres on the idea that "learners will bring to the learning situation different beliefs and attitudes about the nature of language and language learning and that these beliefs and attitudes need to be taken into consideration in the selection of content and learning experiences."

However, scholars that support context-specific language instruction in ESP, such Cheng (2011), Hyland (2002), and Swales (1985), have criticised this strategy. They refute the assumptions made by Hutchinson and Waters (1987) about the usefulness of subject-specific ESP teaching materials and the existence of a unique type of language. The opponents argue that each ESP situation should be evaluated in its own setting, highlighting the importance of adjusting language teaching to specific linguistic and contextual needs

The Needs Analysis Method

The concept of needs analysis is generally compared to needs assessment, though some researchers attempted to differentiate between the two. Graves (1996) who differentiates between needs assessment and needs analysis, explains that "assessment" involves amassing data, while "analysis" is concerned with interpreting data and giving it a value. Since its emergence in 1960s, needs analysis, also known as needs assessment, has been an essential component of ESP. Kaufman (1994) also defines needs assessment as the process of identifying and emphasising language needs, while needs analysis concentrates on comprehending the determining causes of these needs to achieve effective solutions for language enhancement.

Nonetheless, many experts in the field of ESP refer to needs assessment and needs analysis interchangeably (Brown, 2009; Johns & Dudley-Evans, 1991). According

to Brown (1995), needs analysis is sometimes called needs assessment in some situations. To identify language-learning needs, Huang (2010), Inceçay G. and Inceçay V. (2010) similarly utilise both concepts.

According to Graves (2000), needs analysis emphasises social interaction and is viewed as a dialogue among learners. He also explains needs analysis as a systematic and continuing process, identifying three time intervals: pre-course, course beginning, and ongoing. Needs analysis is generally utilised in planning ESP courses and is related to diverse phases of course development, involving course construction, methodological procedures, choice of materials, evaluation and assessment system. Many ESP stakeholders consider needs analysis as central to the effective planning of any language course (Hutchinson & Waters, 1987).

The present study uses the term “needs analysis” because it is widely understood by many ESP scholars and they make no distinction between the two terms. In its broadest sense, needs-analysis can be thought of as an aspect of reflective analysis of practices related to scheduling and structuring activities utilised in English language course (Richards 2009). Based on convergence of experts’ views, the term might be defined as gathering data about students’ needs (Richards, 2009, p. 51).

Needs analysis is commonly considered as the primary phase in the horizontal process in course preparation, though Dudley-Evans and St. John (1998) viewed this as more cyclical. In other words, once overall needs for a course are recognised and proven, decisions can be made in constructing or reconstructing the course in terms of course objectives, choice or production of materials, the instruction strategy, and evaluation procedures (Jin et al., 2014). Hence, many ESP instructors have admitted that a needs

analysis is central to evaluating any language course effectively (Hutchinson & Waters, 1987)

Specificity and ESP course Construction

The question of subject matter specificity stays a debatable issue in English for Academic purposes (Johns & Dudley-Evans 1991). ESP courses are usually discussed with regard to the difference between 'wide-angled' and 'narrow-angled' designs.

According to the “wide-anglers,” such as Widdowson (1983), Hutchinson, and Waters (1987), many elements in ESP are not different across the line-up of disciplines. Thus, it is more methodical to design instructional materials that can be shared among learners from different fields. However, the defenders of “narrow-angled” design such as Dudley-Evans and St. John (1998), and Hyland (2002), consider the language and task mastery needed by students are closely related to the specific discipline they study. Moreover, concentrating principally on the common-core features of academic English in ESP instruction seems to be disputable for them.

The term 'wide angled' is used to indicate courses designed for students targeting a broad professional or academic domain. Whereas the term 'narrow angled' is utilised to mean courses constructed for students targeting one unique professional or academic field. Generally, wide-angled course designs are preferred based on the assumption that there is a set of common skills and linguistic elements, which is transposable across different disciplines and academic groups. Supporters of narrow-angled designs reject this presupposition (Hyland 2002). Furthermore, they claim that ESP is an instructional approach that should fit in with the students' field of study. The main objective of ESP course is to assist learners acquire specific knowledge literacy distinctly related to their

academic discipline, but in English language. However, as the majority of English language instructors are trained for teaching English for General Purposes (EGP), they teach English language with very less knowledge in the students' discipline. Hence, teaching ESP needs particular cooperation among ESP practitioners and subject specialists in order to get over the difficulties of subject specificity.

The significance of specialist knowledge in ESP teaching has been explored through hypothetical arguments, practical studies, and analytical reports. Hypothetical arguments have shown that specialist knowledge is crucial in ESP instruction, as it enables instructors to create tailored learning materials that match up with the specific needs of students. In Ferguson's definition (1997), the subject specialist knowledge refers to the knowledge of the students' subject area or profession, which is essential in ESP instruction.

In order to clarify more the notion of specificity in ESP course, Bhatia et al. (1997), establish a relation between specificity and authenticity when demonstrating that authenticity is essential in the relationship between text and task in ESP teaching. They argue that the texts used in ESP classroom can only be considered authentic if the instructors are aware of their orientation and functions within the specialist discourse community. Furthermore, research has shown that ESP instructors need specialist knowledge in order to teach effectively the subject. For instance, in Selinker's (1979) study we have found that an ESL instructor must have knowledge of the main terms and assumptions of the text to refrain from emphasising only on mere grammar and vocabulary.

Now one may ask which method is more effective. Belcher (2006) answers that the decision on which method, either large or narrow, should be implemented to each ESP class and concern the students themselves, not based on the instructors' views or preferences. That is, a wide angled method may be more suitable and more advantageous for limited-proficiency level elderly students and undergraduate learners without majors, while other learners that have gained some professional knowledge and learning experience in English, such as majored ones, or engineers may take more advantage of a narrower strategy.

In any case, Dudley-Evans and St. John (1998) explain that although, regardless if a large or a narrow method is applied in an ESP class, and whether its concern is about language and not the topic, some specific workplace content should be covered in any ESP class. In whatever way, Anthony (2011) adds that if a language instructor should teach narrow-angled, discipline-specific English language, they might cope with more problems (versus wide-angle strategy) simply because language instructors are not acquainted with the subjects of the students; it is probably that students master the content more than the practitioner (Spack, 1988) does.

Based on the ideas mentioned above, we conclude that an ESP practitioner needs to have accurate knowledge about the subject matter. Additionally, they ought to show an optimistic attitude toward the ESP content, meaning that they should be more interested in the subject matter and be willing to learn more about it. The course then should include a description of the specific language the ESP student will use in real life communication first in the academic setting and later in the workplace environment.

The Enhancement of ESP Teaching materials

Materials are a very important component in ESP instruction. Tomlinson (2011) describes language-teaching materials as anything, which is utilized, by instructors or students to make the learning of language easier. Learning Materials consist of course books, manuals, and audio-visual recordings. Tomlinson's (2011) description of materials applies to daily papers, pictures, live talks by a native guest speaker and anything, which is intentionally used to extend the students' knowledge and language proficiency. There are certain factors that ESP instructors must consider when they create or select materials. These materials should be more observably illustrative to make students understand the processes of relationship, and the language used in the representation has to be practical and utilisable. Hence, ESP materials must be perceivable in order to enhance students' reading ability; such faculties as developing their sense of observation and concentration, and decoding what they read.

Concerning the collection and selection of materials, Jones (1990) states that ESP instructors find themselves in circumstances where they are required to create a course that matches the wants of a group of students, but are expected to do this with no or insufficient preparation time. Subsequently Jones (1990) proposed having a resource reserve with a collection of materials for the instructors to select. This does not imply that an ESP instructor has not to be an effective materials constructor, but must be a supplier of appropriate materials, be imaginative with the accessible materials, provide supplementary materials and adapt to students' expectations.

Tomlinson (2011) explains that different kinds of learners require distinct types of materials. Materials should compile with the standards, principles, methods and strategies, which fit in with different learning styles of the students and the conditions

they are learning in. For example, an ESP course for petroleum engineering, students are going to use materials that are very different from the materials selected for a commerce English course.

As ESP applies learner-based approach, it must explore technology to offer students various choices. For that reason, video recordings and audio files are required in ESP materials. Furthermore, ESP should suggest themes, topics, classroom tasks and methods that are specific to the subject area and the future job career of the learners. Dudley Evans (2001) argued that ESP uses materials that are subject specialisation oriented. However, most materials, are designed by individual instructors for separate situations, and there is not a big amount of published ESP material (p. 135). Moreover, in an ESP classroom the group has commonly mixed abilities. Thus, it is expected to adopt an eclectic approach to materials selection and implementation. This simply means that teachers should be given the freedom to select what materials they prefer to use, how they prefer to use it and adapt them to their classroom context regardless of what their colleagues have selected. Brown (2002) asserted that eclectic approach allows instructors to select the materials that function well in their classrooms within their changing contexts.

Conclusion

This chapter has presented the conceptual framework for the study based on a review of the literature. According to the literature review mentioned above, it recommends that the success of ESP course depend on students when they can perform well in English in the specialised field. This is because an ESP course is not just a language proficiency course; rather, it is a course that is developed with the learners' motivations for learning the language. Some of the viewpoints and directions required

to comprehend ESP in its practical aspect, were reported in this chapter. It included definitions of ESP, its types and sub-types, ESP vs. EGP, ESP language issues, and ESP resources. This chapter also reviewed the factors that contributed to the rise of ESP as a distinctive and recognised approach within ELT. The chapter also highlighted the recent ongoing developments within the field of ESP, asserting the importance of the discourse community in the ESP world. According to the literature, there is a number of aspects involved in definitions of the term ESP. The definitions used in this study are based on the variable and constant characteristics proposed by Basturkmen (2010), Dudley-Evans and St John (1998), and Robinson (1991). Moreover, this chapter attempted to provide complete answers to some questions, which are explicitly related to the topic of the present study. The interpretation covered the following questions: Which kinds of ESP are there? What is the complete definition of ESP? How long ago did ESP first emerge?

Chapter Two

Needs Analysis and Evaluation

Introduction

In ESP course evaluation, needs analysis, often known as NA, is a crucial component of the teaching and learning process. In order to facilitate the identification and selection of course materials that would accurately meet their needs, it is imperative that both instructors and students express their views and perceptions regarding their needs. Although NA is generally recognised as an ESP threshold, ESP is on no account the only academic enterprise.

Pedagogically, in order to obtain relevant materials for ESP course, it is very helpful for instructors to combine and apply their views with their students' perceptions. The present study draws on the learner-centered approach to ESP and considers needs analysis as an ongoing, cyclical process where present and target needs are to be thoroughly examined. This chapter reviews the theoretical basis of needs analysis.

Needs Analysis of ESP course

Many authors see needs analysis as a key component of language teaching. This is to ensure that English language instructors may adapt their methods of instruction and meet the learning goals of their students and institutions through the application of Needs Analysis. To implement it in ESP course design, it is essential to acquaint with both the adjustability of its procedures as well as the wide range of investigation methods and data resources that should be accessible before applying it.

A thorough analysis of students' needs has become increasingly essential in English language instruction as a prerequisite for effective course design (Long, 2005). Usually, the NA process is used to determine and assess the needs of students (Johns and Dudley-Evans, 1991; Belcher, 2006; Graves, 2008). In addition, Dörnyei (2001: 140) suggested that in order to make the curriculum and instructional materials relevant to the students, one should utilise needs analysis methods to learn as much as you can about your students' interests, aims, and needs. Furthermore, Brown defines NA as a methodical compilation and assessment of all objective and subjective data required to determine and validate justifiable curricular goals that meet students' language learning needs in the context of specific particular institutions. (1995: 36)

In order to address the needs, Graves confirmed that NA is a continuous process that involves obtaining data on students' preferences and needs, analysing the data, and arranging courses based on the analysis (2000: 98). Furthermore, Dudley-Evans and St John (1998:124-5) state that needs analysis in ESP comprises the following elements:

- a.** Details about the students' professional background, including the tasks and activities for which students are or will be utilising English language -target situation analysis and objective analysis.
- b.** Personal background, including cultural background, prior learning experiences, motives for attending the course and expectations in it, and attitude towards English—wants, means, and subjective needs.
- c.** English language learning, including the learners' current proficiency and language use - present situation analysis, which enables the researchers and other course designers, to assess (d).

- d. The gaps between (c) and (a) -lacks among students.
- e. Language learning information: efficient methods for acquiring the language and skills in (d) -learning needs
- f. Professional communication information regarding (a): understanding how language and skill are utilised in the target situation - linguistic analysis, discourse analysis, genre analysis.
- g. What is wanted from the course - The objectives of the course?
- h. Details regarding the setting in which the course will be taught - means analysis.

The ultimate goal of needs analysis in ESP in general and this study in particular is to supply data-driven information for the development of instructional materials and design of courses. According to Hutchinson and Waters (1987), the students may benefit from this information in order to enable them to perform well in the target situation. In order to use the findings for bettering the current course, the study examines the students' needs and assesses English for science and technology. This is confirmed by Brindley (1989), who stated that needs analysis has evolved into a process of ascertaining the learners' present and future language use.

Needs Analysis Models

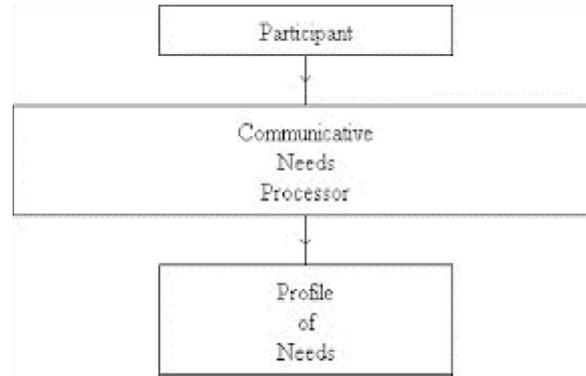
Three different models have been established in relation to needs. These are Munby's (1978) Communicative Syllabus Design, Richterich and Chancerel's model (1977 and 1983), and Hutchinson and Waters' Model of Needs Analysis (1987).

Munby's Model of Needs Analysis (1978)

In 1978, Munby published his book *Communicative Syllabus Design* which discusses the questions that should be raised (and answered) before constructing the course. Munby's theoretical principles consist of modern opinions on the nature of communicative competence, stemmed from fundamentally from Hymes (1971). Munby (1978) presents a comprehensive set of strategies for identifying the needs of a target setting. His approach is a very practical one that may be utilised to define the content of language courses with specified goals. Additionally, in his model, Munby provides a profile of communication needs which involves the following elements: subject content; communicative events (e.g., talking about routine duties and tasks); purposive field (e.g., education); medium (e.g., spoken form); channel of communication (e.g., in person communication), and level of English proficiency needed for interaction. The communication needs are then integrated within a particular curriculum. This approach can be utilised to specify realistic target situations. Moreover, English instructors who work with ESP students extensively use this approach for needs analysis and adhere to the paradigm for determining communicative competence. Munby's approach is criticised for being more intricate and time consuming, even though it has realised further advancements in the field of ESP. As a result, it seems that a number of needs analysis approaches take into thought the current needs and perceptions of learners.

Figure 6

Munby's Framework of Needs Analysis, 1978



Note. From Munby's book Communicative Syllabus Design, 1978. From *Communicative Syllabus Design: A sociolinguistic model for design of second language syllabuses*, by Munby, J.L., 1978, Cambridge University Press.

The Communicative Needs Processor (CNP) constitutes the central component of the model, data on the participants taking part in the study, is put into the C. N. P., which comprises several categories. Following the fulfilment of these categories, we obtain a profile of needs, which outlines the learner's predicted language abilities at the end of the course.

Munby's paradigm, like any other theory or tactics, is not without its critics, though. In his CNP, Munby presented comprehensive lists of micro-functions. He disregarded any information on how to rank them or any other affective aspects that are now acknowledged as significant (Dudley-Evans and St. John, 1998).

Four items are mentioned by West (1994: 9–10) to list the Munby's model's weaknesses:

1. Complexity: Munby's instrument was inflexible, complicated, and time-consuming because of his attempt to be meticulous and scientifically rigorous.

2. Learner-centeredness: Munby states that the focus of his CNP is on the learner. Although the student is the starting point in the analysis, the model gathers information about the student rather than from them.
3. Constraints: While numerous researchers believe that these real restrictions should be taken into account of at the beginning of, the needs analysis process, Munby proposes that restrictions should considered following the needs analysis approach.
4. Language: Munby fails to provide a procedure for transforming the student profile into a language syllabus

Richterich and Chancerel's Model of Needs Analysis (1977 and 1983)

Richterich is the founder of a typical needs analysis and provides a more adaptable method of needs analysis than Munby. Richterich and Chancerel (1977:49) suggest methods for assessing language needs before and throughout the course. The needs are determined by the student, the educational institution, and the user establishment; each along with the resources, objectives, and methods of assessment to be applied both before and during the course (1977). Richterich (1977:53–61) recommends implementing surveys and questionnaires, which can be answered individually or as part of an interview (1977:78).

Richterich (1977) examined the needs of language through the lens of linguistic contexts and linguistic processes. The language situation component includes three categories of information:

1. Data about the participants (all the parties engaged in the communication process, including the employer, instructors, and student) must be collected from those participants about their identity, numbers, and psychological as well as social positions.

2. Data on the time frame when the communication act occurs, comprising its duration and recurrence.
3. Data regarding the place of the communication act, comprising its physical and geographical attributes.

On the other hand, three other categories of information constitute the other component, "language operating":

1. Data outlining the roles or objectives that the communication act has to fulfil, which includes expression, description, explanation, etc.
2. Data identifying the objects to which the communication act will be related, such as whether the object of the communication is to communicate a neutral message, indicating how the affective state promotes or disrupts social ties, etc.
3. Data detailing how to develop that act, especially the language abilities required, whether the communication is direct or indirect, controlled or uncontrolled, and whether nonverbal cues are used entirely or in part to carry out the act of communication.

In a later study, Richterich and Chancerel (1983) provide a more comprehensive definition of needs within their model. It encompasses the needs, objectives, and methods as stated by students as well as by other parties involved, such as employers, subject teachers and language instructors. Richterich's work is exhaustive, but it is not without constraints.

Some of the types found in the second part of Richterich's model are unimportant. Course designers might not put much value on details like the learner's marital status, address, religion, or parent's jobs, all of which can be found under "learner identity" though the researchers did not specifically mention them. Another weakness of

Richterich's model is the substantial amount of time and human resources needed to be invested to complete this phase, as both specialist and non-specialist contribution is required. It is unlikely that those in control of actually delivering language courses have the time or abilities necessary to abide by the model's instructions. Furthermore, the model applies too many methods, not all of which are feasible to implement. Certain methods, like personality or intelligence tests, are deemed redundant and outdated and need to be redesigned by experts.

Richterich and Chancerel (1987) point out that the system should need to be continuously adjusted since needs differ too much between individuals. According to Richterich and Chancerel (1987:3), experience generally demonstrates that a student is not highly conscious of his needs and is not able to communicate them clearly.

Hutchinson and Waters' Model of Needs Analysis (1987)

In their 1987 paper, Hutchinson and Waters also note that using Munby's methodology to create a target profile for every student would take too much time. This approach only focusses on one point of view, especially that of the analyst, but ignores those of user-institutions and students. In the Meanwhile, it overlooks learning needs and fails to distinguish between needs, wants, and lacks.

However, according to Widdowson (1981), there are two ways to understand what students need. Firstly, a goal-oriented definition that outlines what students have to do with the language once they become proficient in it; that is, at the end of their course of study. Secondly, a process-oriented definition of needs that focuses on what students need to learn and obtain as knowledge.

Hutchinson and Waters (1987) similarly identify these two needs as target needs—what students must do in a target situation, and learning needs, what students must do in order to acquire them. Target needs as described by Hutchinson and Waters (1987) includes lacks, and wants and necessities refer to what students need to know in order to perform well in the intended situation. It is simple to determine what learners lack if the necessities (what they need to learn) are determined.

Criticism of the needs analysis approach

Many scholars have questioned the needs analysis method as lacking appropriate comprehensiveness from certain viewpoints of ESP course and materials design. Basturkmen (2006, pp. 19–20) addresses some crucial instances of ESP research that is unfavourable for the intended goals of needs analysis. According to Chambers (1980), it is controversial whether it is appropriate to ask students to determine their own language needs because they could potentially not be able to express them with sufficient competence, as noted by Basturkmen. Similar to this, Long (1996) asserts that students' perceptions of their needs are not always accurate, particularly when the learner is unfamiliar with the learning situation and has never studied the subject or field in question. Basturkmen (2006) indicates another aspect of criticism regarding the ESP needs analysis.

Basturkmen (2006) discusses ESP needs analysis and raises the question whether there is enough compatibility between objective and subjective needs and wants. For instance, engineering students might objectively be required to read written materials on technical themes, but they might also want to read topics in English language on more general topics, not than just technical texts (p. 19).

Hutchinson and Waters (1987:53), however, point out that the awareness of needs, rather than the actual existence of needs, is what differentiates ESP from General English. Furthermore, Richterich (1980) asserts that it is very important to take into account both the potentials and restrictions of studying a specific language course in order to successfully meet the target needs. In order for students to accommodate to their learning needs, the course must also be designed with an eye towards being both engaging and content-specific.

ESP Needs Analysis Process

Before we can perform a NA, we must determine who will take part in the study, what kind of data will be gathered, how it will be gathered, and how it will be analysed and explained (West, 1994). While adopting NA data gathering techniques, the researcher must take into account the suitability of these techniques for the research situation as Brown suggests that those procedures are likely to function within that situation and will typically be accepted in the particular setting. Thereby, they would be ineffective, wasteful, and possibly useless. (2016: 57).

Jordan (1997: 23) provides some viable procedures for implementing NA in English language instruction that might be used to various ESP types. He enumerated a list of thorough procedures as follow: determining the aim(s) of the NA; establishing the student sample; selecting strategies; recognising constraints and restrictions; deciding on data collection instruments; obtaining data; evaluating and interpreting findings; specifying objectives; applying decisions (i.e., deciding on syllabus, content, materials, methods, etc.); and assessing procedures and results.

Taking into account each of the previously listed procedures, Jordan believes that identifying the purpose of the NA is the first step in conducting the analysis. Other

procedures are really followed to, such as choosing how to perform needs analysis and gathering, classifying, and analysing data. According to Richards (2001), the following techniques have been applied in NA:

1. To ascertain how much the current ESP course contributes in the improvement of their vocabulary, grammar, and language skills (reading, listening, speaking, and writing).
2. To ascertain that the language barriers and difficulties they will encounter both at their current English language institution and in their future job careers.
3. To ascertain the degree to which the current ESP course sufficiently prepares them for their studies and their future jobs
4. To ascertain the degree to which the current ESP course and its materials fulfil their needs.
5. To ascertain the degree to which the English language needs assumed by their promoters are real needs.
6. To determine what language skills, tasks, and activities that will be useful for them to be efficacious in their academic field and in their future workplaces.
7. To determine their attitudes about learning English and ESP. (Richards, 2001: 52)

The present NA in this study adopts Richards' recommendations. Furthermore, NA in ESP is seen as the basis for all other decisions that need to be considered (Belcher, 2006), and it serves as the basis for constructing ESP courses fitted to the needs of the students. According to Brown (2016), "the data will be student centred", because a great deal of the information gained from a NA data collection would be around the needs of

the students (p. 57). Following the collection and interpretation of the data, it should be utilised in practice, which implies that real decisions should be made based on it.

Graves (2000) states that the needs analysis process consists of seven steps and comprising a set of decisions, measures, and reflections. This process contains the following sequential steps:

Step 1. Determining what information needed to obtain and why to obtain it.

Step 2. Adopting the most effective method of obtaining it, including how, when, and from whom.

Step 3. Gathering information

Step 4.Analysing and understanding the information

Step 5. Applying the information

Step 6. Evaluating the impact and efficacy of the application

Step 7. (The return to Step 1) Seeking additional or novel information to gather (p. 100)

As stated by Brown (2009), he blended the eight steps proposed by Schutz and Derwing (1981), the nation's ten phases (1997, p. 23), and Graves's seven levels (2000, p. 100) to form three (p.266-277):

1. Be prepared to perform NA.
 - a. Outline the NA's objectives.
 - b. Determine student population
 - c. Decide on the approach and curriculum.
 - d. Acknowledge limitations

f. Specify data gathering techniques.

2. Conduct the NA study

g. Gather data

h. Assess data

i. Interpret facts

3. Implement the NA findings

j. Set objectives (assessments, materials, and instructional methods).

k. Assess and provide a report on the NA programme (Brown, 2009, p. 266-277)

This methodical process demonstrates how important data collection is to the Needs Analysis.

According to Stefaniak (2020), need analysis and research studies are similar in that they both entail data collection and questioning. As a result, asking appropriate questions for in needs analysis and data capturing process are essential to construct right materials or plan a syllabus.

Data Gathering Tools in Needs Analysis

Many scholars have identified different techniques that can be applied to obtain data as a part of need analysis (e.g. Berwick, 1989; West, 1994; Richard, 2001; Brown, 1995, 2009). More specifically, West (1994, p. 7) indicates that an essential phase in NA is "selecting the information-gathering instrument." Many other scholars point out that the NA process can opt to use questionnaires, observations, interviews, and authentic materials analysis might be chosen as a tool in the NA (Basturkmen, 2010; Brown, 2001; Long, 2005a). According to Graves (2000), data gathering should be

conducted in three periods: pre-course, at the start of the course, and continuous during the course. A summary and brief explanation of some of these procedures are provided below:

Available data

Books, journal articles, reports, surveys, and other sources usually provide an enormous amount of useful information. Brown (1995, 2001) adds emails, letters, and phone calls are included in this category of data gathering.

Questionnaires

This method may be the most widely used or standardised instrument in the needs analysis process. Large amounts of data can be achieved through questionnaires (Brown, 1995; Dudley-Evans & St John, 1998; Graves, 2000). In addition, this helps to acquire data about a wide range of topics, such as communication issues, analysis of learning modes, preferred classroom activities, motivation, attitudes, and principles.

Meetings

Through meetings, a significant amount of information can be obtained in a duration.

Interviews

There are various techniques for conducting interviews. In general, instructors can interview their students and students can interview each other or their instructors. They are used to ask open-ended questions and obtain «real opinion" (Brown, 1995). The interview should have a time limit and be recorded so that the interviewer may

obtain the essential data they need. The interview is also time-consuming; thus, they are conducted as follow up to another instrument like questionnaires. (Dudley-Evans & St John, 1998).

Observation

Observation is engaging our sensory organs, such as our senses of sight and hearing, to observe and record behaviours and events. Observation is a specific data collection procedure, and analysts may need specialised training to learn, how to observe, what required seeking, and implementing the data they have achieved. Case studies, journal studies, behaviour observation, interactional analysis, and inventories were mentioned by Brown (1995, 2001), and Long (2005) adds diaries, journals, logs, non-participant, and classroom observation to this list. Furthermore, it necessitates researchers to form opinions regarding the behaviour, its frequency, its length, and delay. These indicators serve as the basic data needed to evaluate the effects of our variables. These must therefore be carefully gathered. These types of observation (judgments about whether or not behaviour has occurred, are by nature more subjective than other procedures of gathering data. An identical event occurring in the environment will be viewed differently by different observers since judgements rely on our perceptions.

Case study

Creswell (2014, p. 241) provides a clear and thorough explanation of case study methodology. A case study is a qualitative design in which a phenomenon, event, activity, procedure, or an individual or a group of individuals are thoroughly examined

by the researcher. The case is constrained by time and task, and researchers gather exhaustive data over an extended period utilising a variety of data gathering procedures.

According to Yin (2014), a case study can include:

Descriptive: A descriptive case study, the aim is to ‘describe’ a phenomenon minutely in its real-world context. It is largely used in social sciences and education.

Explanatory: The study seeks for causes to explain a specific phenomenon. The main goal of such a study is to provide explanation “why” and “how” certain circumstances arise, or, more specifically, why some sequential events happen or do not happen.

*Exploratory :*The purpose of exploratory study is to examine a phenomenon with the aim of ‘exploring’ or identifying new research questions which can be investigated in further research studies in an exhaustive way.

Categories of Needs

In regard with the categories of needs, researchers hold different beliefs and opinions.

Objective Needs and Subjective Needs

Both Brindley (1989) and Robinson (1991) introduced two distinct and though contrasting but complementary categories of needs: objective and subjective. Robinson (1991) explains that objective needs are the needs, which can be inferred from separate types of information about learners, which include their practice of language in real communication situations, present language proficiency, and language problems. Objective needs are, therefore, those needs that are diagnosed on the basis of clear cut,

observable data amassed about the situation, the learner, the language that students must achieve, and students' current proficiency and skill level (Brown, 1995).

On the other hand, subjective needs are linked with the learner's affective and cognitive needs within the learning environment. These needs arise from affective and cognitive segments such as thought, perception, attitudes, problem solving, personality, confidence, anxiety, and expectations for the acquisition of English language skills. When it comes to curriculum, learners' subjective needs also to include their preferred course length and intensity, adopted learning setting arrangement (i.e., whether they want to receive instruction in a classroom or not), favoured methodologies (i.e., the materials and activities they want to include in the course), and privileged learning styles (Nunan, 1988, p. 42). In a broad sense, objective needs refer to any real information related to curriculum while subjective needs are those perceived by interested parties besides learners, such as teachers, administrators, sponsors, parents and potential employers. In support of Brindley's argument, Graves (1996) see subjective-needs as being as crucial as objective-needs since the latter cannot be fulfilled unless the former were considered.

Real Needs, Ideal Needs

what Harding (2007: 17) refers to as immediate needs, as those that are typically achieved towards the end of the students' careers when handling more specialised updated reading material becomes vital. According to Scrivener (2005), students actually are not able to make the difference between what they need or want. Furthermore, as noted by Richterich and Chancerel (1987: 3), experience generally demonstrates that the learner is not highly conscious of his needs and, particular, is not able to convey them accurately. This suggests that educators have a duty to determine

the needs of their students, assist them in communicating those needs, and increase students' understanding of what they need or want.

However, De-Escorcia (1985) suggests that the ideal needs might be associated with the ideal setting in which students will likely be. Of course, the ideal need could vary depending on the students' perspectives and settings, but as stated by De Escorcia (1985), the real need is the core knowledge that students require in order to achieve success in their studies. It appears that the ideal need might change based on one's perception and particular situations, but the true or principal need, for to De Escorcia, is the minimal information students require to complete their studies with success and ease and success.

Target Situation, and Present Situation Needs

Target situation analysis (TSA) and present situation analysis (PSA) are the two methods of needs analysis that are most commonly used for conducting a needs analysis and functioning as the groundwork for developing ESP courses. Hutchinson and Waters (1987) state that needs are related to the ability to understand or generate the linguistic components of the target setting.

There are two distinct types of needs

1. Target situation. Actually, Chambers introduced the term Target Situation Analysis (TSA) in his 1980 study in an attempt to resolve the conflicts caused by needs analysis terminology. TSA, according to Chambers, is communication in the target setting (p. 29). Target needs are what the student should do in the Target situation (Hutchinson and Waters, 1987: 55: 56). Target situation analysis is defined by Robinson

(1991) as the type of study that ultimately focuses on the needs of students at the end of the course. Hutchinson and Waters (1987) suggest the following stages of target needs:

1. The "demands of the target situation" result in necessities. That is, "what the learner needs to know in order to function effectively" in a particular setting at specific moment in time. According to Nation and Macalister (2010), "the target tasks" are necessities (p. 27).
2. Lacks represents the gap between the students' current and expected level of proficiency in terms of language skills and cultural awareness, etc.
3. Wants are the perceptions or understanding of students' necessities. They convey what they think is valuable and useful to them (Nation and Macalister, 2010, p. 29). Their viewpoints could differ from those of other participants or stakeholders, such as instructors, designers of the course, etc.

2. *Present situation analysis (PSA)*, a different type of needs-analysis is implemented in order to fill in the gaps or overcome the constraints of target situation analysis (TSA). As Robinson (1991) notes, this kind of analysis looks into what students are like at the beginning of their language course, determining their abilities and weaknesses.

One might state that target situation analysis and present situation analysis are complementary; one completes the other. (Jordan, 1997). Present situation analysis attempts to identify the characteristics of the students at the start of the language course, while target situation analysis aims to determine what the learners should be like by the completion of the course. Dudley-Evans and St John (1998: 125), indicate that a PSA assesses abilities as well as deficiencies in language, competencies, and learning

experiences. In order to determine the final destination that the students should attain, it is necessary to first identify the starting point, as provided through PSA.

Richterich and Chancerel (1980) were the researchers who first proposed the term PSA, or (Present Situational Analysis). In this method, the teaching institution, place of employment, and the students themselves are sources of information (Jordan, 1997). Placement tests can be used to conduct the PSA. However, the background data about the students such as the number of learning years they have studied English, their proficiency level, etc., can give us enough insight into their current abilities, allowing for some degree of prediction.

Means Analysis

Means Analysis, as an additional NA method suggested by Holliday and Cooke, (1982, referenced in West, 1994) aims to make language courses easier to implement by tailoring them to specific local settings. The concept of means analysis stems from the notion that what functions effectively in one setting might not be applicable in another, and that language should be adjusted to the multiple professional, educational, and occupational settings rather than being forced on students without prior understanding of the local learning environments and specific needs

For determining how the language course is going to be carried out, means analysis, therefore, considers the circumstances in which the course will be conducted by taking into consideration the resources available, the practitioners, methods of instruction, and the actual attitudes of the students, among other factors (Jordan 1997).

ESP Course Evaluation

Course evaluation and assessment is vitally important in any type of course with the aim of determining the strong points and areas for improvement of the instruction and enabling students to meet their learning objectives by providing constructive feedback. The development of courses, along with course evaluation, is connected to the term needs analysis. According to Dudley-Evans and St John (1998), there are certain parallels between needs assessment and course evaluation in terms of data collection, analysis, and application. Yet, many elements should be taken into account while performing a needs analysis, including the language in the target situation, the learners' challenges, their learning styles and methods, and contextual factors; all of which will be addressed in greater detail later on (Basturkmen, 2010). Thus, the purposes and views of needs analysis and course evaluation are diverse and different. Setting the aims and objectives of the course and making proposals for its implementation are the two main functions of a needs analysis (Songhori, 2008).

As per the findings of Dudley-Evans and St John (1998), evaluation should consider the subject matter, methods utilised, materials employed, timing, and procedures for data analysis.

Tyler in Bazergan (1999:53) defines evaluation as the process of appraising learning or measuring academic achievement. The terms "examining," "quizzing," "testing," "measuring," "evaluating," "appraising," and, most recently, "assessing" have all been used at various points in time, but the essential purpose of determining students' educational competence has not changed. Brown (1995) states that evaluation is a methodical gathering and analysis of any necessary information required to support course improvement and evaluate its effectiveness as well as attitudes of students within

the context of the specific institutions implicated (p. 227). In addition to being gathered, the data is systematically examined. Thus, the two main objectives that can be fulfilled are facilitating course improvement and evaluating its efficiency.

When evaluating teaching and learning materials, the goal is to determine if something is suitable for a given purpose rather than determining if it is good or bad. put it another way, as Hutchinson and Waters (1987:96) stated, the results of the need analysis should be considered to determine the level of appropriateness for the intended purpose. This statement can suggest that the materials used in the ESP course are not appropriate for the needs of the students. We must evaluate those materials in order to find out whether or not they are relevant. According to Tsou & Chen (2014), the purpose of course evaluation is to investigate into three aspects of a course. The course should be assessed whether or not the needs of the students are met, the authenticity of the assignments, materials, activities and assessments, as well as the students' autonomy or sense of responsibility for their education and their willingness to take responsibility for what they learn.

Evaluation can be realized as a formal or informal process. Richards (2009) discriminates between accountability-oriented and development-oriented evaluation. The first usually examines a program outcomes and is intended for external subjects. The latter, on the contrary, is aimed at improving quality of a program. In an effort to determine whether and how course components function, Richards (2009) also reinforces formative and summative evaluation with an additional, so-called illuminative mode of evaluation. Its principal objective is to gain deeper understanding of the course processes rather than alter the curriculum. Evaluation can be carried out as either a formal or an informal style. Richards (2009) distinguished between development-

oriented and accountability-oriented assessment. The first usually seeks to raise the quality of the curriculum. Conversely, the latter is intended for external subjects and usually looks into the performance of the programme.

Brown (1995: 233) concludes that:

"It is best to view evaluation as an ongoing needs analysis, the goal of which is to constantly refine the ideas gathered in the initial needs analysis so that the programme can do an even better job of meeting those needs,"

Methods of Course Evaluation

There are many kinds of evaluation of language courses according to the issues and the aims of the evaluation. Evaluation methods are mainly differentiated by the techniques that are utilised; for instance, the distinction between questionnaire and interview lies mainly in the aim of the expected results. A few different evaluation methods types are addressed in the following paragraphs. According to Brown (1995), there are three primary kinds of evaluation: quantitative versus qualitative, process vs product, formative versus summative.

Formative versus Summative

According to Graves (2010), evaluation might be conducted on a regular basis, for instance, in the middle, end of a course, at the completion of units, or whenever a problem arises. When evaluating a case, it is done formatively with the intention of modifying the curriculum i.e., preserving the parts of the curriculum that work and

removing the ones that do not. Regarding formative evaluation, she notes that it allows students to have a voice and affect their own learning in addition to evaluating the effectiveness of the language course and providing a framework for potential modifications. On the other hand, summative evaluation, which takes place after a course has ended and typically has major implications. Richards (2009) also adds to formative and summative evaluation so called illuminative type of evaluation striving to assess whether and how elements of course work. Its primary orientation is not changing the program but to obtain deeper insights in the course processes

Product versus Process-Oriented Method

The distinction between process and product evaluations is based on the types of information that will be used, whereas the relationship between formative and summative evaluations depends on the differences in the aim for gathering information. As noted by Brown (1995), product evaluation considers whether the course objectives (products) are being met, whereas process evaluation concentrates on what is occurring within the course. According to Stake (1986), in order to truly assess the value of a given course, evaluation techniques must take into account the results of both evaluations.

Quantitative versus Qualitative Design

The crucial difference between quantitative and qualitative research is the category of data they gather and analyse. As defined by Brown (1995: p. 225), quantitative data are calculable fragments of information which are often collected using ratios and degrees which generate results in the form of digits. For example, these procedures include tests, counts, percentages, portions and so on. While the quantitative research uses rationale or numerical observations to consider the facts of a given

situation, the qualitative research depends on verbal narrative like oral or written data. Qualitative data, according to Brown (1995) involves more complete and comprehensive information based on empirical observations that may not be transformed into amounts or numbers” (p. 227). For instance, it entails classroom observation.

The distinction between depends on the purpose of evaluation. In quantitative evaluation, the evaluator is perfectly an objective observer who does not interfere, participate and attempt to influence what is being investigated. In qualitative evaluation, however, it is believed that the researcher can experience the most about the situation by being involved in it (Brown, 1995). Both types of evaluation may affect considerably the two forms of data gathering methods conducted in the study. As a conclusion, quantitative evaluation is useful for testing and validating already constructed theories. Qualitative descriptions can be important in suggesting possible relationships, causes, effects, and dynamic processes. However, Qualitative descriptions can be essential in presenting probable relationships, cause and effect relations, outcomes, and make the practitioner gain new insight. Both forms of evaluations affect greatly the types of data gathering methods implemented in the study. In short, both quantitative and qualitative evaluations are useful and they are essential means for capturing and analysing data.

Conclusion

Chapter Two is devoted primarily to discussing the concept of "need" in general. It presents some opinions and insights of different scholars concerning the need analysis in order to achieve a clearer understanding and recognition of the notion "need," as the present work is concerned with the investigation of needs in order to evaluate the current ESP course offered in FHREEUS at Ouargla University. Furthermore, an accurate

examination of the notion has led to the provision of a comprehensive and useful description of needs analysis different models. Because this study looks into the practical English communication needs of FHREEUS students, an evaluation survey is conducted in order to cover some previous studies and research that specifically address the topic of the current study. Additionally, it attempts to investigate the needs analysis on the English language course delivered in the context of petroleum, renewable energies, and earth sciences subject areas.

Chapter Three

Research Design, Methodology and Institutional Context

Introduction

A plan for obtaining and evaluating data in order to find a solution or solutions to the research question(s) is known as a research design. The required data, the procedures and tools to be utilised for gathering and analysing data, and the way in which this will all contribute to addressing the research question(s) are all described and delineated in the research design. Research design, according to Ary et al. (2010:426), is the researcher's approach to understanding and gaining insight into an issue or situation within its context. Every type of research aims to achieve certain results. Nunan (1992:2) states that "A systematic process of inquiry consisting of three elements or components: 1) a question, problem, or hypothesis; 2) data; and 3) analysis or interpretation of data,"

Research Methodology

In this research, the method used is a survey. Survey research is regarded as important for effective programme evaluation (Brown, 2001). For the present study, the obtainable data to be examined is the teaching material itself. To collect data, a research-made students' questionnaire consisting of 19 questions and an instructors' semi-structured interview of 19 questions covering different aspects of the current ESP course were adopted. To check and control the validity of the questionnaire and the predetermined questions of the interview, diverse procedures and as in customary, applicable references and related studies were deeply engaged in the study, besides the experienced instructors' views. According to Ary et al, "descriptive research studies are

designed to obtain the nature of the situation as it exists at the time of the study". Gay (1992) added that descriptive research involves collecting data in order to test hypotheses or to answer questions concerning the status of the subject of the study.

This study also used aspects of both quantitative and qualitative data collection methods all together. The goal for using the mixed method approaches is to depict the strengths and diminish the weaknesses of the quantitative and qualitative research approaches (Onwuegbuzie and Johnson, 2004). A mixed method approach also fits with needs analysis research as a range of data collection methods are relevant when conducting a needs analysis (Basturkmen, 2006; Dudley-Evans & St John, 1998).

Shields and Rangarajan stated that descriptive research is a tool to describe data and characteristics of the population or phenomenon being studied (2013). Creswell (2012) stated that survey is a research method which researcher administer to a sample or to the total population to describe the attitudes, opinions, interests, or characteristics of the subjects. Therefore, the aim of this study is to explore and describe the perceptions of the subjects by collecting the information concerning their beliefs, views and attitudes towards the English language course offered in FHREEUS. Based on the statements mentioned above, the two research designs were appropriate for the present study because it was important to include the assessment of instructors' perceptions of the ESP course as presently delivered in FHREEUS.

As indicated earlier, in the general introduction, the methodology of this study was deployed to seek for answers to four research questions. Thus, a plan showing the research questions, data collection tools and methods of data analysis is presented in table below.

Table 1

A recapitulation of Data Sources and Methods of Data Analysis Used to Answer the Research Questions

Research questions	Instruments	Data Analysis Method
1. What are the present and target situation needs as perceived by the undergraduate students of the Faculty of Petroleum, Renewable Energies and Geological Engineering at the University of Ouargla as well as their teachers?		
2. To what extent is the current ESP course in terms of objectives, content, teaching materials, methodology, evaluation system, aids and time allocation in the FHREEUS at the University of Ouargla appropriate and effective?	Needs analysis questionnaire	Descriptive statistical analysis
3. What English language skills and topics do the students and teachers perceive as necessary for an ESP course for FHREEUS students?		
4. Which aspects of the present English language course (goals, content, materials used, technology involved, aids and teacher’s training etc.) in FHREEUS need to be improved to meet the undergraduate students’ learning and target needs?	Semi-Structured interview	Qualitative data analysis using the constant comparative method

Procedures

The investigator chose to conduct a descriptive survey investigation in the Algerian context since the primary aim of the study is to clarify the ESP course offered within the LMD system. In a descriptive study, the current situation can be determined

through data review, a survey questionnaire, and interview. It makes an attempt to clarify, understand, and discuss about the circumstances of the current ESP course, or "that which is". Investigating and clarifying a situation that is occurring at a given place and at a particular point in time is the major purpose of descriptive study. (Dörnyei, 2007).

As for the data collection techniques, various instruments can be recognised in the study of various topics, especially in the area of applied linguistics. These methods of data collection are essential for providing the researcher with a certain amount of the required data. In recent years, tests, interviews, and questionnaires have become the most frequently used instruments in social science research. Thus, the researcher opted to apply the triangulation method for the current investigation. According to Cohen and Manion (1980), triangulation refers to the use of two or more data gathering techniques in a study of a certain phenomenon. To achieve the objectives of the study, two research instruments, a questionnaire and a semi-structured interview are utilised. This type of design, which combines several research instruments to look at the same issues, is referred to as a triangulation mixed method approach. As per Tellis (1997), the ethical obligation to enhance the validity and reliability of the investigation process and minimise the possibility of bias justifies the use of triangulation. Furthermore, using a range of investigation instruments would allow for the presentation of a comprehensive picture and the examination of various aspects of the situation (Silverman, 2000, p.50)

Robson (1993) establishes two different designs of the research procedure. The first design is to gather all the information before starting to analyse it; another design combines between data gathering and analysis. The first is differently labelled a positivist, science oriented, hypothetical, deductive, or even simply quantitative;

however, the second method is considered as interpretive or qualitative. In fact, as mentioned earlier, the present study adopts and implements the two designs in order to gain a more complete picture than a standalone quantitative or qualitative study, as it conjoins advantages of both methods. Richards (2001) also recommends this mixed method in assessing ESP courses, explaining, and “Both quantitative and qualitative approaches to collecting information are needed because they serve different purposes and can be used to complement each other” (p. 297).

Sampling and Respondents of the Study

The common purpose of research is to gather information about a large group of people by studying a much smaller group of people. A sample is the smaller group that we actually study, whereas the broader group we aim to learn about is called a population. Borg & Gall (1994) sustains that the process of establishing a sample is essential to the entire investigation procedure. Research cannot advance science or provide new information if its findings cannot be generalised to a wider population outside the study sample. The study involved different groups of participants who were the 1st, 2nd and 3rd year students taking ESP course during 2022-2023 academic year, and four (4) English language instructors.

Student Respondents

In contrast to the majority of other available studies on this same topic which have included ESP students from one or two departments, our research includes four (4) groups of ESP students belonging to four different departments constituting the Faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences, at the University of Ouargla. The faculty provides three years of instruction that allow the

students to graduate with a ‘license’ degree either in Earth and Universe Sciences, Petroleum production , Drilling and Mechanics of petroleum fields or Renewable Energies. The faculty introduces an ESP course starting at the first year level. It offers two or three one-semester-long English language courses. Classes are generally large and mixed-level. One of the biggest challenges that researchers encounter is the blended-level classes, where students have different language capacities, social backgrounds and preoccupations.

A questionnaire survey for this research initially included 98 participants chosen randomly from different departments of FHREEUS at Ouargla University. The researcher opted for the simplest form of probability sampling to select a random sample of 98 students, who volunteered to participate in the questionnaire. Ninety- eight (98) students from the four departments were invited to participate in the process of providing information for this study. The selected participants were personally approached and briefed one by one by the researcher, himself to ask for their full participation and cooperation. However, among these, only ninety-three students consented to complete and answer the questionnaire. Five (5) questionnaires were rejected because the respondents left them blank. Subsequently, the number of participants was limited to 93. These participants were available and sufficiently motivated to participate as the informants of the questionnaire instrument. In this regard, the distribution of informants by fields of study will be presented in the next chapter.

ESP Teacher Respondents

For the purposes of triangulation, and gain of a wider and more objective perspective of the students’ present situation needs, four FHREEUS teacher colleagues (two specialist teachers and two others, EFL teachers) who taught ESP course were

interviewed. The teachers belong to the following departments: One from the Department of Petroleum Production, another from the Department of Renewable Energies and the two others from the Department of Earth and the Universe sciences.

The language teachers' participants were invited to express their opinions and views about three themes:

1. Students' attitudes, purposes, and interests
2. Strengths and weaknesses of the ESP teaching
3. Solutions and suggestions to readjust and improve the ESP course

At the time the interview was performed, there were only four teachers who taught English in the faculty. The researcher has opted for the entire population because of the very small number of teachers, as shown in the table below. Two teachers are EFL specialists. One holding an LMD doctorate degree in English language; she obtained her doctorate degree from the department of English language at Ouargla University. She was employed as a part-time and temporary teacher in the Department of Petroleum Production. She accumulated 4-year experience in ESP teaching. The other holds a Master degree in English language. She has gained an experience of three years in teaching EGP and then moved on to become an ESP instructor in FHREEUS for two years. The two others are geologists (subject teachers) holding a Ph. doctorate degree in the field of geochemistry and petroleum drilling. One of them received a training in his field of research in England that is why he was appointed to teaching English language as a subject specialist because of teacher shortage in the department of Earth and Universe Sciences. Unfortunately, not all the teacher respondents received specific training to teach ESP.

The interviewees were asked to provide some feedback on the effectiveness of the course under study, the strengths as well as the weaknesses of the ESP course taught in the faculty because the success of any course depends very much on the lecturers. All the four teachers were available to provide valuable insights into the phenomenon investigated. Their evaluation was considered to have greater construct validity for assessing to what extent the objectives and the needs of the students were achieved.

Table 2

The FHREEUS Teacher Respondents

Teachers	Qualification	Gender	Department	Teaching experience
Teacher/1	Doctorate	Female	Petroleum Production.	4 years
Teacher/2	Master	Female	Drilling and Mechanics	5 years
Teacher/3	Doctorate	Male	Renewable Energies	3 years
Teacher/4	Doctorate	Male	Earth /Universe Sci.	4 years

Instruments of Investigation

This section describes the methods utilised to gather the data relevant to answer the research questions. Data collection was conducted with two research tools, that is, questionnaire and interview. The questionnaire was developed based on our review of the literature, especially on the theoretical frameworks of ESP course development. Another tool of the study was the semi-structured interview scheduled to function as a guide to the researcher and to enable the instructors to supply detailed answers related to their views about each aspect of the ESP course and instruction. In this context, the research was conducted in 2023 by means of two research instruments: a questionnaire (see Appendix 1) and a semi-structured interview (see Appendix 2). The questionnaire contains 19 questions. The interview consists of 19 questions within which there are

fourteen (12) open and seven (7) close-ended questions. The interview was conducted with four (4) teachers, with the aim of obtaining in-depth information about the practice of language use in ESP teaching and learning. A semi-structured interview is a combination of structured and unstructured types of interviews. Some of the questions are pre-established but others are not planned. It offers the benefits of both: the ability to ask follow-up questions, comparable and trustworthy data. Because it facilitates the elicitation of rich, in-depth, and detailed data, question probing has been acknowledged in semi structured interviews as a crucial component of the research interview process. The flow of the interview has elicited additional questions in form of probes as mentioned in questions 7 (if yes, to what extent?), 8 (if yes, what are they?), 9 (why?) 11 (why?), 12 (which one(s)), 14 (to provide feedback to students? or to grade to students), 18 (please explain?) . Probes are inquiries or requests that elicit more details from the participant regarding their prior response. (Given, 2012) The purpose of probing questions is to stimulate in-depth discussion of a particular topic. Since they are usually open-ended, the responses are mostly subjective. In addition; probing questions are used to encourage critical thinking, as well as to elicit the respondent's thoughts and feelings regarding a given topic.

The Questionnaire

The researcher, in the current investigation, gathers empirical data using two available tools: a semi-structured interview with instructors and a questionnaire filled by students. They are considered particularly valuable in obtaining information about the issue investigated in the present study and providing with an accurate description of the characteristics of the ESP course. A questionnaire is the most widely used research instrument not only in social sciences research but also in many other disciplines like applied linguistics that seeks to gather data and analyse it numerically. The design of a

questionnaire will be determined by whether the researcher needs to obtain quantitative data (to test specific hypotheses that have previously been stated) or qualitative information (to better understand a subject). In this vein, Brown (2001) states that survey research is regarded to be vital for efficient programme assessment.

Course evaluation in Brown's opinion indicates "the systematic collection and analysis of all relevant information necessary to promote the improvement of the curriculum and assess effectiveness within the context of the particular institutions involved" (p. 15). For this study, the accessible data to be assessed is the teaching material itself, thus the researcher believes that the issue under investigation is more adequate for research using a quantitative approach, or that the researcher uses a questionnaire to attempt to overcome some of the limitations and restrictions of qualitative procedures. The questionnaire is considered very useful to achieve evidence and fulfil the aims of the present study.

The main advantage of survey questionnaires is their exceptional usefulness in respect of a. cost reduction b. highly functional, and c. reduction of time. Moreover, because of their great adaptability, they may be effectively useable to a wide range of audiences, in a wide range of contexts, and on a wide range of issues. They can even unveil attitudes that the informants are not fully conscious of, as noted by Bryman (2008). On top of that, a well-constructed questionnaire can lessen the bias of interviewer effect, enhancing the preciseness and reliability of the outcomes. Given all of these benefits, it should come as no surprise that the greater part of social sciences investigation projects and specifically second language research entail at some point gathering data questionnaires.

Questionnaires have some serious drawbacks, despite the prior depiction of some of their benefits positing that they are effective research tools. One of the drawbacks of using a questionnaire in research is that it considers that the respondents are skilful readers and writers. Not everywhere, even in the developed world, is this the case. When a questionnaire is distributed to the subjects in a language they are learning, as is frequently the case in applied linguistic research, the problem could get more crucial.

Closed-Ended as Opposed to Open-Ended Questions. Questions within a questionnaire can be structured in different ways, resulting in closed or open answers. The needs analysis and the material assessment questionnaire consists of eighteen (18) closed and one (1) open questions. For keeping record of the results, the responses to the open question have been assembled manually and documented into a database. The statistical information from the questionnaire has been entered into an Excel database. According to Breakwell (1995), in an open design, participants are required to write down their answers in whatever terms they see appropriate, while in a closed design, the researcher must anticipate the likely answers to the items. Closed-ended questions are criticised since they compel respondents to select a response from a list of options rather than responding to the question in their own words, but they are also more specific than open-ended questions, which increases the likelihood that all respondents will mention the same choices (Converse and Presser, 1986:34). Additionally, the quantitative analysis procedure supplies similar responses, makes it easier to measure and assess quantitatively. Robson (1993) also makes it clearer that open-ended questions are typically less productive than closed-ended ones and that the problem with open-ended questions resides in how they are described and explained. He adds that they are more difficult to categorise and analyse. Subsequently, the questionnaire of the study contains mostly closed-ended questions.

Question Types and Response Formats in Questionnaire Design. When setting up a questionnaire, researcher can choose among various response-formats and questions types. Questions can be differentiated according to their function in a questionnaire. For example, Closed-ended question provide respondents with a set of response options. The options help respondents decode a question's meaning and provide additional guidance on how to answer a question. Further decoding and interpreting the meaning of provided response options is easier for respondents when the scale is fully labelled, as compared to a scale using numbers (Tourangeau, Couper, & Conrad, 2007). In addition, Munn and Drever (1995) indicate that using scale responses allows the researcher to investigate large numbers expressing certain views. They also assert that this way is necessary in attitude measurement.

Therefore, a variety of question types with various response formats were used in the questionnaire of the study. It is more practical and convenient to include diverse question types and different response-formats in the questionnaire, particularly with issues such as those examined in the present study such as perceptions of needs, views, beliefs and values. As Oppenheim explains, it gives these complex situations more reliability of measurement and less tendentious questions and responses, because of difficult and multi-dimensional nature of such attitudes.

A combination of question types was used in the questionnaire to give more validity and dimensionality to the informants' answers. They are enumerated as follows:

Matrix scale question design. Multiple scale question (*question 6*) was combined into a grid question design to save further space and ask respondents several questions in a short time frame, using the same response options for 11 items.

Likert scale questions. A Likert scale is a psychometric scale commonly involved in research used to represent people's opinions and attitudes to a topic or subject matter. Breakwell (1995) mentions that rating is commonly used to measure people's attitudes, perceptions and opinions. In this study, a five-point scale was applied through four questions. This was introduced in terms of *agreement (agree, disagree)* in four questions (*questions 6 (also matrix), 9 and 11*). *Agree–disagree scales* are used to evaluate the level of agreement or disagreement towards a statement.

Moreover, a 4-point Likert scale was used in one question (*questions 10*). The reason it was employed as such was that the respondents were stimulated to form a clear opinion. It does not include a 'neutral' option. In certain situations in which a specific respondent opinion is necessary, the 4-point scale is the most appropriate. It measures the quality of instructor performance in class. This is presented in terms of (*excellent/good/fair/poor*). The question solicits students' opinions regarding aspects of teacher performance. The students were asked to rate eight individual characteristics of the instructor.

With A 3-point Likert scale, the respondents' options include two polar points (3. Too much/ 1- too little) with an average value option in the middle. For example, too much, 2- about right, and too little. This type of scale tends to be less discriminating; it was used to avoid unnecessary extra emotional responses. This would help the researcher comprehensively analyse the precise perceptions of the informants. The researcher used a 3-point likert scale in 2 questions (*questions 7 and 13 (also considered ranking question)*).

Dichotomous question. Dichotomous scales (“yes” or “no”) are effective for precise data, but they do not allow for nuance in informants’ responses. For instance, asking if the course helps students improve their sub-skills with a yes/no-styled question, gives the informants more consistency in awareness and response. This dichotomous question was placed eighth (8th) on the questionnaire.

Multiple choice questions. Multiple choice questions are the most frequently used survey question type. They help the respondents to choose one or more options from a list of responses that the researcher defines. They are instinctive, flexible to use in various ways, allow generate easy-to-analyse data, and provide mutually exclusive choices. Multiple-answer/ multiple-choice questions are frequently presented with square checkboxes. They make respondents explore all the options that apply to them. The questionnaire consists of seven 7 MCQs, drafted by the researcher, and checked for quality by a group of experienced teachers, using coding standards and best practices standards for writing multiple-choice features. In the study questionnaire, multiple choice assessment method was used in questions 4,5,12, 14, 15, 16, 17, 18.

Closed-Ended Ranking Question. A Closed-ended ranking (rather than rating) question (13) was also added into the questionnaire, where the researcher asked the respondents to order a list of different items (response options) according to their importance.

Open-Ended Survey Question. The questionnaire finishes with an open-ended survey question (19th question) requiring respondents to write their responses into a comment box and does not provide specific pre-set answer options; responses are then viewed individually. It is not easy to quantify the written views; open-ended questions

are much convenient for providing qualitative data. Allowing the respondents to offer feedback in their own words could help you uncover opportunities that you may have otherwise overlooked.

Students' Questionnaire Survey. The student questionnaire utilised in the current study has been planned to fulfil three major objectives. It contains 19 questions distributed into three sections. (Appendix-1)

First, the questionnaire starts with the collection of students' registration information about the year of study they are, the department they belong to, gender and the academic year. (Section 1 items 1-3).

Secondly, in its second part, the questionnaire aimed to obtain information about students' English learning proficiency level, their purpose for studying English language in their disciplines, determine the lacunas in the current ESP courses, and unveil the students' academic and professional needs in the language-learning context. (Section II items 4-11).

Thirdly - As for the third part of the questionnaire, it aims to acquire information about, discoveries, and interpretations of FHREEUS undergraduate students' (1st, 2nd and 3rd year students) views of making suggestions and recommendations for more effective ESP courses in this specific context.

In this case, the perceptions of different participants (namely, 1st, 2nd and 3rd year undergraduate students) are envisaged to learn more and better meet the needs of these students within the context of learning English for petroleum, renewable energies and earth science purposes.

The questionnaire distributed to the students comprises nineteen questions, which are sequenced as follows:

Questions 1 to 3: seek information about student's registration information; the department and faculty they study in, their undergraduate level and the academic year the study was conducted.

Question 4: aims at collecting information about students' proficiency English language level.

Question 5: asks to provide information about students' purpose(s) for studying English language.

Question 6: attempts to ask students whether they agree or disagree with the aspects of the ESP course currently delivered in FHREEUS at Ouargla University.

Question 7: investigates whether the skills of listening, speaking, reading, vocabulary and grammar practiced and emphasised in class.

Questions 8: tries to reveal whether the ESP course help students to improve some important sub-skills in the classroom.

Question 9: examines whether the students agree or disagree about the suitability of learning materials used in ESP course

Question 10: attempts to find how students evaluate their instructors' performance in classroom

Question 11: seeks to find how students rate the current ESP testing

Question 12: asks students about actions to be taken for solving problems encountered in ESP course

Question 13: aims at grading the four skills in terms of importance and priority.

Question 14: examines the students' preferred learning styles.

Question 15: asks the students about the types of materials to include in ESP course.

Question 16: elicits students' preferences on how the materials should be taught in ESP course.

Question 17: evokes how students prefer the quality of assessment to be improved.

Question 18: elicits students' opinion about the weekly teaching time required for learning English language.

Question 19: invites the students to make additional remarks and suggestions to improve the current ESP teaching/ learning situation. (For more details, see Students' Questionnaire in appendix 1)

Administration of the questionnaire. The researcher personally carried out the survey. It was administered during the year of 2023. The researcher conducted the administration of the questionnaires over a period of 2 months. The distribution of the questionnaire was performed in different time periods depending on the belonging to each department. At the research site the researcher got informal permission to administer the questionnaire in one of the classrooms at FHREEUS. As soon as the questionnaire was distributed to the respondents, he gave precise instructions and orientations. He also explained the purpose of the survey and, if necessary, provided some explanations for completing the questionnaire. After the questionnaire had been distributed, the researcher kept moving around the classroom in order to facilitate answering the questionnaire and encouraged them to clear doubts if they had any. In many cases, when the questionnaire was returned, the researcher verified the blank cases and asked them to fill in the open-ended question, which many had skipped to answer.

Some students who were not interested to supply information requested, were asked to abstain from filling in the questionnaire. The number of participants who disinclined to answer the questions is minor. Finally, 93 students completed the questionnaire.

The Interview

The other study tool was an interview consisting of structured open-ended and some closed-ended questions. It was held with four (4) instructors belonging to the Faculty of Hydrocarbons, Renewable Energies, and Earth and Universe Sciences. The purpose of conducting an interview was to learn more about the views of the ESP instructors on the necessity of providing effective English language courses in FHREEUS, as well as to acquire additional data about the current situation of ESP course profile, and recognise instructors' suggestions on prospective ESP courses for more enhancement of English language instruction.

Interviewing is a widely used method in research and data collection, particularly in social sciences. Furthermore, it may be argued that it is a unique research tool, especially when it is employed in a semi-structured or structured design that enables the researcher to explore specific data that is extremely hard to gather by quantitative method. According to Cohen and Manion (1994), a research interview is a two-person conversation that begins by the interviewer with the specific goal to collect the necessary details for the study. He focuses on content that is specified by the research objectives, which might include systematic description, prediction, or explanation. It is also a unique method of gathering data that relies on verbal interaction and is distinguished by its flexibility. In a similar vein, Patton (2002) keeps on stating that in order to learn about matters we are unable to observe personally. We need to ask individuals questions about such issues throughout interviews.

As concerns the interview, it has its own drawbacks as compared to other tools like the questionnaire. Conducting interviews may be time-consuming, and often hard to conduct. They rely on effective interviewing procedures, which may require intensive training. They also may include elements of subjectivity and emotional bias, which may lead the interviewee to respond in a certain manner to conciliate the interviewer.

Yet, Interviews offer various advantages which may not be observed with other types of data gathering instruments. The flexibility of the interview is one of its key benefits. A trained interviewer can achieve things that a questionnaire can never perform: they try to find hidden information, follow up on ideas, and look into reasons and thoughts, which a questionnaire can never achieve. The way the informants respond, their voice tone, their faces and their reservations, can supply information that a written response would never reveal.

Semi-Structured Interview. There are several types of interviews: unstructured, semi-structured, and structured, with distinct degrees of explicitness. In the situation of the current research, an instructors' semi-structured interview is favoured for gathering data for this study. A semi-structured interview constitutes an instrument in which the structure and procedure of the interview, the topics that need to be covered, the main questions to be asked, and the sequence, in which they will be responded, have been predetermined or emerged during the interview session. The semi-structured interview has many benefits. First, unlike with questionnaires, no question will remain unanswered because the interviewer is the person managing these questions. Second, the interviewer has the opportunity to dispel any misunderstanding or additional questions that may arise during the interview session. Third, and possibly most usefully, the interviewer is able

to investigate any intriguing idea that emerges during the question and response session but has not been expected during the construction of the interview (Mackay, 1978: 22).

Mackay (quoted in Jordan 2005: 34) vigorously adopts this technique of gathering information, stating that:

Firstly, since the gatherer is asking the questions, none of them will be left unanswered... Secondly, the gatherer can clarify any misunderstanding which may crop up in the interpretation of the questions. Thirdly, and perhaps most advantageously, the gatherer can follow up any avenue of interest which arises during the question and answer session but which had not been foreseen during the designing of the interview.

Hence, this method of data gathering enables the researcher to seek more details and accuracy from the informants as the interview continues and develops. It also permits a certain fluidity and emancipation on the part of the participants engaged in the interview.

Therefore, the semi-structured interview used in this study is constructed in a way that it includes a set of open-ended questions as a method of gathering some information about the learning situation in FHREEUS at Ouargla University, finding out instructors' attitudes towards the current ESP course, and exploring their motivation in learning English. It is seen as a natural method in generating new hypotheses about the investigated issue.

Objectives of the Interview. The objectives of using an interview in this study is to gather primary data, elicit opinions, recognise learning styles and trends, and find out opportunities for improvement. It is in fact the same as the questionnaire; the former is intended to elicit the views of the instructors, while the latter is meant to draw out the students' perception. Overall, two parameters may be considered to determine the objectives of the semi-structured interview:

The first parameter focuses on the difficulties that students encounter when communicating in English, especially in terms of English usage and students' attitudes and motivation from the perspective of the instructor informants.

The second parameter refers to the assessment of the English language materials that are utilised in the ESP course. Therefore, in this study, the primary specific objectives of the interview is to obtain information on:

1. The qualifications, experience, and training of instructors in the ESP instruction.
2. The implementation of ESP and the views of the teachers.
3. Issues that arise when instructing ESP.
4. Utilising instructional materials and technologies.
5. Course content and evaluation.
6. Instructors' perspectives on the allocated weekly teaching duration.
7. Suggestions and solutions from instructors to enhance ESP instruction.

Semi-Structured Interview Schedule Plan. As stated earlier, semi-structured interview is one of the tools that has been implemented for collecting the data obtained in the current study.

Overall, the interview was carried out with ESP instructors in order to obtain information about the current situation of ESP teaching under the LMD system in the University of Ouargla.

In fact, English instructors are actually delivering the current ESP course; therefore, it is essential that they are involved in the evaluation process, as they certainly will provide valuable perspectives for both researchers and course designers.

More specifically, the semi- structured interview is split into three (3) sections, which includes, mainly, twenty questions, which are hierarchized as follows:

Section One (1)

Questions 1 to 4 attempt to obtain information about teachers' qualifications, their experience in EGP and ESP teaching, their status in the faculty, their participation in training programs and publications and their gender.

Section Two (2)

Questions 5 to 15 aim at obtaining information about instructors' perceptions regarding the suitability of materials to students' level, and the importance of English language for students' academic studies and future job careers. They also seek data on the ability of students to follow course contents, the problems faced by instructors while teaching ESP course, the methods, skills, and types of assessment, aids, and the use translation in classroom.

Section Three (3)

Question 16 to 19 ask the respondents to put forward some solutions and suggestions to improve the ESP teaching/ learning situation.

Interview Process. The researcher conducted a trial run with two instructors representing 50 % of the sample, which belong to institute to technology. The interview should have a trial run with only two instructors simply because the others are not available at that time. The trial was performed in order to decide which questions to maintain, which ones to improve, and which others to remove. As a matter of course, this process generates valuable modifications as certain items were rearranged before establishing the core questions of the interview in their final phase. Additionally, certain items were eliminated, as they are not considered relevant to the aim of the instrument. Piloting is an essential phase to gather data, analyse it, and helps the researcher determine which elements should be preserved and which others must be dropped.

When the structured part of the interview had been fully revised, it was then held with all the four (4) ESP teachers constituting the sample. At this point, it is worth mentioning that the researcher used audio recording as well as note-taking while questioning the teacher participants in the study. All the interviews were conducted in classrooms where these instructors were delivering their ESP lessons, after the students had left the classroom. Moreover, the teacher participants were interviewed individually. The interviews are crucial since they are utilised to verify the accuracy of the questionnaire that has been utilised to collect the data.

In order to add validity to the present study, interviews with teachers were also performed for gathering more information about the issue investigated in the study. Section A, Section B and section C comprise three separate categories of questions that

were specifically planned for the interview process. Questions in Section A includes qualifications, experience and training of the instructors. Questions in section B deal with the teachers' opinions regarding the ESP course delivered in FHREEUS in terms of course content, course objectives, materials, time allocation and evaluation procedures, which address the research question one (1). Questions in Section C are intended to arouse suggestions from the informants on how to enhance the efficiency of the ESP course.

Conducting the Interview. One of the major advantages of conducting in-person interview is the capacity to collect quality data through detailed analysis. After the subjects gave their approval, the interview started. At this phase, we invited the instructors according to the schedule that we had established for the interviews and they were all interviewed in their classrooms for their ease and convenience. The researcher then moved the recordings to his laptop and from there to another portable hard drive. Additionally, as previously noted, even though the interview was scheduled for one hour, I ensured that the main investigation issues were adequately addressed without limiting the interviewee's response. I perceived that interviews with the four (4) teachers lasted longer than one hour because the interviewees mentioned some new issues that necessitated to extend the interview with additional questions. The respondents appeared eager to share their experiences; therefore, I chose to stay a little longer. I therefore made the decision to extend the interview by thirty- (30) minutes in case the instructors were willing to provide more information and extend the questions for further information or clarifications. I used a little, discreet digital recorder for recording the interview sessions, thus less bothersome. The interview took place between May and June 2023. The researcher preferred to allow one week between each interview to obtain a broad understanding of the data.

It is common that the administration process of the interview is the most challenging of the various data collection methods because it necessitates that the interviewer prove to be more skilled, knowledgeable, and able to adapt in order to operate each schedule item in a compassionate and methodical manner, which boosts the effectiveness of the procedure.

Individual interviews have been carried out as a part of the present investigation in an attempt to maximise their subjectivity. Subjectivity is an inherent characteristic of qualitative research, but it is not an affliction as long as the researcher is aware of the risks and threats. He makes use of subjectivity to accomplish their objectives and helps participants to prevent bias in their responses. The interviewer ensures that the informants understand the aim of the study and attempts to make them feel aware about the importance of their participation at the start of each phase.

During the interview, I tried to establish a flexible, amicable mood while simultaneously discussing some significant and relevant issues with them, their future, or their opinions about teaching and learning English in the university.

In fact, the interviewer expressed his gratitude to the subject at the end of the interview and indicated how their involvement will provide significant insights to the findings of the current study. According to Evans (1984), it is very essential to recognise the informants' cooperation and express gratitude to them for providing information (51).

Pilot Study (feasibility)

The pilot study was conducted in FHREEUS at Kasdi Merbah University to provide the necessary feedback regarding the irrelevance of the English language course delivered to Petroleum, Renewable Energies and Earth Science students through a

students' needs analysis questionnaire and a teachers' semi-structured interview, which have been prepared and designed by the researcher. A semi-structured interview was carried out with ESP instructors who are either English language instructor or subject specialist expert. A workability study states whether the study can be implemented must be proceeded with a questionnaire and a semi structured interview. In a pilot study of a future study is carried out on a smaller scale. Pilot study can be focused on quantitative and/or qualitative methods and large-scale study may use a pilot study before the principal study is carried out. Pilot study is not planned to give positive information or results but rather to clarify the road for efficient implementation of the final full-scale survey. However we employ pilot study in order to identify difficulties and adjust the research construction, instruments, and procedures as required.

A needs analysis and a course content assessment questionnaire was developed and continuously adjusted to provide an in-depth analysis of the students' language learning needs. The ESP course offered in us constructed specifically for the Petroleum, Renewable Energies and Earth Science students and it covers the important language skills and specific knowledge needed in the field. Therefore, the researcher felt that FHREEUS would be the best setting to obtain the essential information required for this work.

After piloting the questionnaire with the students, the teachers were also asked to attend individual interview sessions later. Eventually, the piloting carried out successfully with the help of the heads of the four departments at FHREEUS during and after the class hours in which thirty-three (23) students representing a quarter of the sample and two (2) teachers from the Institute of Technologies, reaching a percentage of 50 %, were involved.

The two phases of the research pilot study are displayed in the table below:

Table 3

Pilot Study Phases, Instruments and Timing

Pilot	Instruments	Time Study Phase
Phase 1	Students needs analysis questionnaire	First semester February, 2023
Phase 2	Teachers' interview	Second semester April, 2023

Validity and reliability of the Research Instruments

In conducting a questionnaire and an interview, the researcher is required to consider the issues of validity and reliability; the factors of validity and reliability can influence the quality of information the researcher acquires.

Validating the 'Students' Questionnaire and 'Teachers' Interview

A measure is considered valid if it achieves the intended outcomes. Cohen et al. (2007: 133) stress: "If a piece of research is invalid then it is worthless." One of the most common methods for assessing content validity is to refer the instruments to a panel of experts in the field. The instruments should have a checkout with some professors in order to decide which items to be maintained and which others to be readjusted or disregarded. The purpose of the verification process was to measure the research tools in use; this method provides a necessary redrafting as some items were reconstructed before putting the schedule in its final phase. Thus, a panel of experienced teachers from three distinct faculties at the University of Ouargla was constituted. The researcher asked the panel members to review and evaluate the instruments (Teacher interview and

student questionnaire) used in this study: Prof. Thouria Drid, one of the leading figure in Applied Linguistics, teaching at Kasdi Merbah University, Ouargla; Prof. Ahmed Guendouz, a lecturer of Educational Psychology in the Department of Psychology at Kasdi Merbah University; Prof Abdelaziz Bousbia, Head of the Department of English language and Letters Prof. Rabah Kechiched Full Professor in Geochemistry, Geology and Geostatistics in the Faculty of Hydrocarbons, Renewable Energies and Earth sciences. Thus, the professors who are experts in the field examined the questionnaire and interview questions in order to enhance the validity and reliability of the study. All the questions of the two instruments were then corrected, adjusted and developed in light of their insightful and constructive feedback. Before finalising the two instruments, their opinions and reservations were taken into account. This helps to group together the opposing opinions and make the modifications that are needed to the two surveys. The results of the peer review were principally satisfactory. In this regard, the first draft of both the questionnaire and interview schedule were revised to achieve clearly worded, relevant and unambiguous questions as well as to obtain the structure of the two instruments. In this sense, Allison et al. (1996) explains that, in order to achieve this goal, the researcher needs individuals who have the same or higher qualifications, abilities and proficiency level and who are prepared to utter their thoughts while providing information. They are the final judges of what constitutes clarity and eliminates any ambiguity. (95).The questions were validated with regard to their relevance with the research questions. It is essential to emphasise that any questionnaire or interview should not only be tested but also approved by experts and experienced instructors before being used in order to ascertain the relevance of the data obtained, clarity of questions, the format and the amount of time needed for answering them. This procedure increases the quality of the information being acquired.

Reliability of the Research Instruments

Reliability deals with the level of consistency with which an instrument generates results. When a data gathering method provides consistent results under various conditions or with diverse users. Reliability relates to the ability of a tool to give reliable and uniform results when used repeatedly. According to Baily (1987), reliability of an instrument is simply characterised by its consistency. If a measurement does not shift when the concept being measured stays constant in value, thus, the result can be considered reliable and trustworthy.

Hence, the test-retest method of the interview was applied in this study to assess the reliability of questions. For a retest, two instructors teaching different subjects, the first instructor in Electrical Power in the Department of Electronics and the second instructor is 3rd year doctorate student in EFL in the Department of Computer Science, in the Institute of Technologies were selected. There was a two-month interval time between the two applications. Next, a correlation between the two findings was measured and then established. Fortunately, over 86 % of the data received was consistent, indicating an adequate reliability. The correlation finding was significant across all the interview sections. Therefore, it was taken as sufficient confirmation for the reliability of the data collection tool used in the study.

Ethical considerations

Given the importance of ethics for the conduct of research, it should come as no surprise that many different universities have adopted specific codes, rules, and policies relating to research ethics. These codes entail avoiding the violation of subjects' protected right to privacy and anonymity and using fraudulently personal information.

Before conducting this study, the information about the current study was given to the subjects to gain their consent to take part in the study. I informed them that participation was non-mandatory and that they could abstain at any moment. They should be given the freedom to choose and engage or not (Morrison 1993).

The subjects in our study were very knowledgeable about the purpose of the study, and were given guarantees of total privacy and anonymity of the data. Respondents were not forced to engage in either the interview or the questionnaire. As an example of that, there were two instructors who did not choose to take part in the interview, and there were some unutilised questionnaires.

On a different matter, instructors and students frequently feel compelled to refrain from expressing unfavourable opinions on the university or its strategies of teaching and learning to avoid being afflicted by their claims. Thus, it was vitally important to reassure them that their participation in the study would not cause them any harm and that their answers would remain anonymous and confidential, having no impact on their job careers or studies.

Institutional Context

Description of Kasdi Merbah University of Ouargla

This study considers the case of Kasdi Merbah University, Ouargla a public university located in Algeria. The university has predominantly Arabic-speaking students and staff, except for the Doctorate Degree students, where approximately all speak and write English. The English language was integrated into its official curricula in one way. Language-led ESP courses designed particularly for each undergraduate

degree programme is mandatory subject. However, groups may be heterogeneous as there is no entry requirement for students.

The University Kasdi Merbah Ouargla is located in the city of Ouargla, Algeria. The university was founded in March 1988 and is acclaimed nationally for its research partnerships. The university has three large campuses comprising five (5) founding institutes and 10 different faculties offering academic programmes across a wide range of disciplines ranging from mathematics and medical sciences to renewable energy and humanities. The university has constructed research partnerships with institutions such as the Renewable Energy Development Centre, Centre for Scientific and Technical Research in Welding and Control (CSC) – Algeria, and Space of Higher Education and Scientific Research. It also maintains frequent international exchange programmes and research collaborations with international institutions through different programs like the P3A programme, AFEQ programme and the Erasmus programme. It includes six libraries and 26 research laboratories. There are also auditoriums, a medical centre, workshops, residence halls and amphitheatres across the campuses.

The Importance of English Language in the University

Regarding the University of Ouargla, English for Specific Purposes (ESP) is, then, an approach to English language teaching, which gave a high priority to the language forms and elements students would need in their areas of study. However, in the Faculties of Science and Technology the students were not offered a practical and satisfactory ESP course though Learning English has become a major focus of interest for both students and instructors. For the students, they have strong motivation for learning English language to increase their communication abilities. They learn English in order to be competitive particularly in their discipline. Having English in their stock

of knowledge puts them at a distinct advantage over others who are unable to use English. Whereas, the instructors seek to gain more updated data to implement new strategies and styles in their teaching practices; make changes in course content; refine their pedagogical and research purposes; and develop their oral communicative skills for conferences and symposiums. However, lack of effective ESP courses at FHREEUS is one of the major troubles faced by both instructors and students in the Departments of Petroleum Production, Petroleum Drilling and mechanics, and Earth and universe sciences.

The Teaching and Learning English Situation in FHREEUS

The faculty of Hydrocarbons, Renewable Energies, and Earth and Universe Sciences was established in 2013; by Resolution No. 950/13 dated 12/05/2013. It includes 4 departments namely the Department of Earth and Universe Sciences, the Department of Petroleum Production, the department of Drilling and mechanics of Petroleum Fields and the Department of Renewable Energies. In this faculty, English is taught in all the departments of the faculty, but is regarded as a secondary course in the four departments where teachers are free to teach whatever they judge relevant. It is up to them to opt for the convenient syllabus and the appropriate methodology applied in the teaching process. This asserts the fact that decision makers, in general, and curriculum developers, in particular, give no particular attention to teaching English let alone English for Specific purposes. To clarify the situation more, the researcher has chosen informant participants from all the departments as a sample of this present study.

As regards to English language teaching, we can say that the proficiency level of students does not really promote communication skills (listen, speak, read

and write) using the language, much less in specialised disciplines. The lack of well-designed curriculum and effective instructional materials are the most acute issues. Without a well-defined syllabus, the instructors have to gather and construct their own materials from course books or from the Internet. Clearly, the inexistence of an adequate syllabus has a negative influence on ESP instruction. Thus, planning a more carefully prepared and organised ESP syllabus based on learners' ability, preferences and motivation, is a crucial need for all ESP classes

Another problem that instructors are facing in FHREES, at the University of Ouargla is the lack of teaching materials such as classroom supports, reading materials and lab equipment, etc. With minimum resources, instructors have to collect and adapt materials from course books or from the Internet. Apparently, the unavailability of authentic materials causes a negative impact on the teaching and learning process.

An additional issue that should be questioned refers to the fact that the ESP course is not in fact allocated sufficient time to be fully delivered to ESP learners. At most, English language is taught no more than as a simple subject that has been imposed in the teaching program by the Algerian Ministry of Higher Education. In other words, the English course is provided as a subject of secondary importance. What makes the situation far more serious is not only the time given to the course, but also the value assigned to the English language course in terms of co-efficient reserved to the English language subject. In a worst situation, English is allotted a 1 co-efficient, and in a best situation, it is given a 2 co-efficient. In addition, Another inconvenience that is perceived concerns the fact that there is not material that is prepared and available for use and particularly a course book that can support teachers by providing ready-made printed material, facts for presenting

different topics, reading texts to use in teaching ESP . Other issues are identified about what must be taught to students (content) and how to deliver it in class (objectives and methodology) in each discipline specific area.

Conclusion

This chapter examined meticulously a number of essential topics of the research design and methodology in detail. It has delineated the research methodology and thoroughly described both the research procedures and instruments used in the study. A mixed methods research design is applied; taking a triangulated approach to data collection based on research tools (structured interview and questionnaire) and sources (undergraduate students and instructors) to enable an in-depth analysis of the research questions, and building reliability and validity. To indicate, I state that many efforts are devoted to guarantee the incorporation of ethical considerations into this current research process. Additionally, it attempts to investigate the context analysis on the English language course delivered in the disciplines of petroleum, renewable energies, and earth and universe sciences. In this context, the Algerian Higher Education Ministry (MESRS) has integrated English instruction in higher education institutions across the country, acknowledging the vital role of the language in all fields of study and research. However, and apart from recognising the growing need of English for higher education students' successful integration in the technological, scientific, economic and educational areas, what are the MESRS' pedagogical policies about the ESP difficulties? Besides applying ESP teaching to all specialties, what other steps have been taken to better meet the needs of professionals and students and to improve the quality of instruction and learning in ESP courses. ESP courses are irrelevant.

Chapter Four

Findings and Analysis

Introduction

In this chapter, the results are presented and classified methodically. As soon as the results of the study are presented based on the data collected through Students' questionnaire and teachers' interview, the next step is to analyse the data obtained in order to attain the answers of the study questions, which are treated on the basis of the main objectives of the study. The primary objective for undertaking this study is to examine the undergraduate students' English language needs of the petroleum, renewable energies and earth science faculty at Ouargla University exploring the views and perspectives of two different groups namely : petroleum, renewable energies and earth science students themselves, and their English language teachers of the Faculty.

The study implements a mixed method design. It starts with a students' questionnaire, which was designed to get a more comprehensive understanding on FHREEUS students' perceptions and attitudes towards the current English language courses delivered in the petroleum, renewable energies and earth science faculty. Then, a semi-structured Interview was developed to amass qualitative data about the current ESP course taught in FHREEUS at Ouargla University. Informants, for both tools, were nominated utilising a simple random sampling procedure. Quantitative data are analysed applying numerical descriptive measures, whereas qualitative data are commented and analysed thematically. In this chapter, the analysis of the findings is described meticulously. The group responses are analysed applying descriptive measures for frequencies and percentages, and exhibited in tables to present the findings.

Data Analysis

Both quantitative and qualitative data analysis techniques are used in this study. Frequency counts have been utilised to examine and translate the questionnaire data into percentages. Since there are not too many respondents in the survey, there is no need to use the SPSS statistical process. The researcher considers that the results may be explained simply and clearly through only tables. Based on the responses from the students' needs analysis questionnaire, illustrative tables are completed to support the analysis. The information collected from the interview is interpreted in a descriptive style. Overall, the information acquired via a questionnaire and a semi-structured interview are examined in accordance with the opinions and suggestions of the learners and their instructors about the current ESP course.

Participants

A pilot survey for this research initially included 98 participants chosen randomly from different programs and levels at FHREEUS. However, 5 of the questionnaires were rejected because they were not completed. Therefore, the participants were limited to 93. The target student population in this study was all the students who studied in the academic year 2021-2022 in FHREEUS, at the University of Ouargla. The FHREEUS provides three years of instruction that qualifies the students to graduate with a license degree in petroleum and geological engineering. Alternatively, French and Arabic are the medium of instruction in the departments. In addition, English language course is taught to all the petroleum and geological engineering students over two semesters in each university degree year. Most of the students were already engaged in their 1st, 2nd and 3rd academic year at the time of the study. Further, the study was done three months after the students had stepped on an ESP course intended to meet

their academic requirements. This had perhaps made the students more undeniably more informed on the ESP course content and its implications, and more comfortably able to express their attitudes and demands about the means to achieving their objectives.

Tools

There are various tools available for ESP course evaluation; they include questionnaires, observation, interviews and others. Evaluation instruments should primarily request quantitative ratings and leave space for additional qualitative remarks from students. A Questionnaire was determined to be the most effective tool of investigation in this study. It was chosen as the instrument of data collection for the following utilities:

- The number of informants was considered quite sufficiently representative.
- It requires very little time from informants and provides an adjustable and suitable way to engage in the study.
- Participants were ensured of a certain level of anonymity in their responses and could answer the questions righteously.

Part One: The questionnaire

Procedures

In January 2022, we started carrying out the study in the Faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences (FHREEUS) at the University of Ouargla. The students were supplied with a questionnaire, which includes a set of multiple choices, likert scale and yes /no questions. Before administering the questionnaire, the researcher met with four (4) instructors who were teaching the second

and third-year students. For each of the grades, a class time was granted to the researcher to carry out the study. During the study, the students were informed of the aims and importance of the research. They were also instructed to give real and honest responses. Moreover, they were informed about the time they would spend in filling in the questionnaire. The subjects were also encouraged to ask for any explanation if needed. Immediately after they finished answering the questionnaire, they were asked to review their answers for imperfections or missing responses.

Data Analysis Procedures for Questionnaire

The students' questionnaire was designed out of the need to check if ESP course offered in FHREEUS, at the University of Ouargla, cope with students' learning needs, under the LMD educational system. The objectives of the questionnaire were to gather information regarding the ongoing ESP course and how effective it has been put into practice and then to identify different needs (academic and professional) of students in petroleum and geological engineering context.

The questionnaire will be analysed through the following steps:

1. Calculating the answers with Ms. Excel 2021 that have been obtained through questionnaire .The total answers from all respondents were divided into whole number of the respondents and multiply by 100 to get the percentages.
2. Concluding the answers, the answers will be drawn in which options have higher percentage.
3. Presenting those answers into the form of table percentages
4. Developing and remodelling the answer descriptively

Findings and Analysis of the Questionnaire

The findings of the study were provided based on the data collected through the questionnaire. The results were given in frequency tables with counts and percentages for the purpose of data analysis. In order for this to occur, every element of the ESP course—including the objectives, time management, classroom tools, skills, materials, assessment tests, and instructional strategies—was measured, quantified and examined.

Section one: Background Information

Number and distribution of Respondents by Fields of Study

Table 4

Distribution of Informants by Fields of Study

Area of specialization	N° of Qsts answered	Level Year	Percentage%
Earth sciences and the Universe (Geology)	28	1/2/3	30.10
Petroleum Production	26	1/2	27.95
Drilling and mechanics of Petroleum Fields	23	1/2	24.73
Renewable Energies	16	1/3	17.20
Total	93		100

Department and Class Enrolment of Respondents

Table 5

Distribution of Informants by Year level

Year Level	N° of questionnaires answered	Percentage %
First level	40	43.01
Second level	37	39.78
Third level	16	17.20
Total	93	100

A total of 98 undergraduate (first, second and third year) students of the faculty of Hydrocarbons, Renewable energies, Earth and Universe sciences (FHREEUS) at the University of Ouargla , who were enrolled in the English language course in the second semester of 2022 constitute our study sample. Ninety-three (93) students answered the questionnaire. All of our participants had already taken ESP course for one, two or three semesters in their undergraduate studies at the university. The respondents were enrolled in four different departments and classified according to their fields of study: twenty-eight (28) in earth sciences and the universe; twenty-six (26) in petroleum production; twenty-three (23) in drilling and mechanics of oil sites; sixteen (16) in renewable energies. There appears to be more males than females in each of the year level involved in the study.

Of these respondents (males and females), 43.01 % of them (40) were selected from the first level , 39.78 % of them (37) were drawn from the second year level while 17.20 % of participants (16) were chosen from the third year grade.

Gender Distribution

Table 6

Respondents' Gender Distribution

Respondents	Male		Female	
	N ^o	%	N ^o	%
Earth sciences	15	53.57	13	46.43
Petroleum production	15	57.7	11	42.3
Drilling and mechanics of oil sites	20	87	3	13
Renewable energies	10	62.5	6	37.5
Total	60	64.5	33	35.5

The table above shows the distribution of gender of the students who answered the survey. Of the 93 respondents, 60 (64.5%) are male students and 33 (35.5%) are females. Petroleum engineering and Earth sciences have typically been male-dominated disciplines. However, as more job opportunities become available in the employment market, female students are beginning to follow these fields of study. Female students have become true competitors for males in the areas of hydrocarbons, geology and renewable energies. The study of gender has become a major focus of research in order to ensure impartial and accurate findings. According to Marsh and Myers (1986), masculinity and femininity are two distinct and malleable characteristics that can coexist to varying degrees in different individuals.

Students' Proficiency Level

Q. 4. What Level of English do you currently have? Indicate (✓) only one choice

Table 7

Students' Level in English Language

Statements	N° of respondents	% of respondents
a. I am weak in English and I need to improve it a lot.	31	33.33
b. I am an average student, thus it is essential to learn it more	44	47.31
c. I am just good at English, but not fluent. Therefore, I need to better it more.	16	17.2
d. I have excellent oral and written communication skills and I do not need to improve them	2	2.16
Total	93	100

As shown in table 7, Petroleum, Renewable Energies and Earth Science LMD students in FHREEUS have an intermediate level in English with 47.3% which is visibly an indication for students' need to develop their English proficiency to the next levels (good and very good). Meanwhile, the results also showed that the number of students with low English level attains a rate of 33 %. This rate is not minor. This may be related to the lack of students' motivation due to the ineffectiveness of English language course taught in FHREEUS. The other reasons may be interpreted in the lack of accuracy in terms of objectives, and inadequacy of teaching scientific materials.

Students' Purposes for Studying English

Q. 5. What are your goals for studying English language? You may indicate more than one choice.

The question two (2) is formulated in a form of multiple-choice question. Here, students were given a number of options that were rated with the results of their responses in the table below:

Table 8

Students' Goals for Studying English Language

Goals for studying English language	N° of respondents	% of respondents
a. for improving my communication skills	61	65.5
b. for continuing my academic studies	51	54,8
c. for employment goals	58	62.3
d. for understanding and writing technical reports on engineering	42	45.1
e. because attending the English language course is mandatory	7	7.52
f. for travelling abroad	6	6.45

Question five (5) seeks perceptive insights on students' English language study goals, as well as to set the learning goals and aims of the new course of study. In simple terms, this question reveals why students wish to learn English. Table 8 shows that students mainly study English for enhancing more their communication skills, 65.5%.

This may be explained that Petroleum Engineering, Renewable Energies and Earth sciences students wanted to communicate with native English users and exchange their field study knowledge with them or benefit in return from their scientific experiences. The table unveiled almost similar results concerning the second item, 54.8 % of the respondents preferred continuing their academic studies. This also reveals that the students are aware of the essential role of English language in the development of their academic studies. The students wanted to learn English in order to be capable enough to keep up with the dynamic world of science that is provided in English language. Moreover, the findings indicated that English language is necessary for the undergraduate students of Petroleum Engineering, Renewable Energies and Earth sciences to better realise their professional needs. The data indicated that 62.3 % of informants opted for the use of English in their future job careers; this is because English language is usually used as the communication medium in multinational oil and gas companies operating in Algeria. The students have also communicated their preference for understanding and writing technical reports on engineering issues in English, achieving the rate of 45.1 %. However, only 7.52 % of the respondents selected the option of compulsory attendance as the reason that made them study English language and attended course sessions. Finally, the data displayed that the students did not express any interest for travelling abroad where English has a higher status with a quota of 6.45 %.

Section two: Students' Perceptions about the Current ESP Course

Q. 6. How far do you agree with the following elements of your English language course?

In this question, the respondents are given a list of items about the ongoing language course and asked to mention to what extent they agree or disagree with each. Therefore, a 4-point Likert scale was implemented to rank the level of agreement with each item on a scale from Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4). The 4- point Likert scale was used to avoid a neutral response toward each item. To guarantee the validity and relevance of the question, three colleagues were solicited to validate it. The data decoding is based on simple percentage ratings, representing facts and the highest and lowest frequency of course elements. The students' answers demonstrated that English was more than essential for almost all the respondents who were not hesitant to convey their need to be delivered effective ESP courses in their field of study.

Referring to the course content, eleven items are evaluated, and the results are displayed in the table below:

Table 9

Students' Views about the Main Components of ESP Course

Statement	1		2		3		4		Total	
	N	%	N	%	N	%	N	%	N	%
a) The course content is well	53	57	12	12.9	18	19.35	10	10.75	93	100
b) The topics in the course are relevant to your study field	61	65.6	7	7.52	19	20.43	6	6.45	93	100
c) The course objectives are clearly stated and understood	55	59.14	6	6.45	20	21.5	12	12.9	93	100

d) The Course is well organized	58	62.36	19	20.43	9	9.67	7	7.52	93	100
e) course takes into account your learning needs	53	57	3	3.22	30	32.25	7	7.52	93	100
f) The course content is sufficiently adequate to prepare you for success in the job market	49	52.6	11	11.2	23	25.4	10	10.75	93	100
g) The course helps you improve your English skills	9	9.67	52	56	24	25.80	8	8.56	93	100
h) Learning materials are relevant and useful	44	47.3	19	20.43	23	24.73	7	7.52	93	100
i) The teaching methods used in class are motivating to study the course	47	50.53	22	23.65	22	23.65	2	2.15	93	100
j) The tests and exams assess your skills appropriately) the weekly time allocated (per week) for English course is enough cover all its aspects	82	88.17	3	3.22	4	4.30	4	4.30	93	100

The results in table 9 show that almost all students (66.66 %) disagreed that the course level is suitable for their proficiency level. Thus, the instructors need to look at the materials to ensure that they do not include vocabulary difficulty, which is beyond students' ability to understand and enable text comprehension, neither rudimentary nor tough vocabulary. Students' dissatisfaction with the quality and level of course result in little improvement of the language. This validated the assumption that the present.

English course does not meet the students' expectations to reach the desired level. Pal, Halder, & Guha (2016) stated that ineffective classroom communication occurs when students and instructors are not at the same level of understanding, which

thus, impedes communication in the classroom. Instructors should ensure that the materials fit in with students' different language levels.

As for the 2nd item listed in the table above, there is a general consensus among the respondents about the irrelevance of topics to students' areas of specialization at FHREEUS. Most students responded negatively to the suitability of topics with their fields of study (57% strongly disagree). The topics must allow an approach that specifically involves petroleum production, renewable energies and earth science areas of study.

The respondents' answers to the 3rd item indicated that 72.58 % (between strongly disagree and disagree) of students felt that the objectives of the course are not articulated adequately. This may be interpreted that the course material is not related to their personal educational goals or to any other goals they can recognize as being important. It is inferred that the course is somewhat disorganized, that the topics do not match up together, and that there is no clear orientation. With well-defined course aims, students will have a clear statement of the goals and objectives of the course.

Another aspect that should not be ignored while dealing with the ESP courses is the organization and preparation of the courses. The results of the 4th item reveal that the majority of respondents (59.14 % = 55/93) strongly disagreed that the course is well-organised. The organisation of the ESP course is very important for achieving positive outcomes in the course. In order to provide a well-regulated course, the instructors need to structure the course more effectively. In teaching ESP course, the instructors should cope with three factors: selection of materials, types of exercises and establishment of a learning environment-motivation, which can determine the handling of the course and emphasise the content.

The informants' responses to the 5th item state that more than half of respondents claim that the current ESP course disregard their English language needs; 62.3 % strongly disagree and 20.5% disagree asserting that there exists a gap between the current ESP lessons and their English language needs. This, in fact, demonstrates that ESP course has not yet been successfully corresponding to students' needs; courses, which focus the teaching of English language needed.

Concerning the 6th item, the table above displays that 57 % of students answered strongly disagree that the ESP course prepare them adequately for professional success. This means that students expect a systematic proceeding of a job specific needs-based course to practise all the needed skills and relevant project-oriented activities in order to meet the job market requirements.

The purpose of the 7th item in the table is to find out whether ESP course helps students develop their English language skills. It is obvious that students, more than half of them (63.8 %) answered strongly disagree and disagree about the effectiveness of skills used in ESP course, whereas only 35.4% of them (between agree and strongly agree) with the skills developed in the classroom. Substantially, in ESP, it is a needs analysis that tailors which language skills students mostly need, and the course is delineated accordingly.

Furthermore, the students' responses to the 8th item shows that a considerable proportion of respondents, 56 % disagreed and 9.67 % strongly disagreed about the materials selected for the current ESP course while (26 %) announced their agreement. The respondents did not agree that the course materials contain adequate skills and knowledge needed by Petroleum, Renewable Energies and Earth Science students. The results also demonstrated that there is unavailability of effective Instructional materials,

which may increase students' performance at FHREEUS. It is obvious that students would prefer to use a variety of teaching materials such as hand outs, academic and occupational based materials, Internet and video materials, scientific articles, and audio-visual presentations to increase their motivation and participation.

As represented in the table above, the respondents' answers to the 9th item indicate that more than half 67.46 % of the respondents strongly disagreed and disagreed with the methodologies the instructor applied in the teaching process. However, 32.3% of students tend to be satisfied. This explains that instructors of English language in non-English departments as the case of FHREEUS need a sort of cooperation with subject specialists, as well as training in ESP teaching to get through the specific needs of the students.

For the 10th element included in table above, the majority of respondents (74, 18 %) exhibited a negative attitude towards the assessment tests because they believed that the assessment tools and methods were not effective and therefore, did not help improve their performance in English language; an issue that is very essential for their future job careers. This implies that the whole assessment process seems vague and it does not tell exactly where the learner stands. Logically, assessments in ESP classrooms are conducted to raise learners' opportunities to determine their strengths and weaknesses as they are faced with a variety of tasks that increase students' challenge to improve their skills and performance. Reeves (2000) considers that the focus on performance assessment is student's ability to apply his/her knowledge and skills to simulations that replicate real-world situations.

Finally, as for the 11th item, a very considerable number of respondents claimed that the time allocated to the English course per week was insufficient. The results revealed that a vast majority of the respondents 88.17 % strongly disagreed with the

amount of time spent in English language course. They felt that with one hour and half per week, it was difficult to deal with all aspects of the course.

Q. 7. How much focus does your English Language course put on the following skills?

Please rate (Tick \surd) on a scale from 3- too much / 2- about right / 1- too little

The purpose of this question is to find out which skills are the most implemented; the respondents were given the chance to choose different options.

Table 10

Students' Perceptions about the Focus of Skills in ESP Class

Skills	3		2		1	
	N ^o	%	N ^o	%	N ^o	%
a. listening	41	44.09%	26	27.96%	18	19.35%
b. speaking	9	9.68%	8	8.60%	75	80.65%
c. reading	44	47.31%	28	30.11%	7	7.53%
d. writing	14	15.05%	18	19.35%	63	67.74%
e. vocabulary	4	4.30%	13	13.98%	74	79.57%
f. grammar	10	10.75%	10	10.75%	73	78.49%

Reading and listening skills have taken a broad part in classroom application (47.31% / 44.09 %), leaving very little for other skills. However, practical skills (speaking and writing) have been the least practised skills in the classroom (9.68%/15.05%). Regrettably, there is too little implementation of the productive skills viz. speaking and writing, though they are considered as the most essential skills in language learning. Reading and listening are overstated whereas speaking and writing

are depreciated. ESP, particularly EST students need to acquire speaking and writing skills, because these two language skills are very important for the ESP learners to practise efficiently English language. It is widely believed that productive skills, speaking and writing are very essential in teaching ESP courses depending upon the students' needs and interests. Given the focus on vocabulary skill, many specialists might be surprised to learn that this area of teaching often neglected because it was thought that vocabulary could simply be left to be learnt by the students alone. Almost 80% of the students asserted that vocabulary teaching is practiced too little if ever in class. Language instructors have always misunderstood grammar instruction. The misunderstanding arises from the idea that grammar is merely a set of arbitrary rules regulating static linguistic constructions. However, more attention should be paid to grammar instruction, which most teachers continue ignoring it. In this study, 78.49 % of respondents reported that, in their ESP courses, instructors provided little instruction on grammar in classroom. Grammar is worth studying because it allows students to communicate their ideas comprehensibly and effectively in writing and speaking.

Q. 8. Indicate whether your ESP course help you to enhance the following English sub-skills. Tick (✓) only one choice for each statement.

Table 11

Students' Perceptions about the Focus of Sub-Skills in ESP Class

Sub-skills	YES		NO	
	N°	%	N°	%
a. listening to lectures	67	72.04	26	27.96
b. listening to speeches and other oral presentations	4	4.30	89	95.70
c. participating in class discussions	5	5.38	88	94.62

d. preparing and delivering oral presentations in classroom	3	3.23	90	96.77
e. practising reading of texts and other documents	48	51.61	45	48.39
f. doing reading exercises in classroom	43	46.24	50	53.76
g. writing down class notes during a lecture	9	9.68	84	90.32
h. writing compositions and making summaries in class	3	3.23	90	96.77

Among the sub-skills of listening, the results revealed that listening to lectures attained 72.04% and only 4.30 % of participants thought that listening to speeches and other oral presentations was not practised in the classroom. Listening comprehension focuses only on retaining information presented in lectures. However, the other results unveiled that the students seldom participated in discussions / debates (5.38 %) nor asked to give oral presentations in class (3.23%). Concerning reading sub-skills, the findings showed that practising reading of texts and other documents and doing reading exercises in classroom were rated successively 51.61% and 46.24%. As for the writing sub-skills, the data demonstrated that the respondents confirmed the researcher prior assumptions that only a few of them wrote down class notes during lectures (9.68%) and only 3.23 % of respondents who ticked “yes” for writing compositions, reports and summaries in class. Writing instruction is an essential component of any language learning curriculum. Nonetheless, writing is widely recognized as a difficult subject in second and foreign language learning. Writing skills are extremely important for communication; writing reports, or proposals as well as email messages are used for different purposes, especially in the modern world, where work and studies can be accomplished remotely.

Q. 9. Do you agree that the materials used in the course respond appropriately to the following statements?

Please rate (Tick \surd) on a scale from 4- strongly agree /3- agree /2- disagree

/1- strongly disagree or uncertain

Table 12

Students' Perceptions about Materials Implemented in the Course

Statement	4		3		uncertain		2		1	
	No	%	No	%	No	%	No	%	No	%
a. are original	10	10.75	17	18.28	53	57	10	10.75	3	3.23
b. contain practical information	10	10.75	12	12.90	23	24.73	25	26.88	22	23.66
c. are well sequenced in presentation	10	10.75	17	18.28	53	56.99	10	10.75	3	3.23
d. raise motivation	14	15.05	10	10.75	4	4.30	47	50.54	18	19.35
e. are relevant to the course objectives	7	7.53	17	18.28	20	21.51	25	26.88	24	25.81
f. help to understand the content	7	7.53	11	11.83	1	1.08	58	62.37	18	19.35
g. improve communication skills	3	3.23	9	9.68	9	9.68	53	57	20	21.51

h. are relevant to										
future job	9	9.68	10	10.75	10	1.75	46	49.46	19	20.43
situations										

Table 12 above displayed the analysis of the students' views on the utilization of teaching and learning materials in the classroom. As can be noticed from Table 10 participants expressed their disagreement with the materials supplied for ESP. For statement 1, the majority of students selected "uncertain" meaning that 57% did not agree or disagree that the course materials are real and authentic. According to Peacock (1997) and Brinton (1991), authentic materials provide language learners with a valuable source of authentic language input and act as a bridge between the classroom and the outside world. Carver (1983) added that ESP instruction does in fact require the use of authentic content in the classroom. Regarding the statement 2, half (50.54 %) of the students disagreed and strongly disagreed that the course materials contained practical information, while the other half chose "strongly agree" 10.75 %, "agree" 12.90 % , and "uncertain" 24.73% to the statement. For the item 3, only 18.28 % of respondents ticked "agree". This is followed by 10.75 % who chose "strongly agree" and the same amount for "disagree" and 3.23 % selected "strongly disagree" that instructional material were well sequenced in class presentations. For statement 4, the results unveiled that the course materials were not designed to increase the students' motivation in studying ESP course, 50.54% of respondents expressed their disagreement. Similarly, 52.7% of respondents chose "disagree" and "strongly disagree" that materials used in class are relevant to the course objectives. They also indicated the option of 'disagree'; 62.37% to the understanding of the content, 57 % to improvement of communication skills and 49.46% to fit in with future job situations.

Today's engineers are required to have a high competence level in communication skills. According to Helsvig (2012), ESP teaching aims at improving students' communication skills related to the students' discipline specialization

The results can be interpreted as evidence in favour of introducing modifications to the existing course in order to meet their needs. Considering the suitability of the course to learner's level, statistics indicate that material is not well selected and adapted to learners' proficiency level, 57% .This validates the assumption that the present English course does not meet the students' expectations to reach the desired level.

Q. 10. How would you assess your instructor's performance in the classroom?

Please rate (Tick √) on a scale from 5-Excellent / 4-Very satisfactory/ 3-satisfactory/ 2-needs improvement / 1- unsatisfactory

The aim of the above question was to determine how the students perceive their instructor's performance in class. Based on ten key elements of ESP teaching, the students were asked to assess the performance of their instructors. These items are listed in the following order:

Table 13

Students' Evaluation of their teacher's performance in Class

Criteria /Teacher's class performance	5		4		3		2		1	
	N°	%	N°	%	N°	%	N°	%	N°	%
1. shows mastery of the course content	10	10,75	25	26,88	10	10,75	10	10,75	38	40,86
2. displays a clear understanding of course objectives and topics	10	10,75	11	11,83	9	9,68	31	33,33	32	34,41

3. has an efficient style of course presentation	9	9.68	5	5.38	8	8.60	7	7.53	64	68.82
4. uses the materials appropriately	11	11,83	10	10,75	12	12,90	48	51,61	11	11,83
5. applies teaching methods which keep me interested in the course	10	10,75	11	11,83	12	12,90	20	21,51	39	41,94
6. uses multimedia (e.g., video) or technology (e.g., PC and internet) to present the course content	10	10,75	17	18,28	11	11,83	16	17,20	38	40,86
7. knows the answers to students' questions about the ideas and facts that he/she teaches	8	8,60	8	8,60	6	6,45	16	17,20	55	59,14
8. assigns course tasks and activities, which are effective in developing my speaking and writing skills.	5	5,38	20	21,51	13	13,98	13	13,98	41	44,09
9. implements assessment methods which adequately evaluate my understanding of the course	4	4,30	10	10,75	7	7,53	15	16,13	57	61,29
10. translates English scientific and technical terms into Arabic	5	5.38	76	81.72	1	1.08	6	6.45	5	5.38

Table 13 shows the distribution of the varying answers of the students concerning the assessment of their instructor's performance. Teachers regard students' feedback as a significant barometer of the quality of their instructional performance and the

curriculum (Surujlal, 2014). In most of the studies in higher education, recurring statistical data analysis representations such as using frequencies, percentage are implemented to evaluate ESP teacher performance.

As rated by the students, an average percentage of 59, 14 % (n=55) evaluated their instructor's performance practices in class as being unsatisfactory. The results displayed that the majority of students felt that their English instructors exhibited a moderate mastery of the course content with a weightage of 40.86 % for the option 'need improvement' and 11.83 % for 'unsatisfactory'. As Kimberly (2009) notes instructors should be able to provide students with relevant input, the instructors must be knowledgeable in their field of study. The mastery of subject content by an ESP instructor substantially determines the quality of teaching and subsequent learning. The teacher with effective knowledge of the course content increases his or her capacities to plan and teach the ESP course.

The results also revealed that instructors encounter difficulties in the classroom when they fail to set clear and achievable objectives. The teacher's failure to make clear and understandable objectives of the course accounted for almost 34.41 % of the cases who chose the option of 'unsatisfactory' followed by the response option 'need improvement' at 33.33 %.

Concerning the 3rd item, the students' perceptions of their teachers' course presentation style, are negative and unfavourable. The majority of the respondents (68, 82 %) ticked the rating option "unsatisfactory". Most research on the subject has assumed that presentation style is an important factor to consider while delivering lectures in class. It has an impact on both the level of engagement of the students listening to the lectures and the effectiveness of the content delivery.

Regarding the 4th statement ‘the teacher uses the class resources appropriately’, the students in FHREEUS mostly considered it with a negative attitude; 51.61 % chose ‘it needs improvement’ and only 11.83 % indicated ‘excellent’. Materials are regarded as one of the significant basics in language teaching, thus in order to achieve effective language instruction, ESP instructors need to develop some material based skills. According to Kitao and Kitao (1997), some of these essential skills are selecting, finding and constructing adequate materials, implementing, offering, and elaborating on materials in line with the needs of the students and the teaching setting. Materials are considered one of the basics in language courses, per se; ESP instructors must acquire specific material-based skills in order to fulfil effective teaching instruction.

The next two statements reflect a general opinion of ESP course in the higher education institution. The 5th statement revealed that most of the respondents perceived that their instructor’s performance in implementing effective teaching methods as average and weak. It is noticeable that many respondents focused the options ‘needs improvement’ and ‘unsatisfactory’ respectively with percentages of 21.51 % and 41.94 %.

For the 6th statement a about the use of technologies and multimedia, most of respondents view their instructor’s performance either it ‘needs improvement’ or ‘unsatisfactory’, successively with the percentages of 17.20 % and 40.86 %. This helps us to deduce that instructors still use traditional teaching aids like standing at the blackboard and talks to students or writing course notes, which the students dutifully copy in their record books.

When it comes to the instructor’s answers to students’ questions about the ideas and facts that he/she teaches, 59.14 % of respondents ticked the scale option

‘unsatisfactory’. Presumably, this attitude proves that the respondents’ instructors failed to provide satisfactory answers to learners’ questions raised in class. One of the reasons for this failure might be the fact that the instructors do not command the course content. We infer that they feel unprepared, doubtful and hesitant to answer the students’ questions

The 8th and 9th statements asked the participants whether or not the teacher ‘assign course tasks and activities, which are effective in developing students’ speaking and writing skills ‘ and ‘implement assessment methods which adequately evaluate their understanding of the course. The respondents’ responses were negative and unsatisfactory. As demonstrated in table 10, the majority of the respondents opted for the option “unsatisfactory” respectively with, 44.09 % and 61.29 %. This failure is probably ascribed to the problem that might be faced by teachers in teaching specialised English courses, at least from students’ opinion.

Finally, the students were asked to respond to the following statement: the teacher ‘translates English scientific and technical terms into Arabic’. The results showed that a considerable proportion of respondents (81.72 %) ticked the column “very satisfactory”. In the context of communicative language, teaching (CLT), where the best way for a learner to become proficient in the target language is to think in that language. Indeed, through the integration of translation, students can enhance their analytical abilities, gain a deeper understanding of problem-solving techniques, and improve their performance in terms of grammar and vocabulary (Leonardi, 2009).

Q. 11. Which of the following statements describe your ESP assessment testing?

Put a (√) for whatever is appropriate, you may tick more than one.

Please rate (Tick \surd) on a scale from 4- strongly agree /3- agree /2- disagree /1- strongly disagree or uncertain

Table 14

Students' Views on ESP Assessment Testing

Statements	4		3		uncertain		2		1	
	N ^o	%	N ^o	%	N ^o	%	N ^o	%	N ^o	%
a. the content of the test tasks was directly linked to the course content and instruction	10	10.75	7	7.53	8	8.60	62	66.67	6	6.45
b. the level of difficulty of the tasks was appropriate	12	12.90	5	5.38	9	9.68	61	65.59	6	6.45
c. I was provided with sufficient feedback regarding the achievement at the tests and exams.	8	8.60	3	3.23	70	75.27	6	6.45	6	6.45
d. assignments and tests assessed language skills and specific topics	9	9.68	5	5.38	70	75.27	5	5.38	4	4.30

As detailed in table, the students' perceptions on the fundamentals or principles that establish the specifications for assessment and testing in the ESP course development process, the students expressed their dissatisfaction with the aspects listed in question 11. The majority of respondents (66.67%) disagreed that the testing system implemented in the English language course was appropriate and effective because of the fact that the content of the test tasks were not directly linked to the course content and instruction. Kennedy (2007) explained that the connection between teaching,

assessment, and learning objectives helps to make greater transparency and significance for students' overall learning experience. Similarly, 65.59% of the respondents also expressed their disagreement that the level of difficulty of the tasks was appropriate. As for the two other aspects, which were providing sufficient feedback regarding the achievement at the tests and exams, and assignments and tests assessed language skills and specific topics, the majority of students (75.27%) gave a neutral response. It might be understood that the respondents either were less inclined to express their opinion. From the respondents' opinion, neutral creates a balance between agree and disagree.

Section 3: Suggestions for Improvement of the Course

Q. 12. In your view, which of the following measures can help solve the problems you encountered in your English course?

Table 15

Students' Solutions for ESP Course Problems

Statements	N° of respondents	% of respondents
a. modify the English course content	55	59.14
b. the objectives of the course should be revised	55	59.14
c. include all language skills particularly speaking and writing	76	81.72
d. include relevant topics and activities according to your needs and specialized discipline	85	91.40
e. adapt materials to make them more relevant	85	91.40
f. increase the time allocated for teaching English	82	88.17

Table 15 exhibits the analysis of the proposals in readjusting and refining the ESP course as a whole. More than half of the students (59%) thought that the revisions

and modifications of the course content should be made and managed. The *assumption of rational decision-making* is that the *decision maker* should be aware of all possible alternatives and solutions in order to remedy the situation through the improvement of the ESP course content. . Similarly, the same percentage of students (59 %) recognised that the course objectives should be revised and improved. Dudley Evans & Johns (1991) stated that learning objectives in ESP are mainly practical in nature and structured in accordance with specific students 'needs. On the other hand, the remainder of the participants did not opt for the modification of course content and objectives. This is because, in contrast to General English, the respondents were inexperienced and did not have enough background in the subject. This being the case, the students were confused about the topics that they needed to be covered or removed. In the matter of language skills , the questionnaire with the students indicated that while the content was mostly focused on listening and reading, the majority of respondents expressed their need to include and practise the skills of speaking and writing in the classroom (82%). The students probably considered these productive skills essential as they gave them the opportunity to practise real-life activities in the classroom. Table also displays the analysis of the suggestions about the adaptation and readjustment of materials and activities to the needs and specialized disciplines of the students. For the items d and e, the majority of the students (92%) suggested that the materials and activities to be used in the course should be more relevant to the context of their specialised disciplines. Concerning the time allocated for the English language course, almost all participants (88.5 %) suggested to extend the time allocated for teaching English. This would probably allow covering every facet of the English language course.

Q. 13. Which of the following skills do you think you should focus the most in your English language course? Please rate (Tick ✓) on a scale from

3- Very important / 2- Moderately important /1- Not important

The participants were asked to indicate the skills they need to practise more in their English language course. The respondents may choose more than one option. The results are presented in table here below:

Table 16

The Students' Preferred Skills

Skills/Evaluation	3		2		1	
	N°	%	N°	%	N°	%
a. Listening	55	59,14	20	21,51	18	19,35
b. Speaking	58	62,37	18	19,35	17	18,28
c. Reading	57	61,29	26	27,96	10	10,75
d. Writing	45	48,39	28	30,11	20	21,51
e. Vocabulary	57	61,29	30	32,26	6	6,45
f. Grammar	23	24,73	45	48,39	25	26,88

Overall, in table above, the results show that more than half of the respondents need all the skills for gaining more achievement. The rates indicate that all skills are important for students except for grammar. It appears clearly that the four language skills have nearly the same level of importance to fulfil students' target needs. Speaking was rated by students as the first primary skill they preferred to improve in their language course (62.37%), considering that speaking is usually undervalued in many ESP courses based on target situation needs analysis. Al-Tamimi and Shuaib (2010), in their research, believed that students are reading, writing, and listening skills and poor at speaking and communication skills. Reading was classified in the second position in terms of importance in students' discipline (61.29%). In fact, reading skills are needed to be

developed for science and technology students. Listening comprehension skills came next, as recognized by 59.14 % of the subjects. Writing was put in the fourth position with 48.39 %. There are many reasons students gave for avoiding the hard work of writing. One of the most usual obstacles is lack of time. Most students strongly claimed much more on skills such as reading or speaking. The students' need in taking training in speaking and reading is more influential than listening and writing. Another skill the respondents indicated as the most important element in their English course is learning more vocabulary in their subject field. The students found that the expansion of vocabulary, mainly specialised vocabulary has a major effect on their area of study. The result exhibited a higher percentage (61.29%). Richards and Renandya (2002), proved that vocabulary is a core component of language proficiency and provides much of the basis for how well learners speak, listen, read, and write'. With a score of 24.73%, the respondents felt that practising grammar in class was the least preferred item. The role of grammar in ESP teaching is often misunderstood since teaching grammar is not thought to be associated with ESP (Dudley-Evans & St John, 1998). However, it is vital to highlight a number of significant grammatical constructions that the texts illustrate as well as a few more that might be encountered in verbal communication in an ESP English course.

Q. 14. In class, how would you like to learn your English language lessons? You may tick more than one choice.

The question (14) was intended to find out students' preferred learning strategies. The analysed data are presented in the table below.

Table 17*Students' Preferred Learning Strategies*

Statements	N° of respondents	% of respondents
a) listening to lectures	55	59.14
b) copying from the board	54	58.06
c) taking notes from power-point presentations	53	57
d) taking notes from teachers' instructions	49	52.69
e) reading class materials	53	57
f) conducting class debates and discussions	47	50.54
g) using translation in classroom	39	41.94
h) using internet resources in class	54	58.06

As shown in table 15 all ESP teachers acknowledged the importance of understanding the students' different learning style preferences and their role in attaining academic success. The first most preferred learning strategy (59.14 %) mentioned by the respondents was listening to lectures. In universities, lectures are used regularly. In general, students have to understand and retain the information in order to learn from lectures. According to Kaur (2011), lectures are believed to be easier, more efficient, and more flexible than any other kind of instruction. However, they are teacher-focused rather than student-centered, which suggests that students have only a passive role in the learning process by listening to and executing instructions. Therefore, the lecture needs to build a bridge between students' knowledge background and the new material or subject topic of the lecture (McKeachie and Svinicki, 2014). Furthermore, the results of the items (b,c,d) showed that the majority of students with almost similar percentages (58.06 % , 57%, 52.69%) strive to engage in the learning strategies like copying from

the board, taking notes from power point presentations, taking notes from teachers' instructions in terms of course delivery methods. Research suggests that teacher's teaching strategies can impact student learning and motivation (Bolkan & Griffin, 2017; De Meyer et al., 2014). In the same manner as with the previous items, reading class materials, another learning strategy, is also approved by the respondents (57%). With this strategy, activities are used to enhance self-discovery and practise critical thinking skills, which can often help students develop an effective understanding of the topic. Based on the results of the item (f), the students expressed favourable attitude (5.54%) towards classroom debates and discussions.. As an instructional method, debating engages students in expressing their views from two competing perspectives with the goal of contradicting each other's arguments (Chang & Cho, 2010). However, the students' responses towards the use of translation in classroom revealed that 41.94 % of the respondents wanted it. Translation is an efficient ESP learning method if the load of translation done is well proportioned, activities are well thought out and the student's profile and needs in each specific course well- rationalized. Lastly, in item (h), the findings revealed that the attitude of students towards the use of the internet was positive and high (58.06 %). Indeed, the researcher realised that all of the results displayed in the above table demonstrated how keen the students were to use a variety of teaching strategies in the classroom. Unfortunately, universities lacked the funding to supply the required materials.

Q. 15. What types of materials do you think the course should include?

You may tick more than one choice

Table 18*Students' Suggestions for ESP Course Materials*

Statements	N° of respondents	% of respondents
a) text-books	30	32.26
b) teacher-made materials such as handouts and worksheets	50	53.76
c) video learning materials	60	64.52
d) materials from internet such as websites, texts, manuals, instructions and articles	83	89.25
e) all the above	42	45.16

Table exhibits the analysis of suggestions of the usage of materials for the FHREES course. Of the 93 students who responded to this survey question stated that the materials used in the classroom should be modified to include video learning materials and all types of internet material such as websites, manuals and journal articles. Presumably, Internet helps access to more up-to-date resources than are available in print textbooks. In addition, 53.76 % of students stated they would prefer to continue using hand-outs and worksheets in future courses. This attitude of respondents maybe due to the effectiveness and usability of such materials. However, only 32.26 % of respondents claimed that they would need a course book that may help them to learn systematically.

Q. 16. How do you prefer to use the material mentioned in the previous question in class?

Table 19*Students' Preferred Ways of Using Materials in Class*

Statements	N° of respondents	% of respondents
a) group discussion	49	52.69
b) PC and multimedia based learning	49	52.69
c) oral presentations	32	34.41
d) face-to-face lecture	55	59.14

Based on the data indicated in the above table, it is noticeable that 52.69 % of respondents favoured group discussions in class. Cengiz et al. (2011)) state that there is a need to achieve an accurate and deep understanding into how teaching with small group and whole-class discussions increases students' learning of specialised subject matter. The same percentage of respondents (52.69 %) preferred language PC and multimedia based learning. Whereas, only 34.41 % of students suggested Oral presentations to be practised as a learning activity in classroom. For the last item, the results unveiled that 59.14 % of students still wanted to use a face-to-face lecture method in class. Recognizing that lectures are fundamentally pedagogical, spoken and social events, we should work to improve them rather than aiming to stop using them.

Q. 17. How do you want the quality of assessment to be improved in your English language course? You may tick more than one choice.

Table 20*Improvement of the Quality of Assessment for ESP Course*

Statements	N° of respondents	% of respondents
a) should be relevant with the objectives of the course	70	75.27
b) should be appropriate to your level	78	83.87
c) should include only short answer tests	85	91.40
d) should include what you have already learnt and what you need to learn	49	52.69
e) should provide specific and timely feedback on your work - not just a grade.	29	31.18

Data analysis revealed some suggestions about the most effective and suitable assessment techniques for the FHREES course. 75.27% to 91.40 % of the respondents felt that the assessment tests should be relevant with the objectives of the course, be appropriate to their level, and include only short answer test. In item d, 52.69 % of students suggested that the assessment should reveal what they have already learnt and what they still have to learn. However, it was surprising to observe that only 31.18 % of the respondents suggested providing class feedback. This could be due to the reason that the students never practiced it in class and thus ignored its value in learning. R. Butler, (1988) found that feedback through remarks alone generated learning profits, whereas grades alone or giving praise did not.

Q. 18. In your opinion, how much time will be appropriate for teaching and learning English in a week? Tick (✓) only one choice

Table 21*Time Needed for ESP Course*

Statements	N° of respondents	% of respondents
a) one course session	9	9.68
b) two course sessions	78	83.87
c) three course sessions	6	6.45
Total	93	100

This question is linked to the one previously mentioned in the questionnaire, in which the students were asked if they considered the amount of time assigned for the English course was sufficient. The majority thought it was not enough. Moreover, the analysis of the suggestions showed that the period of English language teaching in the curriculum must be lengthened. The results indicated that the majority of students (83.87%) requested the one session per week (lasting one and a half hours) be extended to two periods (three hours per week). This is because; there was ineffective distribution of time for each topic and practice. Presumably, this portion of students needed more time to understand and practise all the elements of the course. Out of all the respondents, only 9.68 % opted for keeping one course session and 6.45 % for the extension to three sessions.

Q. 19. Please give, if any, two additional suggestions on how to improve the effectiveness of the English course.

Students were given the chance to communicate their opinions and suggestions in question 19 by reporting on and making recommendations for ways to enhance the ESP teaching/learning process in their faculty.

- 1- Exploring the use of translation as a method to learn English language
- 2- Providing useful speciality knowledge
- 3- Considering the needs of the students when designing the course.
- 4 - Organising workshops for writing technical reports.
- 5- Providing learning resources in the library of the faculty.

Part Two: The interview

Data Analysis Procedures for Interview

In analysing the interview data, the researcher carried out the following steps:

1. Transcribing the interview
2. Identifying the features of the current ESP course perception in the interview transcription
3. Calculating all the answers that have been obtained. Total answers are divided into whole number of the interviewee and multiply by 100 to get the percentages
4. Presenting those answers into the form of table percentages

Findings and Analysis of the Interview

This section now will examine the results of the second instrument, the interview. The interview consists of three (3) parts, the results of which will be discussed separately. As discussed in Chapter 3 the second and third parts of the structured interview were arranged to support the information obtained from the questionnaire through triangulation. The informants consist of four (4) lecturers from three

Departments belonging to the Faculty of Hydrocarbons, Renewable Energies, Earth and Universe sciences (FHREEUS). The analysis was performed in terms of the views and the proposals of the instructors about the FHREEUS ESP courses whether they are relevant to the students' current academic needs and their future job needs.

Section 1: Teachers' profiles (degree of proficiency, experience, status and training in ESP field)

While researching learner needs, it is essential to take into account all the associated aspects. Thus, the first part of the present interview includes an overview of the instructors' profiles regarding their degree of proficiency, experience, status and training in ESP area. For finding out whether instructors were able to provide the knowledge necessary to optimise students' learning experiences, information about their educational qualifications, experience and training was also included in the interview.

Questions one, two and three. Instructors' qualifications, status and experience

Q. 1, 2 and 3 help the researcher to find out more about the instructors' teaching pathways by asking them about their qualifications, ESP experience and status.

Table 22

Instructors' Qualification Degree, ESP Experience and Status

<i>Teachers faculty</i>	<i>Gender</i>	<i>qualification</i>	<i>Status</i>	<i>ESP experience in the</i>
<i>instructor 1</i>	<i>female</i>	<i>doctorate degree</i>	<i>part-time</i>	<i>5 years</i>
<i>instructor 2</i>	<i>male</i>	<i>doctorate degree</i>	<i>full-time</i>	<i>7 years</i>
<i>instructor 3</i>	<i>male</i>	<i>doctorate degree</i>	<i>full-time</i>	<i>5 years</i>
<i>instructor 4</i>	<i>female</i>	<i>master degree</i>	<i>part-time</i>	<i>2 years</i>

As far as the first question is concerned, the table mentioned above presents the data, which revealed that 75 % of the respondents possessed a doctorate degree, while only one instructor held a master degree of English language. Concerning ESP instructors' experience, it varied in length, from two years to seven years. As for instructors' Status, the results showed that 50 % of the participants were part-time teachers, and the other half (50 %) was full-time lecturers. Since two instructors did not have a full-time position, this situation may hinder their attempts to develop effective ESP courses.

Q. 4. Have you ever participated in a teacher-training programme, in ESP English?

This question was formulated to find out whether instructors had followed any ESP training during their teaching career.

Table 23

Instructors' Responses about ESP Training

Instructors' responses	Frequency	Percentage %
yes	0	0
no	4	100

As shown in the table mentioned above, none of the instructors had received any training or had ever participated in workshops or on-site training in the area of ESP. As a result, they did not have any experience in teaching English for science and technology students. This is very puzzling, as one feels apprehensive of how it is possible to teach the subject of ESP without having been trained in the discipline. In this regard, all the four (4) interviewed instructors expressed a strong desire to attend ESP training

programmes either before or during teaching the subject. The focus should shift to looking into the appropriate training programs that ESP practitioners could receive in order to assist them overcoming the difficulties they encountered in teaching ESP. The interviewees stressed that the programme should concern all stakeholders and thus, it may benefit them with expert skills or knowledge. According to Ennaji (1997), a teacher must have rigorous training in the ESP instructional strategies and the development of learning resources with internationally recognised scientific principles. Furthermore, not all Engineering departments have language programmes and offer effective ESP courses. This makes things harder for them to select the appropriate material and implement effective methods of instruction, like the topics and strategies that fit in with ESP approach. Robinson (1991) explained that ESP is now recognized as a distinct activity that combines practice, preparation, and education. It encompasses three main knowledge domains: pedagogy, language, and the learners' particular field of interest, such as law, medicine, marketing, and others.

To understand more the situation, it should also be mentioned that half of instructors in ESP are EGP teachers and the other half consists of subject specialist teachers. Therefore, their transition to the ESP area occurs abruptly and approximately (Stevens, 1997).

We present here below some responses of the participants:

Teacher 1 stated.

For two semester, I was an ESP instructor in the department of earth science, but I never went to any ESP workshops or training.

The instructor noted that although she had some experience in teaching English to geology students she was never asked to attend any training for ESP instruction.

Furthermore, the educator two (2) mentioned:

Attending training is an excellent opportunity for teaching development. Unfortunately, I never participated in any training for the teaching of English for Specific Purposes.

In this vein, she also confessed that she did not take part in any ESP training and claimed that she was willing to engage in ESP training since it would help her improve as an ESP instructor.

Regarding this, Teacher three (3) (interview) clearly expressed that instructors must put in the work themselves.

I should review and prepare for all of the material because I am not familiar with it. In any case, the course content should follow a perfect pattern that can be methodically trained for. Higher education faculties do not provide any training to teachers; instead, it is delivered autonomously. Teachers must put in the work themselves.

Once more, the fourth instructor's experience learning about ESP fully demonstrates this:

I gradually became accustomed to it because it initially requires more labour. You should do more research about ESP. There are times when you enter a field of study and find yourself in a conflict between understanding your English and understanding the students' discipline.

Section 2: ESP Implementation and teachers' Perceptions

Q. 5. Do you find the materials used in the ESP course are?

a. within your students' level b. below their level c. above their level ?

The choice of the materials the teacher is going to use in the classroom must fit in with the students' language proficiency. Weak learners require a lot of practice with simple texts. Intermediate students can handle texts that are a little complex, thus the teachers should choose the assignments that promote individual work and free expression. The instructor can foster advanced students' creativity by using a range of authentic and complex materials. The proficiency level of the learners also impact on the amount of time spent on some activities, the quantity of new vocabulary introduced, the types of activities, and other course aspects. Unexpectedly, all the teachers (100 %) reported that the materials they taught to their students was “beyond their proficiency level”. This suggests that the ESP material if not properly selected the students cannot understand it. It can be concluded that there is a negative correlation between classroom materials and students' English proficiency. And their need is influenced by their comprehension because the materials offered in class is beyond their level.

Q. 6. Do you think that English is essential to your students in their academic study and target professional careers?

All the interviewed instructors asserted that mastery of English language is very important for the academic and professional development of their students. In his vein, the instructors alluded to the fact that the course materials should be examined in light of both the learners' immediate needs -in-study- and their future professional needs -post-study-. The current FHREEUS English course may be helpful to students in their future professional careers, but not significantly, it was acknowledged by the instructors that the current English course taught in FHREEUS needs improvement as a tool that gives access to global markets, scientific knowledge, and competence. Furthermore, all the respondents thought that learning English enhances career advancement, and added that it offers a variety of career options. The concern is not only with good academic practices but also with using them to develop future employment objectives.

This demonstrates that all the interviewees are conscious of how beneficial the ESP course is for addressing the needs of students studying earth science, petroleum, and renewable energies. Additionally, some participants mentioned two additional reasons during the interviews: learning English for postgraduate studies and target professional careers.

All of the instructors stated that engineering students took ESP course for developing their academic studies as English is the primary language of instruction in scientific and technological fields and adequate English proficiency is important for understanding the content of earth science, petroleum, and renewable energies topics. Moreover, all technical literature and books are available in English. Teacher 1 noted, "Studying English can certainly assist students with their petroleum area." In a similar

vein, teacher 2 explained, "ESP enables students to improve their academic skills." Teacher 3 argued, "The ESP course can give engineering students skills to enhance their scientific research skills." Teacher 4 added. "English is still the main language of scientific research in the world."

Teachers gave a range of responses to the question indicated above. According to the interviewees, the disciplines of earth science, petroleum, and renewable energies require English for a variety of reasons. The other main goal of learning English language, for example, is also to enable their students to develop their professional communicative skills. They added that emphasising communication skills in an ESP classroom could lead to more social interactions and future job opportunities. Practising speaking and writing skills in class will help students to communicate succinctly and clearly. These skills are very essential in the workplace and during job interviews.

Students' professional development is significantly impacted by English language. This latter is now the most widely used language in petroleum, science, technology and other industries.

For maintaining students' interest and enthusiasm, instructors expressed an urgent need of training in offering and performing work-based learning activities in order to assist students acquire specific skills, particularly to meet the communication requirements of the workplace. Work-based learning can contribute to bridge the gap between their academic studies and future job careers. This can help students build professional skills they need to increase in the workplace. It has been emphasized that teachers must receive training in the newest instructional techniques and technological advancements -professional needs- Regarding the recommendation that the course of study should incorporate instruction in the newest instructional technology and cognitive

learning strategies such as problem-solving skills, satisfying societal demands, and students' self-realization.

Q. 7. Does the present ESP course help your students to follow the contents and skills taught in English in their academic disciplines? (i.e. to take notes, understand lectures, understand technical vocabulary, write summaries and reports, etc.). If yes, to what extent?

The interviewees were also asked to determine whether the English language course helped the students to follow, the contents and skills taught in their academic disciplines. The average percentages based on the practised tasks are summarized in the Diagram below. The findings indicated that understanding lectures was the most important step for three interviewed instructors (75 %). for the remained teacher (25 %), the most essential item was "taking notes during the lecture. However, all the teachers (100 %) suggested the task of "understanding technical vocabulary" as the most vital skill that was carefully followed by the students. Concerning the task of "writing summaries and reports", it comes last. There is poor consideration of the potential impact of this task on learning ESP. Lastly, all four (4) teachers mentioned that students have low language proficiency especially when it comes to writing tasks and grammar usage. That being the case, these skills were disregarded and hardly ever used in class. Street and Stang (2009) reported that research consistently demonstrates that the instructors feel uncomfortable about teaching writing and will try their best to avoid doing so.

Q. 8. Did you face any problems while planning and teaching ESP/EST course? If yes, what?

The results revealed that only one instructor claimed he did not encounter obstacles when designing and teaching his ESP courses. However, a majority of 75% (n= three (3) interviewees) of the respondents acknowledged that they face major difficulties while planning and delivering the course. The interviewees reported that they faced difficulties in making their students practice writing in English, and making them speak English with native speakers and their classmates, and listening to a recorded speech is really a problem. The instructors argued that these weaknesses were because most lectures focus on terminology and translation and sometimes some sessions are fully devoted to technical lexis. They added that the real barrier is their poor English language proficiency.

The following instances illustrate some of the obstacles instructors typically face in planning and teaching ESP courses:

- The difficulty of constructing ESP course material according to the needs of the students
- The level of students' English language proficiency is very average, if not poor.
- The number of semesters in the ESP course does not meet students and lecturers' expectations.
- Lack of in-service training
- Absence of a study syllabus
- Difficulty in obtaining ESP textbooks that are suitable for students' needs

- Difficulty in implementing teaching methods in ESP courses
- Insufficient time allocated for English language course
- Students' low Motivation in learning English language
- The Institution (faculty) policy concerning the ESP course curriculum has not been clearly defined.

Q. 9. Which teaching method (s) do you, as an ESP teacher, use in classroom?

Why?

None of the teachers mentioned using a specific teaching method. Nonetheless, they noted that they had consistently adhered to certain procedures when creating their ESP lessons, such as identifying their students' needs, outlining the course's goals and objectives, selecting teaching resources, and specifying assessment tools. In this vein, one teacher asserted that ESP involves a multitude of elements when attempting to determine what and how to teach. However, Instructors must use a particular or mixed strategy that best fit the teaching situation and the learners' needs. Another educator suggested that rather than focusing on just one type of teaching method, ESP instructors should tailor their teaching methods to accommodate various learning preferences and styles of their students. The teacher 3 argued that Lecture is not always effective and never should be. She added that she applied Task-Based Language Teaching (TBLT) and mini project methods in his teaching of ESP. She discovered that forming groups to perform particular tasks is more engaging for students. In fact, group assignments can help improve class dynamics and lessen some of the stagnation of 'spectator' lectures. Task-based learning, as defined by Richards and Rogers, emphasizes communication through

task completion. When given a task that genuinely interests them, students are motivated to complete it using only the target language and the lessons they have already learnt.

The last teacher interviewee claimed that he utilized a variety of methods in the classroom according to the context, students' needs, ESP teaching standards and students' learning abilities. The problem is how he would implement the method he chose because of ESP specific content and learners. This always necessitates adapting the language to particular subjects. Instead, he chose to focus on only one method:

I prefer to implement CLT approach in class. I believe that using CLT in the classroom would be an effective method to maintain lower level students' motivation. The goal of communicative teaching is to improve students' language skills while enhancing their reading, writing, listening and speaking.

In this context, Richards & Rodgers (2001) explained that the goal of communicative language teaching (CLT) is to enhance communicative competence as the end goal of language instruction and develop procedures for teaching the four skills that acknowledge the connection between language and communication.

Q. 10. In the course of your current teaching, do you occasionally use translation from English language to French or Arabic?

All the instructors have advocated the use of translation activities in ESP class. One teacher participant expressed her choices regarding the use of translation in the classroom in the excerpt that follows:

I frequently translated English technical terms into Arabic. This was enjoyable to me. Translating has never come easily to me; therefore, this requires making challenging efforts. I find that my students learned more quickly and easily when I translated the scientific words into my first language. It also helped my students to learn and understand terse vocabulary.

Another teacher participant, as the following passage indicates, emphasised the actual advantages of translation:

I find helpful to have some technical English words recorded after texts and gave their Arabic equivalents. In my opinion, a dictionary-style glossary of English words and their Arabic meanings would be beneficial to my students. The students would memorise the English terms with greater ease if I utilised translation.

Regarding the use of translation in class, a third lecturer reports that she supports using the native language in the classroom to translate some specialised vocabulary found in texts.

Translation had no role in the communicative language instruction in the past. It is essential to acquire the Arabic equivalent terminology. Using translation in class allows switching between languages, and it can become necessary if the learner desires to use the language at work. Knowing both meanings is a

prerequisite to being able to switch between languages quickly. The student will not be able to switch to the English language if he is unaware of the meaning in Arabic. There is no sense to know the word "sedimentation" in English if one does not understand it in Arabic language because it will be difficult for them to align the two meanings

Because of the negative connotations associated with the grammar-translation method, there has been very little research on the use of translation in ESP teaching and learning, despite the fact that it is an essential element. Many researchers have emphasized the benefits of using translation in foreign language instruction since the turn of the twenty-first century. According to Marinov (2016: 227), translation is an activity or strategy that both language teachers and learners naturally use. Therefore, despite certain drawbacks, its potential should be investigated and utilized as it may aid language learners in better understanding their teacher's actions when switching between the two languages and thus point out areas that may require development. Any course pertaining to ESP teaching and learning must be built around the needs of students (Dudley-Evans and St. John 2012: 4). These particular needs determine the choice of resources and instructional strategies.

Q. 11. What is (are) the most disregarded language skill(s) in your English language course? Why?

The instructors' responses were interesting; they are presented as follows:

Table 24*The Most Disregarded Skills in Classroom*

Skills	Rate (%)
Listening	25
Reading	25
Speaking	75
Writing	75
Specialist vocabulary	25
Grammar	75

Speaking, writing and grammar could be referred to as the most neglected skills in the classroom as the majority of interviewees' responses confirmed this weakness. There is a real variation in the answers to this question; three (3) instructors stated that they put greater importance on reading, comprehension, and vocabulary. This is not surprising given that they teach through course lectures and the amount of students per lecture is difficult to handle. Nonetheless, one (1) instructor assumed that he utilises all the skills in classroom tasks and activities by using task and project-based learning methodologies. Table above also revealed the productive skills and grammar are neglected and almost never practiced in class; 75 % for speaking, 75 % writing, and similarly a high rate in grammar (75 %).

It is essential to balance these language skills for a variety of reasons. First, it promises comprehensive language acquisition. A learner's ability to use the language successfully in all situations may be restricted if they only concentrate on one or two skills. Second, it accelerates students' productivity. Integrating all the language skills is the perfect way of boosting the complex cognitive processes of students involved in language learning, which goes beyond simply learning words and terminology. The

goal of the current integrated skills teaching models, according to Hinkel (2010), is to improve students' accuracy, fluency, and sociocultural communicative competence. In this respect, the first supporter of integrating language skills, Widdowson (1978), identified that language use occurs in discourse and particular social contexts rather than in discrete "units.

Q. 12. Do you use technology (Power Point, Overhead Projector, Computers, Internet sources, etc.) in your class? Which one(s)?

Teachers cited a variety of difficulties integrating ICT into their lessons, for example the shortage of computer equipment and the non-availability of other technological tools (data display, TV monitors, and laser pointer. They concluded that there is still lack of broadband Internet access. Teachers cannot be expected to overcome the barriers preventing them from implementing ICTs without both effective technological support in the classroom and other needed resources. (Lewis, 2003). All the four interviewees claimed that they were not adequately trained in using ICTs in a classroom context. In similar fashion, Beggs (2000) found that one of the top challenges for teachers' use of ICT in teaching was the inexistence of training. In line with this argument, ICTs are essential resources for developing research skills and speeding up students' acquisition of course content. Using visual aids in lectures is crucial because it makes the delivery process easier and encourages students to think critically. Though the difficulties encountered, most of the instructors (75%) who answered the question indicated that they were enthusiastic about using these technological tools in their ESP classes,

Q. 13. What types of assessment do you implement in the classroom? (e.g., quizzes, tests, mid-term exams, mini projects, in-class exercises, etc.)

In general, the four (4) instructors' responses unveiled two primary assessment methods they utilized in ESP classes, particularly formative and summative assessments. The issues of assessment procedures implemented by the lecturers in their ESP classes were addressed in the interview questions thirteen (13) and fourteen (14), which are thought to be another focus of this study. Assessment as an essential component of classroom instruction, it occurs in conjunction with other teaching procedures. It provides feedback that can help instructors identify their strengths and weaknesses, and accommodate their teaching strategies accordingly.

Having asked the instructors about the types of assessment tools they practised in class, the data from the interviewees showed that each instructor implemented different assessment tools, varying between oral presentations, quizzes, tests, midterm exams, mini projects, in-class exercises, and portfolios. In this regard, two instructors stated that, In addition to tests and quizzes, they use classroom exercises and occasionally oral presentations and sometimes ask their students to prepare min- projects on a specific discipline-related topic.

Another teacher respondent reported that:

At the beginning of my ESP teaching career, I tended to favour only summative assessment methods, but I have since changed to use methods that are more formative. Rather, I attempted to use authentic assessment model to demonstrate how knowledge and skills were applied directly. When students complete real-world tasks, they are demonstrating the meaningful application of their knowledge and skills. These tasks involve solving issues that professionals and engineers faced in their fields in an

efficient and innovative manner. A rubric is utilised to assess student performance.

For the remained teacher, he merely mentioned mid- term exams and he occasionally used some short activities in the classroom. In opposition to the teacher's claim, many experts argued that assessment for learning is not reflected in exams. According to Ornstein & Hunkins (2009), testing is an example of a behaviourist model that is teacher-centred rather than learner-cantered. In this way, students take on a passive role as they respond to the circumstances presented to them. As a result, researchers wonder if tests help students learn. Exams also impede careful planning of information that necessitates constant drafting and redrafting (Carless (2015).

Q. 14. What is the purpose of the assessments you practice in class? (e.g., to evaluate student learning? to provide feedback to teachers? To provide feedback to students? Or just to grade the students?

Three instructors of those who participated in the interview (75 %) stated that the main goal of the assessment they practise in class is to come to decisions about teaching and learning, This means that teachers implement classroom assessment as an essential resource for guiding them in terms of what exactly needed teach later and how to teach it more effectively. Many scholars, like Chappius and Stiggins (2002), proved that the main goal of classroom assessment is to inform judgments about instruction and student learning. They added that the input from classroom assessments should be used to improve the methods that courses were delivered and learned...

The three other teachers mentioned that they were providing their students with feedback during class. Dudley Evan and St John (1998) recognised that continuous assessment is vital because it gives both teachers and students feedback on the work

completed in the classroom as well as grades. This attests that in-class feedback enable teachers to assess how well their students are following along and understanding the material, after which they can modify their lesson planning and instruction as needed.

Lastly, however, the remained instructor (25%) revealed that he just provides mid-term tests, end-of-course tests and final written exams to assess students' learning achievements. He added that he never provided any elaborative feedback. His feedback was constrained to yes/no and right. Pinchok & Brandt, 2009; Vadivel et al., 2021 argued that Summative assessments are used to objectively assess learners' accomplishments and various language skills, but they are insufficient to determine their progress and identify their main areas of weakness, and this is what formative assessments are all about.

Q. 15. Do you find the time allocated to the ESP course can suffice you cover all the course aspects in class?

The fifteenth (15th) question is about the teachers' opinions in regard with the duration of the ESP course. Two instructors (50 %) did not worry about the weekly time allocated to the ESP course. However, they clarified that it was not necessary to spend the same amount of time with each group, even if the same content was used together with comparable additional items. They added that when timing is concerned, in a heterogeneous ESP class a teacher should assign and manage time differently and should make every effort to meet the demands of every student.

For the two other instructors, the data revealed that they wanted more time (two sessions per week) to cover all the elements of the course and make sure that all of these elements are addressed and discussed. When it comes to timing, an instructor in a

diversified ESP course should manage time differently and respond as best they can to the needs of each individual student. Therefore, the primary goal is for students to acquire the necessary language skills. That would be far more significant than ensuring that every element listed in the course is covered. When students reach a high level of proficiency, it is imperative that instructors provide them extra exercises when the classroom session has terminated.

Section 3: Solutions and Suggestions

Q. 16. In your view, how the following course aspects can be enhanced? Do you have any recommendations?

Course Content

All FHREEUS instructors expressed a strong desire to review and readjust the current ESP course content and insistently demanded to be provided with more relevant courses and skills development on all of those specific areas of study and concepts by determining the true needs of what English will be used for and where. They all agreed that the course content should be more specific and relevant to the students' areas of study.

One of the most important decisions in the design of ESP course is choosing the instructional content. Selecting teaching and testing materials is a difficult task that necessitates a thorough understanding of the learners' field of interest. In contrast to General English, ESP content is focused on the language, vocabulary, grammar, register, abilities, and discourse appropriate to the learners' discipline. Therefore, in order to create engaging content that encompasses all the essential elements of learning, the language instructor and the specialist teacher must work together. This well balanced

blend of real content, or language-related content, and carrier content, or discipline-related content, fosters students' learning and boosts their motivation.

In other words, ESP or EST refers to the teaching of language with a strong emphasis on practical applications, with the aim of achieving particular language skills through real life situations so that students can utilize the language in their future careers or comprehend contents pertaining to their field of specialisation. Thus, its function includes, among other things, giving students the chance to acquire specialized vocabulary and discourse types relevant to a subject area.

All of those investigations made it possible to identify the characteristics and linguistic components that set the context, situation, and specialty apart from one another. These elements could then be used as the base for the conception of the course that would, among other things, be what distinguishes an English course for a specific field. Therefore, the adage that is still applicable, 'Tell me what you need English for and I will tell you the English you need for' (Hutchinson & Waters, 1987, p. 8).

Course Objectives

All instructors insistently claimed that the current course objectives are not well-defined and clearly formulated. They strongly suggested proceeding to the necessary readjustment of this essential component of the course to make the course objectives more understandable and achievable. They explained that the course objectives should be specific, measurable, and established from both the learner and instructor's perspective. They also mentioned that effective course objectives should explain the knowledge learners are expected to acquire or construct. Learner outcomes should also be discussed in light of the course objectives. In simple words, learning outcomes in ESP are explicit statements of the knowledge students are asked to acquire and utilise in

their respective fields of study. (Du & Wang, 2019). The findings of the needs analysis can be used to determine and state clearly the course objectives. ESP was designed for adult learners expecting to take interesting future careers; therefore, the objectives should be in line with those needs. Furthermore, the course objectives can also be shaped by taking into account the analysis of the difficulties that the students faced. The instructor is the only one capable to decide upon the objectives of the course after having collected exhaustive data from needs analysis. First, it is important to distinguish between goals and objectives. The former means the general objectives of the course. However, the latter explicitly describes the skills the student will acquire and demonstrate at the end of the course (Frendo, 2005:42). The objectives of the courses delivered to engineering students can be conveyed in terms of achievement and performance. The language skills and abilities that students should have achieved by the end of the course are referred to as learners' performance.

Materials

After having, assessed learners' needs and determined the objectives the ESP instructor must choose some other materials to assist learners in achieving the course objectives (Ellis & Johnson, 1994). In this regard, most of the instructors (75%) suggested including more materials in the ESP course currently taught to the students of Petroleum, Earth and Universe Science and Renewable Energies fields of study. The instructors expressed the view that the ESP course materials currently implemented in classroom are inappropriate and their utilization is very limited; it does not cover all the course topics. Therefore, they suggested integration of supplementary materials in order to fill the deficiency of the current materials. Bocanegra Valle (2010) noted that materials are especially useful in ESP courses because they play a vital role in exposing

students to the language of a particular discipline as it is actually used, as Dudley-Evans and St John (1998) established it, They serve as a source of "real language,"

Q. 17. Do you think that is essential to teach engineering students communication skills in order to cope up with the requirements of their field studies and future professional careers? Please, explain.

One of the main objectives of the communicative English course is to give the students the tools they need to communicate effectively in both every day and professional contexts. Communication skills are essential to engineering students' education because they help them learn and prepare them for their future careers.

In general, all the four interviewees felt that communication instruction is very essential for petroleum, renewable energy and earth science engineering students. The ESP course adequately prepared them to meet the requirements of their field studies and future professional careers. They added that communication skills like oral presentations and teamwork have a big impact on the success of graduating engineering students as well as their academic advancement in their disciplines. In addition, Interviewees put a strong emphasis on the goals of teaching and learning process in preparing students for experiences related to the their professional careers, such as creating technical reports and oral presentations. Lastly, the teachers mentioned that small discussion groups are also required in order to obtain experience with group collaboration arrangements. Cooperative learning environments have been widely recognized by teaching-learning strategies for the useful learning outcomes they actually create (Gillies, 2006; Johnson & Johnson, 2002).

Q. 18. Do you prefer teaching English through the implementation of a. Hand-outs and other printed materials b. Audio -video materials c. Internet sources d. Board e. other ICTs?

Teachers endure a lot of hardships and stress of to keep up with the latest technological advancements and innovative teaching aids due to changes in student learning styles and the different types of teaching media that are not usually accessible. All the interview participants (100 %) announced reticently that they favoured the use of hand outs and other printed materials to assist language learning. The board, a traditional material, was the other most preferred material by the participants (75 %). Most of instructors still find it to be useful support and resource in the classroom, despite the fact that it may appear to be conventional and even outmoded. Two (2) interviewees (50%) expressed a greater tendency to use audio-visual teaching aids in the classroom. The other two, however, underestimated the significance of these instructional tools. On the other hand, by making learning more engaging and time efficient, audio-visual aids can help students learn language. By using audio visual aids, students can actively participate in the learning process and enables them to practise their hearing or sight abilities. As for the other ICTs, only two (2) Instructors (50 %) reported their preference for ICT resources, according to the data gathered from interview sessions. Despite the fact that the faculty seemed to have either data show projectors or other projection devices, it was observed that teachers were reluctant to use them. Moreover, the results indicated that only one (1) participant (25%) preferred to use internet for teaching English language, while three (3) participants (75 %) felt frustrated and hesitant to mention their hostility towards internet. However, it was observed that students used Internet-based resources everywhere in the faculty. Unfortunately, this is not the case with teachers. It is frequently noted that a large number of teachers are reluctant to use

innovative materials because they lack the necessary time and expertise. It was widely acknowledged that offering engineering students courses exclusively through pre-made printed materials (hand outs or other textual materials) does not always help contribute to a complete and accurate understanding of the topics. Research indicates that the current teaching and learning environment and foreign language teaching system are inappropriate to meet the learning needs of the 21st century (Carneiro, 2007). In general, the teaching of ESP in the faculty is not really evolving.

After the researcher had mentioned some benefits of the internet usage in the classroom and its impact on the academic performance of FHREEUS students, all the interviewees changed and reconsidered their views. They announced that they had to read and conduct research using online resources such as eBooks, manuals, articles, and other research texts in order to gather the necessary fundamental data and prepare their lectures and classroom tasks. They added that this would enable them to create more engaging lectures and activities and suggest the best course design for their students:

Because of using the internet to browse webpages and download technical documents, the internet resources would provide the best guidance and assistance. As students ask questions about the meaning of some items and expressions that are highly technical and that we never encounter in other specialty areas, I have to thoroughly prepare the course and seek explanations for scientific and technical terms. I have to spend too much time browsing websites to find something new, items that are captivating and different, and that are accessible so that we do not publish tough texts for students as we have varying abilities in one class.

(Interview, instructor 1)

After thinking carefully about the usefulness of Internet tools, the teachers reconsidered their earlier position and realized that they must seek out various resources to teach and create their courses, as well as keep up with the latest developments in ESP teaching, as they recognize the need to enhance their ESP expertise and teaching methods and develop their lessons. This is especially evident when the instructor 2 (two) discussed her opinions on using online resources to keep informed and updated: "I'm learning a lot with YouTube."

Additionally, Charp (2000) claimed that students and instructors benefited greatly from the Internet. This evidence suggests that Internet is integrated into teaching practices to enhance the learning processes and create new opportunities. This is demonstrated by the creation and application of increasingly sophisticated instructional materials and resources, development in teacher-student engagement as well as the promotion of learner-centred cooperative learning (Gibson et al., 2004)

Q. 19. What is the time length that you recommend for an effective ESP/EST course?

One could say that the FHREEUS instructors are in favour of extending the weekly teaching time which could be split into two (2) or three (3) sessions (three or four and a half hours. Three (3) instructors suggested that the time allocated to ESP courses should be extended with an additional period of one and a half hours per week. When asked about the number of years they recommend for teaching ESP course, the instructors' opinions were different; two suggested two years, while the other two instructors proposed three years.

Nonetheless, one instructor clearly indicated that the issue of time is mainly related to the problem of large sized classes. She argued that the difficulties she faced in

managing classroom time are due to the variable of class size that interacts with and upon time. Given the short time that was allocated to ESP course, it became impossible to control large sized groups. Educators have always reported discomfort in teaching large classes. In the following excerpt, she explained well the issue:

I have one and a half contact hours per week for two semesters. It seems like a little time, and it really is. The fact that we have to manage such large groups of students is another issue. Therefore, sixty or more students may be too many for the teacher to control and manage time.

In this context, she expressed a strong desire to increase the amount of time allocated for ESP teaching. She suggested to extend FHREEUS students' exposure to English language by adding more time; three teaching sessions (four and half hours each) instead of one weekly session (one and half hours).

Discussion of the Results

It is widely acknowledged that all course components, including course content, objectives, instructional methods, classroom activities, assessment procedures, teaching aids and materials, and instructors classroom performance, must still be assessed. The instructors, and most importantly, students who are engaged in ESP teaching and learning process, must all be involved in this investigation in order to conduct a fair, thorough, and well-managed evaluation that leads to beneficial and real decisions. However, there are significant limitations to positive and productive evaluation, which is the ability to gather reliable data and the capacity to use them genuinely without

having to worry about one's own biases and disturbances of the others (Hutchinson and Waters, 1987).

According to Little, Goe, and Bell (2009), evaluation is a type of questionnaire that asks students to rate and assess various facets of instruction, such as course content, classroom procedures, and instructor conduct to identify and understand their perceptions. Moreover, the assessment of the effectiveness of ESP course has really become both advantageous and necessary since it enables teachers make judgements about what best suit the abilities of their students and keep updated with their progress in classroom in order to make better achievements. Therefore, the course evaluation is to support students' needs increase students' performance and make the necessary modifications to the course objectives, resources, procedures and organization besides bringing light upon students' perceptions to elevate the quality of the course. According to Master (2005), one crucial area of ESP, research is examining the elements that contribute to the course success or failure and investigating the necessary steps to increase its effectiveness. Course evaluation was thought to be influenced by students' attitudes and evaluations of the quality of their learning experience (Kiely, 2009).

Furthermore, Fenton-Smith, Humphreys, and Walkinshaw (2018) indicated that students' satisfaction with their language learning experience should be taken as an essential criterion to judge the effectiveness of the course. In this situation, the success of evaluation results in important and relevant modifications of the course content and objectives.

In many educational institutions around the world, students' evaluations are being used more and more as a primary determinant of ESP teaching effectiveness, even though they are not the only or best tool for assessing the success or failure of any

language instruction course. Hutchinson and Waters (1987) recommend that the following techniques can be used for course evaluation: test results, questionnaire, discussion, and interviews. The information gathered forms the starting point for any necessary revision of the course and help in guiding the design of other courses. Despite its limitations and subjectivity, the students' evaluation of teaching courses and programmes has not stopped institutions and instructors from continuing to practise it.

A majority of students stated that the English courses in use do not help them meet their entire needs neither academic nor professional needs. Regarding ESP instruction, evaluation is viewed as a crucial component of the course design that answers specific questions primarily about the usefulness of the course, the achievement of goals, and the proper use of instructional resources. Hutchinson and Waters (1987: 152) assert in this regard: ESP evaluation is the groundwork for any required course modifications, and it could serve as a guide for the construction of other courses that could be equally effective in addressing the intended academic or professional needs. In the same vein, they stated that evaluation of students reflects not only the students' performance but also, to some extent, the course efficiency. As a result, any course weaknesses that students may report in the assessment is typically referred to as a course failure.

Selecting and organising the course contents for the specialties where materials are accessible, are not too difficult. However, a number of difficulties remain in this process, such as the insufficiency of allocated time for ESP courses or the irrelevance of target needs data to use as a basis for choosing the contents that address directly the actual ESP needs of the students' academic and future professional careers. The students in ESP are able to start in their learning progressively because they deal with specialism that they have selected to learn. Harding (2007:8) recommends the

appropriateness of work in ESP is due to the fact they might not realise much about their topic of specialism. This is the effective moment where the initial utilisation of ESP can determine its place in instructing. Students will consult texts that are accessible in English, in order to come by being aware of their specialism. As for the specialties with limited resources, there are numerous difficulties. Due to the lack of alternatives, some instructors are constrained to choose materials that do not meet the needs of the students and the specified objectives. The instructors, themselves, have to arrange the writing of the ESP course contents for specialties that have almost no ESP resources available in the library or online, which present major difficulties for the ESP instructors who are pressured to create the course contents. Instead of scientific guidelines for content selection and organising, ESP materials are created based on the experiences of the instructors.

As a result, learners' linguistic abilities were not tested in different contexts and through skills integration (Schempp et al. 1998). As for Speaking skill all teachers ascertain that it is not practised in class. They claimed that this strategy would help students in developing their communication abilities in terms of different aspects. The needs of the students also revealed that instructors dominated their classes and preferred to teach each item of the language separately as previously indicated. It is worth mentioning that the two elements that were emphasized in teaching were vocabulary and reading. The speaking skill was not reinforced and was limited to answering teachers' questions. According to Mackay and Mountford (1978), the field of ESP has put EST as its main speciality. The major benefit of EST is that, it helps the students and technologists to communicate appropriately with their co-workers about the specialized field of studies through conversation or messaging. Rodriguez (2014) mentioned that the various activities used in the research exhibit "how students gained in fluency through

authentic speaking practice” (Rodriguez, 2014, pp.38-112). In both works, students read specialized source and performed in meaningful debate in English. The researcher in these works report improves in students’ verbal fluency.

Several factors influenced teachers’ vocabulary instruction such as their students’ levels, the teaching environment, and their personal views about teaching. For example, in teaching vocabulary, one instructor preferred to give her students a list of vocabulary items with their meanings in English and Arabic. The awareness of vocabulary items was also checked through a discussion of synonyms and antonyms. According to student respondents, expanding their specialized vocabulary is crucial and should be more emphasized in the course. It suggests, first, that students are capable of distinguishing between the linguistic features of the FHREEUS English course and those of general English. They also expect that their vocabulary will increase substantially. As was previously indicated in the literature review, some studies on terminology highlighted the importance of specialized vocabulary in the study of ESP. It is, however, unclear how to make general recommendations about the elements of the specialist vocabulary of different disciplines that should be taught in FHREEUS at the university of Ouargla, because there is no definitive answer to the question of what precisely terminologies of petroleum , geology and renewable energies would be. From instructors’ viewpoints, the findings of the study suggest that teaching new English vocabulary may well be difficult for them who are unfamiliar with specific background knowledge and the specific English language of the students' specialised subjects. These difficulties arise from the specialist vocabulary the course is involved. It is repeatedly stated in the teacher interviews that the teaching of specialist vocabulary is very important and that students should be taught how to use specific concepts because they typically have different meanings in the framework of their specialised subjects.

However, the difficulty lies with the way this terse vocabulary should be taught considering that the meanings the instructor tries to provide, depend on the professional background, the specialized areas, and the future professional plans of the students. Recent language teaching theory suggests that minimize the size of vocabulary received by learners may really damage the development of other characteristics of language (Milton, 2009). Furthermore, Graves (2009) establishes some elements about the value of vocabulary, those are as follows: a. Vocabulary knowledge is one of the best measure of verbal performance; b. Vocabulary knowledge provides to children's phonological consciousness, which in turn helps their word awareness; c. Vocabulary problems strongly affect the readability of texts ; d. Teaching vocabulary can enhance reading understanding for both native speakers and second learners ; e. Studying English vocabulary is one of the most important activity for English language students. Studying about a word needs a process, one encountering is not at all adequate. Only by facing the word repeatedly can students build up complete comprehension of its utilisation and meaning (Jordan, 2007).

Another issue closely tied to ESP course is the teaching of grammatical structures and functions that are likely to be identified as specific to scientific and technological disciplines. Based on the results of the study on the perceived significance of the course language aspects, grammar instruction was not considered as the focus of the English course in FHREEUS at the University of Ouargla. The students' difficulties in grammar and language functions were seen to be caused by the lack of knowledge in these areas, the discrepancies between the grammatical structures and language functions taught in the ESP course and professional contexts, and inexistence of corrective feedback from the ESP instructors. They justified their decisions based on learners' preference for memorizing information in a mechanical manner, usually through constant repetition of

the grammatical rule followed by some illustrations. However, when students learn the rule by heart without understanding or generalizing to new context. In the interview, the instructors implicitly recognised that, while teaching grammar, they focused on teaching forms and rules, but seemed to ignore meaning and language use (Larsen-Freeman, 2003). As mentioned in the previous chapter, the NA found that the learners require grammar instruction in order to express themselves correctly. To familiarize students with the grammatical structures most frequently used in subjects taught in FHREEUS and other engineering discourses, grammar instruction should be reinforced even if ESP/EST instruction is communicatively and content-oriented. Only those structures that are especially relevant to petroleum, earth sciences and renewable energies studies and that the students frequently encounter in the different types of classroom materials should be the emphasis of grammar exercises. Hansen and Marston (1985) included a grammar component to their syllabus while the syllabus in the present course did not. In their work, it is indicated that this grammar component became more practiced than the researchers had initially planned (Hansen & Marston, 1985, pp. 36). This component allowed their students' better comprehension the more technical language that was later introduced (Hansen & Marston, 1985, pp. 36-37)

In the context of ESP instruction, EST students have been strenuously demanding that translation practice should be included in English language course. In close connection with the communicative method, English instruction has been perceived as shifting away from mother tongue translation. Nonetheless, there has been a noticeable change in the perceptions of instructors and students about the usage of the first language (L1). It seems that both general and ESP language learning environments are seeing a resurgence of contrastive language teaching techniques (Rodgers, 2014). This pedagogy aims to emphasize the importance of translation in fostering language

and content comprehension in the ESP English course. Benyelles (2009) clarified well the point when he stated that translation might be advantageous, because it can be interactive, learner-centred, and encourages students' autonomy in using resources.

The results show that the teaching materials utilised in the classroom lack relevance. Because instructors use inappropriate materials and almost no published materials, the students expressed their dissatisfaction with the materials used in class. This is evidenced by the fact that 50% of instructor respondents admit that they rely on internal resources because of the inexistence of formal curriculum and textbook. The instructors also claim that they struggle to select and apply appropriate resources, which meet the current needs of the students as well as the requirements of their specialised fields. Thus, both parties should assess materials that reflect the disciplines and professional contexts of the students. Subject instructors can work with ESP teachers and/or course designers to select appropriate English teaching materials that will support students' development of skills in ways that are consistent with the course objectives. Subject instructors are experts in the subject area their students are studying and aware of their academic and professional needs. Concerning the collection and selection of materials, Jones (1990) establishes that ESP teachers find themselves in conditions where they are needed to design a course that matches the needs of the students, but are hopes to do this with no or insufficient preparation time. Afterward Jones (1990) suggest having a resource reserve with a gathering of materials for the teachers to select. This does not entail that an ESP instructor has not to be an appropriate materials designer but must be a deliverer of appropriate materials, be creative with the available materials, give additional materials and conform to students' desires.

Every aspect of ESP course, including materials and resources, has been impacted by the ICT that we are discussing about more and more these days. Political leaders, experts, and even regular Internet users have displayed an increasing interest in ICT. The Internet has become a crucial instrument for sustainable development and poverty alleviation. The growing importance of information and communication technology (ICT) in society and specifically in universities helps to explain the context of the changes that occurred in Algerian higher education. Indeed, these technologies have the power to cross boundaries and previously unmanageable barriers, In higher education, ICT is utilized to create and share contents, communicate with classmates, instructors, and native speakers, as well delivery of lectures and video presentations; and scholarly investigation; advisory services; and enrolments. Despite the inconvenience related to poor communications infrastructure, a shortage of instructor training programs, and a shortage of information technology professionals to support ICT development, these institutions are equipped with effective software and hardware components. Undoubtedly, ICTs have become indispensable tools for enhancing learning experiences and can offer more access for various target students.

Supporting projects and programmes for learning: authorities and practitioners should help ensure that all schools, universities, and other educational establishments have access to the Internet and multimedia for the purposes of training, teaching, and skill development, research and restructuring. The results of this study shed light on enhancing the material selection process in ESP/EST course delivered to FHREEUS students. It firmly moves the emphasis from outdated learning materials delivery methods to more effective, contemporary ones. In higher education, integrating ICTs is an essential strategy for lecturers and has a significant impact on how students appropriately study (Hattie & Timperley, 2007). Furthermore, ESP should recommend

subjects, topics, classroom activities and methods that are specific to the subject area and the future job career of the students. Dudley Evans (2001) asserts that ESP uses materials that are subject specialisation oriented. However, most materials, are designed by separate teachers for different situations, and there is not a big quantity of published ESP material (p. 135). Moreover, in an ESP classroom the students has usually mixed capacities. Thus, it is hoped to use an eclectic approach to materials choice and application.

ESP course should promote activities that include technology related tasks like network exercises, power point presentations and use of internet. The need of acquisition of effective communication is interactive in nature. Therefore, the present English course as delivered for petroleum, renewable energies and earth science students needs improvement ta development of a set of generic skills along with technical skills forming the part of students' academic and professional growth (Bottino, 2004; Topolovac, Marinovic & Pavlic, 2008). Students desire to be exposed to the implementation of technology and particularly Internet not only for communication but also to keep up with the recent communication trends. Contemporary students are skilful enough of searching for the help of modern technology to achieve their current needs (Siemens, 2004)

All the departments in FHREEUS follow a traditional mode of assessment that conducts written tests and examinations during and at the end of each semester at the faculty level. Students endure several difficulties due to the inbuilt failures of the prevailing assessment mechanism. As no feedback is taken systematically, corrective methods of teaching are not employed often and thereby student's performance is hampered. Most teachers agreed that the exams and tests fail to measure such important abilities as effective oral and written communication. According to Brown (1995), there are three primary kinds of evaluation: quantitative versus qualitative, process vs product,

formative versus summative. Brown states that summative assessment should prevail over summative assessment. McMillan (2007) suggests with formative assessment teachers still have chance to enhance learning before it is over (summative assessment occur then). It refers to pertinent feedback which allows teachers to collect information about students learning as well as to give comments on students' written or oral performance. Teachers written feedback have a significant role in improving students writing. Teachers usually take the role of readers as they respond to their students' writing. Hence, instructors do not feel convinced by only providing marks till they provide written remarks as reader role. According to Hyland (2003) instructor's written criticism appears as a support of the grades they provide.

Almost all the participants shared the same opinion about the duration and the timing of the proposed ESP courses. Both student and teacher respondents suggest that the length of the ESP course should be at least four (4) semesters and three hours a week instead of one hour and half. The content, tasks and activities, scope and sequence of the course are also largely influenced by time and length principles. Scope, according to Richards (2001, p.149), is concerned with the width and depth of scope of items in the course. If more importance, time, and length is provided to EAP/ESP teaching, course practitioners will have much better perceptions on the content description and organizing in the course. Their courses require to be more comprehensive and more time should be allocated in some universities in Algeria.

Conclusion

This chapter concludes by presenting the survey findings from both data collection tools. The findings showed that every participant in the study agreed that the faculty of petroleum, renewable energy, and earth science lacked appropriate ESP

courses. They also called for the implementation of more suitable and effective ESP courses in their respective fields of study. Therefore, it is hoped that the authorities will make better choices and apply the necessary reforms and modifications in order to improve the real situation of ESP and guarantee that this change will increase the quality of the ESP course delivered to Algerian petroleum, renewable energies and earth science students enrolled at the University of Ouargla.

Conclusion and Recommendations**Introduction**

The purpose of this chapter is to sum up the main elements, which have been discussed and, hence, highlight the implications, which the study provides for ESP instruction, and course design development and enhances both academic and employment prospects for ESP students, especially in the fields of science and technology. In this respect, the study proposes recommendations for further investigations into teacher professional and practical knowledge in ESP, which may help them to construct relevant and appropriate ESP courses and offer these courses according to their students' field of specialization and learning needs.

This study set out to describe and explain the undergraduate students' needs of English. The aim of the study was to analyse from the needs of students and opinions of instructors in order to evaluate the suitability of the ongoing English language courses on one hand and provide suggestions for improvement on the other hand. The current study put forward a step in uncovering students and teachers' perceptions of effective ESP instruction in an EFL context in Algeria. Data collected from a questionnaire and interview highlight what students and teachers believe to be important in ESP teaching and how to fill in these gaps in the ESP classroom. In the process of data collection methods, systematic and rigorous procedures as piloting, validation and reliability criteria had been followed to avoid any guess-work and ensure reliable results, which may provide valuable insights for course designers, researchers, ESP teachers and learners altogether.

Reiterating the Research Questions

Research Questions

In this section we mention again the four questions of the study and provide the answers as found through our investigation of the current ESP course delivered to Petroleum, Renewable Energies and Geological Engineering students at the University of Ouargla.

1. What are the present and target situation needs as perceived by the undergraduate students of the Faculty of Petroleum, Renewable Energies and Geological Engineering at the University of Ouargla as well as their teachers?
2. To what extent is the current ESP course in terms of objectives, content, teaching materials, methodologies, evaluation procedures, and time allocation in the FHREEUS at the University of Ouargla appropriate and effective?
3. What English language skills and topics do the students and teachers perceive as necessary for an ESP course for FHREEUS students?
4. Which aspects of the present English language course (goals, content, materials used, technology involved, aids and teacher's training etc.) in FHREEUS need to be improved to meet the undergraduate students' learning and target needs?

Answers

As far as the question one (1) is concerned, (refer to appendixes A and B), the instructors stated that they did not conduct any type of needs analysis before the design of the current ESP course. The design of ESP courses depends directly on needs analysis. It is evident that the value of needs analysis resides in its capacity to provide information for the conception of the syllabus of ESP course. (Basturkmen (2013). They further

indicated that they lacked sufficient skills to undertake such a task. As for FHREEUS students, their current educational needs include improving their writing skills for different purposes, fully understanding spoken English in contexts, perfecting their reading skills in technical English, their listening abilities, and expanding their vocabulary in English to include terms related to the participants of the petroleum, renewable energies and earth and universe science engineering. The results also demonstrated that the majority of students had low level of English proficiency and struggled with all aspects of the language. This unveiled that students' challenges were linked to their frequent usage of the English language in both academic and other settings. The study emphasized the significance of triangulated data. In other terms, the researcher found that some discrepancies between the students' responses regarding their perceptions of their present and target situation needs were obtained from distinct data sources.

Regarding the second research question (2), the data obtained from the students' questionnaire and the instructors' interview displayed that, overall, the skills required in different fields of study were not reflected in the current ESP courses. As were predicted, the objectives and learning outcomes of the analysed data related to ESP courses delivered in FHREEUS varied according to their specific areas of study. However, the researcher found that the "technical" background, methodologies, objectives, learning activities, and assessment procedures of the ESP courses taught to students studying petroleum, renewable energy, and earth science were significantly similar. The results, which are discussed in this section revealed that the students faced difficulties in studying the ESP course. They found that the course content, materials, and teaching methodologies did not adequately address their specific needs. Furthermore, the findings established that the students identified many weaknesses in the ESP course in

FHREEUS at the University of Ouargla, in terms of course content, classroom materials, methodologies, activities, assessment procedures and objectives.

Given that the course is tailored to meet all students' needs, it is vital to take into account both the strengths and weaknesses of the ESP course in order that the course instruction will be successful in achieving its goals, which is equipping the students with the knowledge and skills in accordance with their academic and future professional standards.

The results for the research question three (3) unveiled that all the English language skills were required for both academic studies and professional context. Speaking and writing for communication were perceived necessary in the professional setting, while reading and is the most important skills in the academic setting. These results demonstrated that since the four skills were commonly applied in both contexts, the students continued to demand insistently the establishment of integrated skills. The students' objective needs are those that enable them to fulfil English language activities and tasks in line with their academic or professional requirements. Interestingly, this study revealed that students and instructors disagreed on the importance of language skills. Although the students stated that they needed integrated skills, the current ESP course concentrated on teaching English language skills as discrete skills, specifically reading, vocabulary and occasionally grammar. The ESP teachers' views of their students' needs shaped the way they taught the course. The findings also revealed that the students needed to use various materials and facilities supported by the new IT in their ESP courses and practice their English in authentic environment, especially, the activities that incorporate internet-based activities as media to practise integrated-skills in English learning. The technology helps Students to study at their own pace, select their own resources, and follow their own educational path

(Blin, 1999). Students can learn, practise, and interact with the target language even outside of the classroom by manipulating their cell phones that are connected to the internet. Furthermore, the students were also requested to express their perceptions about the needs covered in their English course in the needs analysis questionnaire. The findings showed that the topics taught in ESP class were not sufficiently specific and relevant to their fields of study. They expressed a strong need for studying and applying the language in their specialised subjects of petroleum, renewable energies and earth and universe science, with an emphasis on communication within these specific disciplines.

The key findings of the research question four (4) also offered useful details about the needs and attitudes of the students toward the course. This explanation is given in terms of the elements contained in the first research question. According to the teacher respondents, the course objectives need to be adjusted to situations directly related to FHREEUS. While they expressed some kind of satisfaction about the course objectives, they also noted that they were too broad and not particularly specific to the various FHREEUS contexts. However, students found the course objectives irrelevant and not set clearly to be clear enough and practically achievable. Regarding the course content, they were convinced that it should equip them with petroleum, renewable energies and earth and universe science required knowledge and skills, which are intricately intertwined with all the four fundamental language skills. This is because the students were required to fulfil tasks that integrate all the four essential language skills during language practice sessions. The students also further stated that they had trouble writing descriptions, memos, reports, and articles. Hence, the students felt that they need to learn more valuable and relevant topics besides other skill sets in the ESP course in order to prepare them to perform adequately well in their future careers, in terms of use of existent resources. They added that the component of material was not well adapted to

situations involving petroleum, earth science and renewable energies disciplines. The students also communicated that they did not use a proper course book in order to better follow and comprehend the course materials. As for the teaching methods, the students expressed their dissatisfaction with the teachers' instructional strategies in classroom. The instructors did not provide enough information for both course content and classroom activities. They further mentioned that the instruction was unclear because it was conducted too fast and was not effectively organised. There were not enough activities or illustrations in the current ESP/EST course. In this vein, some educators acknowledged that their methods were unproductive because they only made use of methods designed for general English, not appropriately adapted to specific English language. English for Specific Purposes (ESP) has emerged as a crucial and inventive activity in the Teaching of English as a Foreign or Second Language (TEFL/TESL) field (Howatt, 1984). The need for ESP may derive in part from the fact that, in contrast to English for general purposes (EGP), ESP is effective at promoting students' English language learning, and connected to their specific disciplines, occupations, and activities in terms of content (themes and topics) (Stevens, 1988). In terms of time allocation, both teachers and students claimed that the course time was inadequate and that additional time was required to cover all of the course topics.

The students themselves mentioned other interesting aspects, particularly when they make oral presentations in class or during their practical training, the students felt that they were insecure and shy to use English language. Some students reported that they were not given the chance to participate in oral activities because of the large classes. This was supported by the instructors' agreement that they were unable to assess the students' speaking skills due to the size of classes. It was surprising to learn that English was not used frequently, even though the majority of students thought it would

be essential for their future professional careers. Even after completing the course, the students' lack of confidence prevented them from using English very often, inside and outside the classroom. This might be the result of insufficient confidence and poor mastery of language skills. Regarding assessment techniques, the students expressed dissatisfaction with the current assessment system used in the ESP course since they were not assessed on a regular basis in class and their teachers hardly ever provided them with constructive feedback. Effective feedback practice can help students learn better by giving them valuable information, but it can also give instructors useful insights. Yorke (2003) made the following claim about this matter: Both the assessor (instructor) and the students are impacted by the assessment process. Teachers themselves must have a reasonable understanding of the students' progress in order to provide relevant educational feedback that meets the students' needs. Eventually, they get more involved in evaluating and considering students' work, which motivates them to create a better learning environment.

Summary of the Key Results

Course Objectives

The findings revealed that most of the respondents strongly confirmed that the course objectives were not clearly stated and understood. Setting clear course objectives helps in sustaining concentration, avoiding disruptions, and guaranteeing effective use of time. When preparing a course, one of the most difficult initial step is defining specific course objectives. Bloom's taxonomy is a teaching tool that helps instructors in constructing a course based on the objectives they plan to fulfil. It is largely regarded as an essential element of many teaching strategies. In their practical proposals on learning

objectives, Fry et al. (2000) suggest utilising 'unambiguous action verbs' and offer innumerable examples of verbs from Bloom's Taxonomy.

Course Contents

The major findings of this study indicate that the course content used in the teaching and learning process is inadequate and not in line with the requirements of the petroleum renewable energies and earth and universe science ESP courses. Moreover, there is no official manual for the instructors to follow in order to formalise and homogenise the language tasks, and they settle for doing the minimum using house-made materials that do not generally fit in with students' needs. Students' end needs are in many cases multiple and diverse. Their needs do not fall into a single model and, therefore, cannot be satisfied by the language course, which supposedly mirrors the target situation. This proposes associating students in choosing their learning resources and setting their own learning objective. As Rivers (1983) observes: "We must work with our students in establishing what they are really seeking in learning the language rather than imposing on them our view of their needs" (p. 76)

However, the instructors' opinions suggested that real measures should be taken about the amount of specialised knowledge and language content to be delivered in an ESP class. This would require to be established by the teachers themselves. Additionally, it was found that real measures to be taken by ESP teachers were relative to the teaching methods used to fulfil content knowledge. The method entails the use of other languages in English course since the translation of complex and difficult words, expressions or phrases into Arabic language usually accelerate the learning process.

Instructor Qualification and Training

It was evident in the results of this study that finding qualified ESP lecturers for the course is a major issue. Either English teachers or subject ones are probable ESP lecturers, but it is essential that ESP lecturers should be assisted through such as training and guidance in the implementation of a curriculum (Graves, 2008). To arrange workshops and training course, coordination between English lecturers and subject teachers is really required and should be supported, especially for the ESP course delivery in the first years of teaching. The teachers' proficiency in handling such sessions would highly rely on the experience and guidelines they receive from experts. This would improve the academic achievements and human centric skills of teachers. Teachers need to practice differentiated pedagogy to meet each student's individual interests, needs, and strengths (Tomlinson, 2001). The teachers may be trained in pre-service/in-service situations to design suitable lessons/tasks/activities/learning resources and materials to suit this purpose (Hubbard & Levy, 2006). Teaching this way offers students choice and flexibility in how they learn, and helps them personalize learning; especially for teachers to update their knowledge and acquire new teaching methodologies. Moreover, Teachers found application of technology difficult and it took much time to implement this into the curriculum. New technology and the internet is confusing not only for teachers but for students as well. Organizing ICT training courses for teachers on how to integrate technology in the classroom will enhance teaching and learning process. Instructors cannot teach with tools that they cannot understand or are not capable to apply them effectively.

Literacy Skills

The students' questionnaire and teachers' interview also revealed that teachers control their classes and preferred to teach each item of the language separately as mentioned earlier. At this point, it is worth clarifying that the two elements that are more emphasized in teaching was vocabulary, and the two skills that are frequently used in class are reading and listening. The speaking skill is almost overlooked and restricted to answering only teachers' questions. The listening skill seemed to be neglected, just practised in the form of listening to lecturer's talk and reading while presenting the lecture. Another problem that has been raised is that the results of the two survey instruments showed that, when it came to teaching the four language skills—reading, writing, speaking, and listening—they were not integrated. Even in situations when there are opportunities to implement the skills altogether in class.

Thus, students' linguistic abilities were not assessed in distinct circumstances and through skills integration (Schempp et al. 1998). For example, during a reading session, instructors, in addition to comprehension questions, should go over to oral discussion of the content.

Whereas students feel the need to practise all the four basic language skills; i.e. listening, speaking, reading and writing. This is due to the reason that the tasks the students had to perform during traineeship with companies operating in Hassi Messaoud, important petroleum city, clearly reveal that petroleum, renewable energies and earth science and universe fields use all the four basic language skills. There is a general agreement among all the student respondents that the most important skill to be improved in the course is the speaking skill and it is recognised as the most essential skill for their current needs. Reading has frequently been overemphasised in EAP/EST

settings and is seen as an essential skill, while other speaking skills are often neglected. Oral skills need to be given enough consideration if EAP/EST is to be viewed from an educational viewpoint. According to Price (1980):

*In terms of satisfying university requirements
then, a student could get by without opening his mouth
... but we would be foolish to ignore oral skills totally
since we are concerned to 'educate' in the fullest sense
(p. 62).*

Implications for Petroleum, renewable energies and earth and universe science

The current study investigated students beliefs about the suitability of the present ESP/EST course taught in FHREEUS. Although the data were confined to Ouargla University context, they provided implications for ESP teaching practices in other settings. Comparisons showed some alignments and differences between students' and teachers' views and preferences. Both teachers and students were aware of the importance of the learning process, relevant skills and strategies, discipline specifications, and language use.

The data generated from the current study concurs with similar studies that English language instructors need to be acquainted with specific content knowledge (Górska-Porečka, 2013). Through the provision of more specialised training courses in a range of disciplines related to specific settings, instructor development programmes can contribute in improving the quality of instructor instruction in classroom. These courses should be designed to familiarise ESP teachers with the function of English in fulfilling specific tasks related to their academic studies and future jobs focusing on

some target contexts. The principles for selecting instructional materials must be understood by the ESP practitioner, as well as how they relate to ESP teaching. This aids instructors in making appropriate decisions that guarantee the achievement of their ESP course aims. For instance, through realistic classroom performances, in-service teacher training programmes could give instructors the chance to refresh their knowledge and gain new insights on novel or other forms of practice (Clark & Peterson, 1986; Fenstermacher, 1986).

Course evaluations are mostly carried out to identify areas to increase the effectiveness of classroom instruction. Course evaluations are principally conducted to serve the purpose of improving ESP instruction through revealing the weaknesses and strengths thereof. It is through a systematic study of ESP course that teachers, administrators and decision makers can generate readjustments and modifications.

The results obtained from the needs analysis questionnaire and the views instructors' interview demonstrate that undergraduate students do have English language needs, which are not fully addressed in their ESP courses due to a variety of factors. This includes lack of time, instructors' inability to master certain language skills (such as speaking and writing), inappropriate materials and unpractical methodologies, deficiency of adequate resources (such as labs, the Internet, and audio-visual aids), and students' limited proficiency in English language. The researcher suggests that much more emphasis should be put on students' needs and learning wants. Dudley Evans (2001) states that the key characteristic of ESP is that its instruction and materials are much more based on the results of needs analysis. It is clear that there is a huge mismatch between the respondents' needs and the current ESP practices. It necessitates the use of contemporary concepts and practices, which must be supported by both the development of infrastructure and continuous reassessments. This means that in order to attain the

expected level of students' proficiency and course quality improvement, it is necessary to establish permanent follow-up and evaluation of the dynamics of ESP teaching in Algeria.

Recommendations from the Study

The recommendations of the present study concern two major aspects. First, recommendations for the betterment of the ESP course programme at FHREEUS, and secondly recommendations and inferences for future research.

It would be useful for the faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences to work towards establishing a curriculum in support of the ESP course. This would involve readjusting and updating English language courses, reevaluating the course specific objectives and expanding knowledge building across subject areas, specifically taking into account students' needs and the Algerian and institutional contexts. The findings of this study are used as a source, for the reconstruction of the ESP course to be delivered in different high educational institutions in Algeria. This study can also be employed as a model for conducting further nationwide needs analysis studies before the implementation of ESP course.

Recommendations for Supporting the ESP Course Programme

Stakeholders' Awareness and Involvement

It is hoped that studies like this one will eventually increase all the educational stakeholders' awareness and involvement for conducting an in-depth examination of the following proposals. Starting by identifying problems and initiating debate upon the issue of ESP course in order to expose a clearer image of what is going on in teaching

and learning ESP/EST course. This can form a strong and solid base for change and reform that is built upon true not assumed knowledge. To make the stakeholders aware of the course problems can actually lead up to its improvement. This is feasible only through constant evaluation with active participation of the curriculum's stakeholders.

People in various positions within the social structure of educational programs have been advised to participate in stakeholder-based evaluations (Weiss, 1983, p. 8). Stakeholders can define program topics that can improve program comprehension because of their expertise and experience (Mark & Shotland, 1985). Two potential challenges for stakeholders who will construct a new ESP/EST programme are the accuracy and balance of the content covered by a new curriculum, as well as the alignment of this content with the curriculum objectives. The concerns and needs of the groups may also be addressed with the support of further training for administrators, staff, instructors, and students.

Students' Complaint Box

Cultivating the pedagogy of student voice in the classroom is an excellent initiative that need to be considered in any ESP course programme. Actually, the present study unveils that disregarding the student voice may have many serious consequences for the students' experience during their English language instruction. Thus, it is recommended that both decision makers and instructors in ESP course teaching to give students the chance to criticize and develop their own needs concerning the ESP course and all its components that is to say; course content, methodologies, choice of materials, aids, skills and assessment procedures. Moreover, students need to have a complaints box because not all students dare to speak out about the distortions of ESP course. Therefore, by having an opportunity to submit their anonymous complaints in written

mode, students would feel much comfortable and more motivated to do it. This would be an essential support to the teaching/learning process itself.

Training for ESP Practitioners

Today, most universities in the world deliver teacher training programmes, forums and seminars both territorially and internationally, seeking to cultivate relationships among teachers that may influence positively the process of teaching/learning ESP. The instructors at the University of Ouargla should be provided with relevant training. In order to improve ESP teacher training, it is essential to provide an in-service teacher training programme for Algerian ESP instructors to help them solve ESP problems. In –service training occurs when one is teaching and in the age of globalization, ESP instructors need to be up-to-date with the evolving needs and requirements of the target situation.

Providing Course Preconditions

It is recommended that the necessary conditions for teaching ESP course be intermediate or advanced level English should be met to facilitate the implementation of ESP in class. To take full advantage from the ESP course, students would need to have a solid level of English language proficiency (Basturkmen, 2006, 2010; Richards, 2001). Students whose general English proficiency is lower than intermediate level should study the general English courses, or take extra courses offered in to reach the required level and then move into the ESP course.

The Need for a more Consistent Course Syllabus

No single syllabus type can fully accommodate the content and teaching in the ESP course (Graves, 2008). An integrated syllabus is needed for the prospective ESP course, combining skills-based, learner-centred syllabi, and task-based syllabi and communicative language teaching and genre-oriented syllabi. To help students acquire and perform language skills, the tasks for the ESP course need to incorporate both pedagogical and real-world facts and topics, which in practice may be integrated with appropriate materials and course plan.

Emphasis of EAP and EOP

Both EAP and EOP should be emphasized more. Both EAP and EOP are one in the same: employment. ESP/EST course should become more interactive and planned for both EAP and EOP. The course should comprise skills instruction for both academic and occupational purposes, which reflect students' current and anticipated future needs

Integrated Skills and Specificity of Topics

It is highly recommended that the skills and topics covered in the ESP course should be taught in an integrated manner rather than discretely. Students communicate amongst themselves more effectively when there is integration rather than in discrete instruction (Rod Ellis, 2004; Nunan, 2004) and this would encourage peer assistance and students' autonomous learning. There should be integration of all language skills learning through tasks that involve learning strategies for enhancing specialised vocabulary, research, intercultural communication, and oral and written communication for professional purposes.

The Implementation of ICTs

Nowadays, the use of Information and Communication Technology (ICT) has become a natural and integrated part in all aspects of students' academic careers. In general terms, this strategy refers to the use of computing devices such as desktop computers, laptops, software, or Internet for instructional purposes" (Hew and Brush 2007: 225). More specifically, ICT refers to the teachers' application of technology as a learning tool for students (Inan and Lowther 2010). The effective use of information technology, the possibility of having access to thousands of internet web pages that provide teaching materials both primary and secondary, information on teaching methods, and communication all contribute to the development of ESP course. If students are provided facilities and guidance in developing technical English skills with proper orientation and practice they can develop a broad perspective to face future workplace needs.

Course Assessment System

All assessments of the ESP course should directly reflect the purpose and objectives of the course and be part of the course design. It is recommended that a larger proportion of formative assessment than summative is needed rather than what currently is the norm. Examples of formative and innovative assessment include peer assessment and portfolio assessment; therefore, these would need to be included alongside summative assessment,

Recommendations for Further Research

The recommendations for performing further studies in ESP field and more specifically EST sub-area are based on two aspects: verifying the results of this study,

and developing new instruments for data gathering and analysis. To begin with, the main findings of the present study can be introductory for further research of EST teaching and learning in specific learning situations that have some distinguished features. The course here is assessed only in terms of some aspects which are essential in the curriculum of any course i.e. course objectives, course content, teaching and learning materials, teaching methods, time allocation and evaluation system. This study was product oriented as it only assessed whether the course was successful in enabling the students to meet the actual needs of the petroleum, renewable energies and earth science students based on their perceptions and their teachers' opinions about the course. Hence, it is recommended by the researcher that further research can be conducted on a larger scale and the present study can be widened to include additional elements that need to be assessed and analysed.

Because it was not practical to carry out easily and suitably, an observation process during the present study, we propose that an observation data-gathering instrument be included in future studies, and particularly used for understanding more the present ESP course while being delivered in classroom.

The respondents of this present study includes only students and instructors in FHREEUS. Adding administrators and decision makers may help amassing a large variety of views, which might be very useful in gaining a broad perspective on ESP learning problems.

In future research attempts, it is also suggested to look into the causes why technological teaching aids are not implemented in ESP classroom. Teachers, in the study, evade from using such aids, which reveal that there are some problems regarding this issue.

Additional research is recommended to explore other features of the course both in academic and professional contexts of petroleum, renewable energies and earth science fields. Moreover, additional aspects of ESP curriculum-development could be considered in further studies by Algerian ESP researchers, such as course design, materials development, and teaching methodologies (Brown, 2016).

Moreover, the requirements to enhance adequately different language skills and sub-skills can be extensively investigated. Further NA should be used to investigate certain features related to the language requirements of students studying earth science, petroleum, and renewable energy for more appropriate design of English language courses.

Limitations of the study

The main limitation of the study is that it offers little support for generalisation of the findings to a larger population. The principal aim of the study is not to expose an overall picture, but rather, to provide a more detailed description of the findings that may help the reader to decide whether the results can be applied to other educational settings. The dissertation suggests sufficient statistical data and a detailed account for the reader to estimate the transferability of the findings. There are three more limitations as well, which may be considered in future research. First, there is time restriction; participants are only available during certain periods and within the limited frame.

Second, self- reporting bias referring to the respondents' perceptions and beliefs due to the use of only two survey instruments, namely a students' questionnaire and a teachers' semi-structured interview. Third, the teachers of English language who participated in the study not only get no training in teaching ESP but also have little

experience in this field. All these constraints could have an impact on the interpretation of data. Moreover, the uniformity of the sample in this study in terms of level of proficiency, and area of specialisation of the students may have influenced the validity of the findings. In addition, though the findings of this study are significant, other variables are skipped in the research, like students' age. Lastly, another restriction of this investigation is that it does not deal with the perspectives other partners' viewpoints and beliefs, namely the Dean of the faculty and the Heads of the departments.

Summary

The major aim of this study is to evaluate, explore and describe the current ESP/EST course in the faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences at the University of Ouargla. It follows that it is in our interest that ESP components as included in the current study to be investigated separately in a research as a whole. It is, therefore, hoped that such an evaluation would be helpful to improve the quality of the course, so that instructors' expectations and students' needs could be fulfilled.

Due to a number of weaknesses identified in the current ESP course under investigation, it can be concluded from the discussion of the results in the previous chapter that the course does not supply students with all the skills and tasks they need for both their academic studies and future professional employment. Most of the study subjects believe that the current ESP course as being ineffective. Thus, the data obtained in the study may contribute to establishing a complete profile of students' target needs, on the one hand, but also a complete report of their major lacks and subject area difficulties. The researcher considers that this current study would be very significant and beneficial to the curriculum planners, so that they can initiate some changes based

on the current needs of the students as well as the instructors' beliefs in order to enhance the suitability of the course as a whole. In that regard the study proposes that necessary adjustments should be made in most aspects of the course such as course content, usage of materials, skills, instructional strategies, assessment procedures, time allocation and course duration. The results also maintain the urgent necessity to redesign a more appropriate ESP course as well as the priority of providing ESP teachers with adequate ESP training to succeed in developing their abilities to the greatest extent.

Without doubt, there are issues in the field of English for petroleum, renewable energies and earth science studies that still necessitate to be researched. Hence, further researches are determinedly needed to investigate this crucial area by utilising comparative procedures or other perspectives in order to reaffirm the results arrived at or to give a more clear picture of such variables, if any. Furthermore, the present study can serve as a platform for the other closed disciplines as mechanics and electricity engineering, which need to be investigated thoroughly.

Based on the assessment the researcher conducted, it may be inferred that the English for Specific Purposes (ESP) course taught at the Faculty of Hydrocarbons, Renewable Energies and Earth and Universe Sciences at the University of Ouargla proves inadequate. Enhancing and developing this process requires more than just the relationship between instructors and students; increased support from the university administration would be the greatest motivation. Support is defined as providing better working conditions; this includes hiring more educational personnel, providing adequate training for teachers and creating better-equipped classrooms and labs. One must give more in order to obtain more. Higher results would be achieved if teachers put in more effort and students study harder.

Last of all, the researcher believes that the previous theoretical debate and its practical implementation will undeniably provide petroleum, renewable energies and earth and universe science students, their teachers and even the curriculum developers with useful and practical data of how to learn, teach and construct effective ESP courses. This should be established on more suitable methodologies, and more relevant teaching programme and rational choice of materials. To better the quality of ESP instruction in the areas of petroleum, renewable energies and earth and universe science at Ouargla University, real modifications are required at different levels and with the participation of all the concerned practitioners who should work together to strengthen ESP courses delivered for petroleum, renewable energies and earth and universe science students,

Conclusion

This study is a survey that provides an evaluation and analysis of the ESP course offered in the different departments of the faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences at the University of Ouargla, the case of undergraduate students that includes three distinct proficiency levels (First year, Second year and Third year Students). This survey is based on the analysis of students' needs and interests on the one hand, and the issues encountered throughout their learning process. The study has unveiled the reasons behind their inability to use English appropriately. One of the main reasons is the lack of an adequate syllabus in addition to a shortage of specialised and well-trained teachers. As a result, the teachers are obliged to prepare themselves ESP courses and implement them in classroom. This day-to-day work has generated problems in terms of synchronic and diachronic progression all along the courses. Therefore, the need to have a well-elaborated ESP programme that could harmonize the teaching process is vital and necessary.

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APPENDIX 1

STUDENTS' QUESTIONNAIRE

Dear Students,

This questionnaire is designed to collect information regarding a needs-based approach to English language teaching for science and technology purposes. This survey tries to find out whether the present state of teaching English for Specific Purposes at the **Faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences (FHREEUS)**, affiliated to Kasdi Merbah University, Ouargla meets your present and prospective learning needs for you to perform proficiently. Thus, this questionnaire gives you the opportunity to express your perceptions about this course, and make suggestions for improvement.

This questionnaire is divided into 3 parts and 6 pages:

Part 1: Preliminary Information

Part 2: Self -Evaluation and Attitude towards the Current ESP Course **Part 3:**

Suggestions for Improvement of the Course

Please fill in the questionnaire as accurately and honestly as possible. Your views and ideas will be kept anonymous and used strictly for this study only.

Thanks for the kind cooperation.

Doufene M., Teacher-researcher, English Department, Kasdi Merbah University,
Ouargla. Email-doufenem@gmail.com

Part one: Preliminary Information

1. Department:

2. Undergraduate year:

3. Gender:

4. What Level of English do you currently have? Indicate

(√) only one choice.

- a. I am weak in English and I need to improve it a lot.
- b. I am an average student, thus, it is essential to learn it more.
- c. I am just good at English, but not fluent. Therefore, I need to better it more.
- d. I have excellent oral and written communication skills and I do not need to improve it.

5. What are your goals for studying English language? You may indicate more than one choice.

- a. for improving my communication skills
- b. for continuing my academic studies
- c. for employment goals
- d. for understanding and writing technical reports on engineering
-

e. because attending the English language course is mandatory

f. for travelling abroad

Part two: Students' Perceptions about the Current ESP Course

6. To what extent do you agree with the following aspects of the current English language course? Please rate (Tick ✓) on a scale from 4- strongly agree /3- agree /2- disagree /1- strongly disagree or uncertain

Course aspects	4	3	Uncertain	2	1
a. the course content is well adapted to your proficiency level					
b. the topics in the course are relevant to your study field					
c. the course objectives are clearly stated and understood					
d. The Course is well organized					
e. the course takes into account your learning needs					
f. the course content is sufficiently adequate to prepare you for success in the job market..					
g. the course helps you improve your English skills					
h. Learning materials are relevant and useful					
i. the teaching methods used in classroom are more engaging to study the course					
j. the tests and exams assess your skills appropriately					
k. the weekly time allocated (per week) for English course is enough cover all its aspects					

7. How much emphasis does your English Language course put on the following skills? Please rate (Tick ✓) on a scale from 3- too much / 2- about right / 1- too

Skills	3	2	1
a. listening?			
b. speaking?			
c. reading?			
d. writing?			
e. vocabulary?			
f. grammar ?			

8. State whether your English course helps you improve the following sub-skills. Tick (✓) only one choice for each statement.

Sub-skills	Yes	No
a. Listening to lectures		
b. Listening to speeches and other oral presentations		
c. Participating in class discussions		
d. Preparing and delivering oral presentations in classroom		
e. Practising reading of texts and other documents		
f. Doing reading exercises in classroom		
g. Writing down class notes during a lecture		
h. Writing compositions and making summaries in class		

9. Do you agree that the materials used in the course respond appropriately to the following statements? Please rate (Tick ✓) on a scale from 4- strongly agree /3- agree /2- disagree /1- strongly disagree or uncertain Tick (✓) only one choice for each statement.

Statement	4	3	uncertain	2	1
a. Are authentic					
b. Contain practical information					
c. Are well sequenced in presentation					
d. Raise motivation					
e. Are relevant to the course objectives					
f. Help to understand the content					
g. Improve communication skills					
h. Are relevant to future job situations					

10. How would you assess your instructor’s performance in the classroom?

Please rate (Tick ✓) on a scale 4- Excellent / 3- Good/ 2- Below average/ 1-Poor

Criteria /Teacher’s class performance	4	3	2	1
1. Shows mastery of the course content				
2. Displays a clear understanding of course objectives and topics				
3. Has an efficient style of course presentation				
4. Uses the materials appropriately				
5. Applies teaching methods which keep me interested in the course				
6. Uses multimedia (e.g., video) or technology (e.g., PC and internet) to present the course content				
7. Knows the answers to students’ questions about the ideas and facts that he/she teaches				

8. Assigns course tasks and activities, which are effective in developing my speaking and writing skills.				
9. Implements assessment methods which adequately evaluate my understanding of the course				
10. Translates English scientific and technical terms into Arabic				

11. How would you assess the current ESP testing?

Put a (√) for whatever is appropriate, you may tick more than one

Please rate (Tick √) on a scale from 4- strongly agree /3- agree /2- disagree /

1- strongly disagree/ or uncertain

Title	4	3	uncertain	2	1
a. The content of the test tasks was directly linked to the course content and instruction					
b. The level of difficulty of the tasks was appropriate					
d. I was provided with sufficient feedback regarding the achievement at the tests and exams.					
e. Assignments and tests assessed language skills and specific topics					

Part 3: Suggestions for Improvement of the Course

12. In your view, which of the following measures can help solve the problems you encountered in your English course? Put a (√) in the box that applies to you, you may tick more than one

- a. modify the English course content
- b. the objectives of the course should be revised

- c. include all language skills particularly speaking and writing
- d. include relevant topics and activities according to your needs and specialized discipline
- e. adapt materials to make them more relevant
- f. increase the time allocated for teaching English

13. Which of the following skills do you think you should focus on developing the most in your English language course? Please rate (Tick ✓) on a scale from 3- very important /2- moderately important /1- not important

Skills/Evaluation	3	2	1
a. Listening			
b. Speaking			
c. Reading			
d. Writing			
e. Vocabulary			
f. Grammar			

14. In class, how would you like to learn your English lessons? You may tick more than one choice.

- a. listening to lectures
- b. copying from the board
- c. taking notes from power-point presentations
- d. taking notes from teachers' instructions
- e. reading class materials
- f. conducting class debates and discussions
- g. using translation in classroom
- h. using internet resources in class

15. What types of materials do you think the course should include? You may tick more than one choice.

- a) Coursebooks
- b) Teacher-made materials such as hand-outs and worksheets
- c) Video learning materials
- d) Materials from internet such as websites, texts, manuals, instructions and articles
- e) All the above

16. How do you prefer to use the material mentioned in the previous question in class?

- a) group discussion
- b) PC and multi-media based learning
- c) Oral presentations
- d) face-to-face lecture

17. How do you want the quality of assessment to be improved in your English language course? You may tick more than one choice.

- a) should be relevant with the objectives of the course
- b) should be appropriate to your level
- c. should include only short answer tests
- d. should include what you have already learnt and what you need to learn
- e it should provide specific and timely feedback on your work - not just a grade.

18. In your opinion, how much time will be appropriate for teaching and learning English in a week? Tick (✓) only one choice

- a) one course session
- b) two course sessions
- c) three course sessions

19. Please give, if any, two or three additional suggestions on how to improve the effectiveness of the English language course.

SEMI-STRUCTURED INTERVIEW FOR INSTRUCTORS

Dear Colleague,

I would like to ask for your help in my doctoral thesis research aiming to investigate the effectiveness of the English course currently presented to Petroleum and Geological Engineering students in the faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences, University of Ouargla. This interview constitutes part of my research on the quality of ESP/EST course. Precisely, this survey tries to identify the difficulties teachers encounter in teaching English, as well as to draw up proposals to improve and update the current ESP /EST course. Your data will be used for research only and will be kept confidential. Thank you for your cooperation.

=====

Date :

Instructor's name:

Academic rank:

Special domain:

Put a tick (✓) mark or fill in what is appropriate

Section –A: Qualification, Experience and Training

1. What is your qualification degree?

a. License ()

b. Master ()

c. Magister ()

d. Doctorate ()

2. For how many years have you been teaching ESP/EST course at the faculty?

..... Years

3. Your status in the faculty:

- a. Part time teacher ()
- b. Regular (permanent) teacher ()

4. Have you ever participated in a teacher-training programme, in ESP English?

a. Yes () b. No (). If yes, indicate:

a. Institution:

b. Time and duration:

Section B: ESP Implementation and teachers' Perceptions

5. Do you find the materials used in the ESP course

- a. within your students' level ()
- b. below their level ()
- c. above their level ? ()

6. Do you think that English is essential to your students in their academic study and target professional careers?

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

7. Does the present ESP course help your students to follow the contents and skills taught in English in their academic disciplines? (i.e. to take notes, understand lectures, understand technical vocabulary, write summaries and reports, etc.). If yes, to what extent?

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.....
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8. Did you face any problems while teaching ESP/EST course? If yes, what are they?

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9. Which teaching method (s) do you, as an ESP teacher, use in classroom? Why?

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10. In the course of your current teaching, do you occasionally use translation from English language to French or Arabic?

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.....

11. What is (are) the most disregarded language skill(s) in your English language course? Why?

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12. Do you use technology (Power Point, Overhead Projector, Computers, Internet sources, etc) in your class? Which one(s)?

.....
.....

13. What types of assessment do you implement in the classroom? (e.g., quizzes, tests, mid-term exams, mini projects, in-class exercises, etc.)

.....
.....

14. What is the purpose of the assessments you practice in class? (e.g., to evaluate student learning? to provide feedback to teachers? to provide feedback to students?

Or just to grade the students?
.....

15. Do you find the time allocated to the ESP course can suffice you cover all the course aspects in class?

- a. Yes ()
- b. No ()

Section C: Solutions and suggestions

16. In your view, how the following course aspects can be enhanced? Do you have any recommendations?

a.course content :
.....

b. course objectives:
.....

c. teaching techniques and strategies

.....

d. and other materials you want:

.....

17. Do you think that is essential to teach engineering students communication skills in order to cope up with the requirements of their field studies and future professional careers? Please, explain.

.....

.....

.....

18. Do you prefer teaching English through the implementation of

a. Hand-outs and other printed materials? ()

b. Audio files? ()

c. Audio -video materials? ()

d. Internet sources? ()

e. Others (Specify)? ()

19. What is the time length that you recommend for an effective ESP/EST course?

.....

.....

SEMI-STRUCTURED INTERVIEW FOR INSTRUCTORS

TRANSCRIPT OF AN INTERVIEW

Dear Colleague,

I would like to ask for your help in my doctoral thesis research aiming to investigate the effectiveness of the English course currently presented to Petroleum and Geological Engineering students in the faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences, University of Ouargla. This interview constitutes part of my research on the quality of ESP/EST course. Precisely, this survey tries to identify the difficulties teachers encounter in teaching English, as well as to draw up proposals to improve and update the current ESP /EST course. Your data will be used for research only and will be kept confidential. Thank you for your cooperation.

=====

Instructor's name: Rabah kechiched

Academic rank: Doctorate

Special domain: Geochemistry, Geology and Geostatics

Put a tick (✓) mark or fill in what is appropriate

Section –A: Qualification, Experience and Training

1. What is your qualification degree?

- a. License ()
- b. Master ()
- c. Magister ()
- d. Doctorate (**x**)

7. Does the present ESP course help your students to follow the contents and skills taught in English in their academic disciplines? (i.e. to take notes, understand lectures, understand technical vocabulary, write summaries and reports, etc.). If yes, to what extent?

The instructor says that the discussion of technical vocabulary, which is about whether ESP should emphasise on specific skills, or it should take a wide-angle method to language and skills referred to various disciplines is a problem in the area of ESP for many years. The instructor highlights that although their courses are principally language-focused and aimed at acquiring communicative skills within a given study field. The instructor adds the content knowledge is beyond their level of proficiency, but the teachers preferred to be in control of the carrier content involved in their ESP courses and have the responsibility for the quality of them. Being a student of ESP is a lot of work with lectures, readings, essays, reports and presentations. In order to bring to notice, some words need to be written in short but in understandable forms I ask the students write down things you understand. Ask for clarification when you are puzzled. But not all students take notes. Hence, they meet difficulties in this classroom activity. The students do not always understand the lectures delivered in classroom. Because they are interested or they contain specific lexis.

8. Did you face any problems while teaching ESP/EST course? If yes, what are they?

I lack of ESP experience. The entire teaching process is teacher – centred. Instructors still utilise the ancient methods. Moreover, the instructor is not able to exploit the students' needs and to discuss them. The practitioner's method involvement, therefore is a complete failure with ESP/EAP components but it is high with common topics. The major concept of teaching ESP is teaching English for the students that their major

objective is not teaching grammar and translation in English. Mastering the contents related targeted field of study is referred to vocabulary in that area. Students will have new lexis. Materials designed for petroleum, renewable energies and earth and universe science students are not available. The instructor say he does not have such materials. This may push him to teach with materials he selects and prepares himself. The problem is that, how such instructors who lack knowledge as far as ESP teaching is concerned and are not aware of technology and science students' needs can prepare and propose these materials. Preparing these materials requires research and analysis on students' needs and necessities.

9. Which teaching method (s) do you, as an ESP teacher, use in classroom? Why?

I mention not using a specific teaching method. I suggest that rather than on just one type of teaching method, ESP instructors must construct their teaching methods to different learning preferences and needs of my students. Because the students' styles learning are different I do not know how to apply a specific existing method.

10. In the course of your current teaching, do you occasionally use translation from English language to French or Arabic?

I use translation in Arabic for specialised vocabulary. We cannot use translation in another language in Communicative Language Teaching in the past. The instructor agrees that the translation is employed in the ESP instruction especially when to provide equivalents in the first language for scientific terms.

11. What is (are) the most disregarded language skill(s) in your English language course? Why?

The instructor announces that he put greater focus on reading, comprehension, and vocabulary. It is important to weigh these language skills for different causes. It comprehends language learning. A student's capacity to use the language effectively in

all situations may be limited if she only emphasises on one or two skills. It accelerates students' productivity. Integrating all the language skills is the successive way of enhancing the complex cognitive processes of students implicated in language learning, which transcends simply acquiring words and terminology.

12. Do you use technology (Power Point, Overhead Projector, Computers, Internet sources, etc) in your class? Which one(s)?

I use Power Point when I present my lectures. But overhead projectors and computers are not available in my classroom. PowerPoint is time and energy efficient. It is easy to improve, remodel or update the courses. PowerPoint can be shared with students and colleagues.

13. What types of assessment do you implement in the classroom? (e.g., quizzes, tests, mid-term exams, mini projects, in-class exercises, etc.)

Assessments are always grade-based, and can include: Exams, final projects and standardized tests. Assessment is not formative and not used as feedback for instructors. It is summative. Summative assessment is often regarded a motivator that drives students' learning.

14. What is the purpose of the assessments you practice in class? (e.g., to evaluate student learning? to provide feedback to teachers? to provide feedback to students? Or just to grade the students?)

We provide summative assessment for students. We give assessment just to grade the students. Assessment we implement in classroom provides the means for students to know how they progress in their learning through grades, marks, and scores Summative assessment is often regarded motivator that develops students' learning.

15. Do you find the time allocated to the ESP course can suffice you cover all the course aspects in class?

a. Yes ()

b. No (x)

Section C: Solutions and suggestions

16. In your view, how the following course aspects can be enhanced? Do you have any recommendations?

a. course content :

The curriculum is comprised of a sequence of courses that produce a learning succession for the student. A careful thought out curriculum will ultimately impact in a effective learning experience for the student where the relationship between courses and learning tasks to gain insight in what constitutes a learning process. Course content quality has a positive influence on perceived ease of implementation of ESP in classroom.

b. course objectives:

Implement course design methods that enable an integrated relationship between the course, programme and curriculum as a whole. Develop a course that determines a clear alignment between course objectives, assessment procedures and outcomes.

c. teaching techniques and strategies

ESP refers to a method of teaching English that is based on the learner's objectives and needs. The teaching of ESP is paced to the needs of the learners.

d. and other materials you want:

.....
.....

17. Do you think that is essential to teach engineering students communication skills in order to cope up with the requirements of their field studies and future professional careers? Please, explain.

It is essential to teach engineering students communication skills in order to write and present orally reports to the instructors and co-workers in future about the technical operations. Conveys ideas and facts in writing and **orally** using language.

17. Do you prefer teaching English through the implementation of

- a. Handouts and other printed materials? (x)
- b. audio files? ()
- c. Audio -video materials? (x)
- d. Internet sources? (x)
- e. Others (Specify)? (Power Point)

19. What is the time length that you recommend for an effective ESP/ESTcourse?

3 years (Licence 1/2 /Licence2/3) (+ Master 1)

ملخص الدراسة

تتناول هذه الدراسة الصعوبات التي تواجه مادة "الإنجليزية للأغراض المتخصصة" في كلية البترول، الطاقات المتجددة، وعلوم الأرض والكون، بجامعة ورقلة في الجزائر. وفي إطار مسؤوليتها لتحسين جودة التعليم، تعمل جامعة ورقلة على إعداد الطلبة بشكل أفضل لسوق العمل حتى يتمكنوا من أداء وظائفهم بكفاءة. وتهدف هذه الدراسة إلى تقييم المقرر من خلال تحليل احتياجات الطلبة. ولتحقيق ذلك، تم اعتماد منهج ديموغرافي يركز على الواقع المزدوج لمجموعتين من المعنيين في هذه المؤسسة، وهم الطلبة والمدرسون. تكشف النتائج إلى حد كبير عن فشل مقررات المقدمة لطلبة البكالوريوس في تخصصات البترول، الطاقات المتجددة، وعلوم الأرض، وذلك بسبب عدم ملاءمتها. وبمعنى آخر، تثبت الدراسة أن هناك رأياً سلبياً سائداً بين الطلبة حول مقررات التي يتلقونها. كما تشير البيانات إلى أن الطلبة بحاجة إلى تطوير المهارات اللغوية الأربعة مجتمعة، مع إعطاء الأولوية للقراءة، والتحدث، والكتابة. ويؤكد ذلك أن الوضع داخل الجامعة بشكل عام، وعلى مستوى الكلية والفصول الدراسية بشكل خاص، يعاني من العديد من الصعوبات، مما يعيق فعالية مقررات بصيغتها الحالية. وتقترح الدراسة بعض الإجراءات والممارسات الملائمة التي يجب تطبيقها في تدريس داخل الجامعة بشكل عام، وفي الكلية بشكل خاص، من أجل تحقيق جودة المقرر وتلبية احتياجات الطلبة المستهدفة. كما تقدم الدراسة مجموعة من التوصيات بخصوص إجراء تحليل شامل للاحتياجات كخطوة أساسية قائمة على الأدلة في جميع مراحل تطوير المقرر، مع تحديد أهداف واضحة ومفهومة، واختيار وتنظيم المحتوى بناء على احتياجات الطلبة.

APPENDIX 5

Résumé

Cette étude examine les difficultés rencontrées par le cours d'anglais à des fins spécifiques (ESP) à la faculté des Sciences de la Terre, de l'Univers, du Pétrole et des Énergies Renouvelables de l'Université de Ouargla, en Algérie. Dans le cadre de sa mission d'amélioration de la qualité de l'enseignement, l'Université de Ouargla s'efforce de mieux préparer les étudiants à l'emploi afin qu'ils puissent s'intégrer efficacement dans le monde professionnel. Cette étude a pour objectif d'évaluer le cours à travers une analyse des besoins des étudiants. Pour ce faire, une approche démographique a été adoptée, en se concentrant sur la double réalité de deux groupes d'acteurs au sein de cette institution : les étudiants et les enseignants. Dans l'ensemble, les résultats révèlent l'échec des cours d'ESP inadaptés proposés aux étudiants de premier cycle en pétrole, énergies renouvelables et sciences de la Terre. En d'autres termes, l'étude met en évidence une opinion négative des étudiants concernant leurs cours d'ESP. Les données indiquent également que les étudiants ont besoin de développer les quatre compétences linguistiques, en accordant une priorité à la lecture, à l'expression orale et à l'écriture. Cela confirme qu'au sein de l'université en général, au niveau de la faculté et dans les salles de classe, la situation est négative avec de nombreuses difficultés, ce qui nuit à la pertinence des cours d'ESP tels qu'ils sont actuellement dispensés. L'étude propose ainsi des mesures et des pratiques adéquates à mettre en œuvre dans l'enseignement de l'ESP à l'échelle de l'université en général et de la faculté en particulier, afin d'assurer la qualité des cours et de répondre aux besoins cibles des étudiants. Elle recommande également la réalisation d'une analyse approfondie des besoins comme pratique fondée sur des données probantes pour toutes

les étapes du processus de développement du cours, en spécifiant des objectifs clairs et compréhensibles, ainsi qu'en sélectionnant et organisant les contenus en fonction des besoins des étudiants.