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**ESP Teaching and Learning in the Algerian University:
Bridging the Gap between ESP Teaching and Workplace
Communicative Skills. The Case of Petrochemical Master
Students at Skikda University and British Petroleum
Company**

Thesis submitted to the Department of Letters and the English language in candidacy for
the degree of doctorat es-science in Applied Linguistics

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DEDICATION

I dedicate this work to my parents who are the source of passion.

To my beloved wife who stood by my side during this journey, without her support, this work would not have been accomplished.

To my cute daughter Celia Zeineb who makes my life enjoyable with her smile.

To my brothers, sisters, colleagues, friends, and wise advisors who encouraged me throughout this endeavor.

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ABSTRACT

The present study seeks to explore the reality of ESP teaching/learning in the department of petrochemical studies at Skikda University, focusing on course content, teaching methods and communicative skills gaps. It also attempts to investigate the workplace communicative needs in British Petroleum (BP) company to bridge the gap in the area, and hence develop a model course unit for the respective specialty. Based on a mixed method approach, an exploratory quantitative and qualitative study is conducted. The data is drawn from two questionnaires, a course content evaluation and two interviews in the contexts of Skikda University and BP company. The questionnaires are administered to the whole population (13 ESP teachers) in the petrochemical department, and 60 petrochemical Master students randomly selected from a population of 147. For the ESP course content evaluation, the lectures taught in the first semester of the academic year 2022- 2023 are analysed in terms of authentic materials used and communicative language skills presented. Six engineers from a population of 52 Algerian workers, and three British managers in BP Company are interviewed. The findings of the questionnaires reveal that ESP teaching/learning for petrochemical studies at Skikda University does not reflect the world standards of ESP teaching and learning. Students and teachers are not satisfied with the current ESP course content in terms of specificity and authenticity. The evaluation of the course content demonstrates that technical repertoire, productive skills and simulative situations related to petroleum field are rarely introduced. With regard to workplace communicative needs, The Algerian engineers express the view that they face serious listening and speaking difficulties in their workplace. The BP managers further confirm such Algerian workers' difficulties. Accordingly, a model course unit is suggested along with some recommendations to bridge the gap between ESP teaching and workplace communicative needs.

LIST OF ABBREVIATIONS

AIP	Algerian Institute of Petroleum
BA	Bachelor of Art
BP	British Petroleum
CA	Cronbach's Alpha
CNA	Critical Needs Analysis
CEIL	Centre d'Enseignement Intensif des Langues
CNP	Communicative Needs Processor
CSD	Communicative Syllabus Design
EAP	English for Academic Purposes
EFL	English as a Foreign Language
EGP	English for General Purposes
EOP	English for Occupational Purposes
EPP	English for Professional Purposes
ESP	English for Specific Purposes
EST	English for Science and Technology
EVP	English for Vocational Purposes
LSA	Language Situation Analysis
LSP	Language for Specific Purposes
NA	Needs Analysis
PhD	Doctor of Philosophy
PSA	Present Situation Analysis
SPSS	Statistical Package for Social Sciences
2WW	Second World War

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GENERAL INTRODUCTION

Background of the Study

In the era of globalization, English has gradually proven its significance as the lingua franca of the world. It has become the dominant language of most scientific publications, business knowledge, global institutions, and media communication. Such different fields as economy, industry, science, education, and culture are academically and professionally influenced by its use. Thus, a considerable amount of literature has been conducted in English as a second or foreign language revealing that people have divergent learning needs of English use. Based on those needs, people are now snapping up to learn it.

Teaching English as a foreign language is not just restricted to the degree of its general mastery but rather to a compulsory requirement to be oriented to specific purposes for scientific, economic or international communication all over the world. In the process of searching for the reasons behind such a need to change the way English is taught and learnt, different answers have been provided according to various motives. Kennedy and Bolitho (1984, p. 01) write, “the growth of business and increased occupational mobility is resulting in a need for English as a common medium of communication; and access to much scientific and technical literature which is difficult for those with no knowledge of English”. In this context, the teaching of a language should, thus, be carefully prepared to fit students’ specific needs and purposes.

Regarding this domination of English as an international medium of communication, many non-English countries including Algeria, felt a need to discuss the status of teaching and learning the English language in their institutions to help themselves meet the standards of communicative skills of ESP at the tertiary level institutions. The view of studying the English language is no longer exclusively restricted to the department of English, but is now

also taught and learnt in other departments, and generalised to cover other disciplines and specialties: Business, Economy, Science, Technology and Petrochemical studies to name a few. Yet, language courses that are offered in these departments are expected to meet specific academic or professional needs.

It has been, therefore, believed that one way to envision obstacles to ESP teaching and learning is to consider the nature of the course content addressed to students enrolled in various technical and scientific disciplines, and who are in need of an English course that fits the nature of their studies. Additionally, reconsidering the teaching methodology is another way that might help teachers of ESP develop not only students' general competence of the language, but rather, the English that helps them to be 'Industry ready' in showing a highly professional language competence that serves workplace needs (Hutchinson & Waters, 1987). Thus, obtaining an accepted level of performance in professional English requires a mastery of specific skills as learners are not required to have only general communicative language proficiency, but a need to learn both receptive and productive communicative skills which suit their professional genres.

Several attempts have been made by researchers in syllabus and curriculum design (Breen, 1987; Crombie, 1985; Mackey & Mountford, 1978; Strevens, 1988; Wilkins, 1981) and need analysis specialists (Brindley, 1989; Dudley- Evans & St. John, 1998; Finney, 2002; Hamp-Lyons, 2011; Hutchinson & Waters, 1987; Johns, 1991; Jordan, 1997; Munby, 1978; Robinson, 1991; West, 1994) to set up ESP courses to achieve effective communicative purposes. Their findings have been used as the basis upon which ESP syllabi and curricula have been designed and developed. Specific models of ESP teaching have been suggested. Hutchinson and Waters' model (1987) and Dudley- Evans and St. John' model (1998) are good examples of that. University as well as private institutions both adapted and

adopted those ESP syllabi and models aiming to offer a good professional language basis to students according to their workplace needs.

As far as the Algerian context is concerned, the growing number of universities, on the one hand and the adoption of the License- Master- Doctorate (LMD) system with its new rationale and scientific specialties, on the other hand, led to the urgent demand for an English that meets the requirements of workplace needs. Consequently, teachers of General English (GE) have found themselves in a situation of teaching ESP. The latter has been defined by Hutchinson and Waters (1987) as: “An approach to language teaching which aims to meet the needs of particular learners” (p. 21); hence, the use of specific methods, techniques, and teaching methodologies by ESP teachers to achieve those needs.

This shift is considered as a hard task that teachers of English should undertake in their professional career. Hutchinson and Waters (1987) note: “teachers who have been trained for GE teaching or for teaching literature may suddenly find themselves having to teach texts that they know little or nothing about” (p.160). In the same vein, Strevens (1988) describes this experience as a ‘shock’ for those teachers because they find it difficult to deal with the requirements of their new situations and this may result in their failure when involved in an ESP teaching course.

Statement of the Problem

Algerian LMD students enrolled in disciplines of oil and gas are expected to achieve a sound mastery of technical English as part of the requirements for workplace communicative needs. The latter is highly required to meet a variety of communicative purposes used in specific professional settings. Nevertheless, it has been noticed that ESP teaching has so far received little attention from university teachers, syllabus designers and even decision makers. Thus, a mere subject knowledge of English in the field seems not to

be enough to guarantee for students the required communicative competences to face international companies' challenges. As a result, students may fail to communicate effectively despite their highly academic competences in their fields of study.

The issue of teaching in Petrochemical Departments has been a much disputed subject within the field of ESP. Students study their specialty subjects in French or in Arabic whereas most petrochemical national companies, foreign ones notably, use English as a means of communication. Master one Petrochemical students are often hampered to have the ability to master scientific and technical English competences to meet their workplace communicative needs.

Since many foreign companies are investing in the Algerian industrial oil areas, namely American and British, the low-level students of English urge for more attention and serious attempts by academic institutions to search for alternative ESP teaching contents and methods may help petrochemical students to acquire an English that meets workplace communicative demands. This kind of English, then, needs meticulous research to be undertaken in order to explore the area of ESP teaching to Petrochemical Master students in the Algerian university following a needs analysis (NA) investigation of workplace communicative needs. This would pave the way for producing pedagogically suitable materials that are required for specific workplace contexts.

Aims of the Study

Several motives prompted this research work. Most importantly is the belief that providing Petrochemical Master students with effective ESP courses would be vital to meet the communicative skills required in international companies. Such courses entail equipping students with a discipline-based repertoire related to their varied purposes of language use which can help them communicate effectively. Therefore, it seems necessary to shed some

light on the ESP obstacles that Petrochemical Master students at Skikda University encounter first during their ongoing university studies and compare them with real life communicative situational difficulties that Algerian engineers face in the workplace.

The crux of the problem in this study is first, explore the status of ESP teaching in one of the Algerian departments of Petrochemical studies. Second, highlight Master one students' lacks in ESP through the lenses of both students and teachers alike according to the expected workplace needs. Third, based on such challenges and difficulties, the work suggests recommendations and pedagogical implications to innovate ESP teaching and learning.

Research Questions and Hypothesis

Since ESP teaching is a worldwide concern, Algeria, in its turn, is interested in developing the status of ESP teaching/learning which is regarded as a key for scientific and technological development. Yet, this domain still encounters obstacles at the level of teachers' professionalism and course content quality.

In particular, this study investigates the following research questions:

1. To what extent does ESP teaching/ learning in Petrochemical Studies Department at Skikda University reflect the workplace communicative expectations?
 - a) What is the reality of ESP teaching /learning in the respective department in terms of teaching methods used, content taught, communicative skills developed?
 - b) What are the British Petroleum company workplace needs for ESP Petrochemical graduates?
2. What should be done to ensure the ESP teaching /learning in Petrochemical Studies Department meet the workplace needs and expectations?

Based on the above questions, the following hypothesis is put forward:

The profile of ESP teachers and the course content taught to Master one students enrolled in Petrochemical studies at Skikda University do not help students to develop the needed ESP communicative skills in international workplaces.

Research Methodology

The present research work called for an exploratory descriptive study of ESP teaching reality in the Algerian university context, particularly in the department of Petrochemical studies of Skikda University. To do so, the researcher tries to follow a mixed method approach which is applied through, first, an exploration of the situation of ESP teaching/learning pointing out weaknesses, deficiencies, and challenges that prevent Master one students and their teachers to reach their objectives. Second, a NA investigation of the workplace communication is approached through a direct access to a petroleum company to gather the needed data from real workplace contexts. A correlation of both investigations is supported by an evaluation of the ESP course content taught in the respective department. These mixed method as Johnson and Tuner (2003) state, “enable the researcher to collect multiple data by the use of different approaches, methods and strategies” (p.134). They are translated in quantitative and qualitative research design where different research tools are used to collect the necessary data.

Data Collection Tools

It is a common practice among researchers of foreign and second languages that data collection and analysis are handled using quantitative and qualitative methods. Both are of equal importance to this work. While the quantitative method provides researchers with numerical data which can be measured and analysed numerically, the qualitative method helps to get deeper insights into the phenomenon under investigation (ESP teaching situation) by collecting data that can be analysed and summarised through narrative and

verbal means. In this regard, Dornyei (2007) says, “the qualitative should direct the quantitative and the quantitative feedback into the qualitative in a circular, but at the same time evolving process with each method contributing to the theory in ways that only each can” (p.43). Therefore, adopting a mixed method approach through a combination of both quantitative and qualitative methods within a single research project would compensate the drawbacks of each other, and hence add strength to the study.

Consequently, data of this research work are of two types: First, exploratory quantitative data are collected through two different questionnaires administered to Master one students and their ESP teachers in the department of Petrochemical Studies at Skikda University. Results of both questionnaires can help in picturing the reality of ESP teaching and learning in the respective department. Second, a NA data is gathered through a semi-structured and a structured interview conducted, respectively, with Algerian engineers and British managers in BP company, Algeria. The interviews would help the researcher to get close and deep insights into the ESP communicative skills practiced in the workplace. Third, data gathered from the aforementioned tools are correlated to a content evaluation of the present ESP course taught in the respective department. Thus, knowing about the nature of the course, its lacks, and shortcomings would be a step prior to the development of a course unit model to bridge the gap between university curriculum and workplace communicative needs.

Population and Sampling

The population of this study consists of Master one students and their ESP teachers in the department of Petrochemical studies at Skikda University, Algerian engineers and British managers in BP Company. With respect to the sample of the study, it includes:

- ❖ 60 Master one students enrolled in different specialties in the department of Petrochemical studies at Skikda University.
- ❖ All teachers (13 Teachers) of ESP in the respective department.
- ❖ Six Algerian engineers and three British managers working in BP Company.
- ❖ A sample of lectures taught to Petrochemical Master one students during the first semester of the academic year 2022-2023.

Structure of the Thesis

The study is composed of seven chapters. The first two chapters sketch the theoretical part which review literature about functional definitions of ESP key concepts, and Needs Analysis in ESP. The last five chapters, deal with the fieldwork consisting of research methodology, presentation of data obtained, interpretation of findings and highlighting pertinent pedagogical implications and recommendations.

Concerning the theoretical part, the first chapter begins by laying out functional definitions of key concepts in ESP. It reviews literature on ESP teaching in terms of approaches, methods and importance for academic and professional communicative purposes. The second chapter discusses the notion of NA with its importance in ESP research area. The different approaches and models are emphasised to back up the criteria of ESP course design.

Regarding the practical part, the third chapter is concerned with a description of the research methodology used for this study and the context under investigation with a particular reference to the place of ESP teaching in the Algerian university. The research design of this study population and sampling are also outlined. Then, the chapter presents the data collection procedures and instruments used. Analysis of pilot study findings, issues of validity and reliability, ethical consideration, and data analysis methods are also

identified. The fourth and fifth chapters analyse the quantitative data collected from university context through the questionnaires submitted to students and their teachers respectively. The chapters include discussion and interpretation of findings with reference to the theoretical foundation of the thesis.

The sixth chapter, qualitatively, presents a content evaluation of the actual ESP course taught to Master one students of Petrochemical studies at Skikda University. Its main components including linguistic aspects and language skills are analysed and evaluated. The chapter ends up with analysing, and interpreting data drawn from the interviews with Algerian engineers and British managers in the BP company. The seventh chapter presents a design of a proposal course unit model for ESP teachers in the department of Petrochemical studies in an attempt to remedy the actual ESP course shortcomings. Different activities related to technical vocabulary, pronunciation, grammar, and the four language skills are highlighted. Aspects of culture and translation are also included in the course unit.

Finally, a summary of the major findings, research recommendations and pedagogical implications which contribute to a successful ESP course development and an effective application of suitable methods are provided in the general conclusion. Additionally, limitations of the study are acknowledged.

CHAPTER ONE. FUNCTIONAL DEFINITIONS OF ESP KEY CONCEPTS

*“Tell me what you need English for,
and I will tell you the English that you
need” (Hutchinson & Waters, 1987, p.08)*

Introduction

Nowadays, communication in world economy requires a mastery of English as a lingua franca to meet professional communicative needs depending on the context of language use. Such a dominance of English over the world market urges educational institutions to shift from the view of teaching /learning GE, to an English that might help learners to meet workplace communicative needs. Therefore, ESP been emerged as a new trend in English Language Teaching (ELT) which seeks to fulfil the communicative requirements of the world market. This chapter sheds lights on relevant literature to the concept of ESP, its emergence, development, scope in language teaching and learning, and teaching methods. ESP has been, also, explained with a particular reference to its types and purposes. The chapter also discusses relevant research studies conducted on the application of ESP as an approach by itself in teaching English in different subjects and specialties. The chapter ends with summarising the challenges to contextualising the teaching of ESP in different educational and cultural contexts.

1.1 Language Teaching for Specific Purposes

Swales (1990) mentioned that language is used for different communicative purposes. In other words, as it is used for general communicative events, in some contexts, it is used for a limited range of communicative purposes. The latter serves specific needs of its users. Seeking to find convincing interpretations and applications of language for specific purposes (LSP), this calls to go back to the fundamental issues about the concept of LSP.

Davies and Elder (2004) introduce LSP as a concept which, “is generally used to help to the teaching and research of language in relation to the communicative needs of speakers of a second language in facing a particular workplace, academic, or professional context” (p.672). Put it another way, LSP, in this context refers to the creation of effective teaching methods and techniques of languages for learners who are specialised not only in English but also in other different subjects, but need a language for their academic and professional settings. Those learners are belonging to different discourse communities communicate based on their specific needs and goals.

Subsequently, since English is invading the communicative setting of the world market, its investigation by researchers has been attributed to its specific purposes of use and has become more than a necessity. Hence, this study focuses on the notion of ESP teaching/learning and tries to uncover what is referred to it in the following sections.

1.2 English for Specific Purposes

ELT has gone through rigorous phases of changes and developments depending on the purpose of using the language. This dynamicity has attracted the attention of many researchers (Breen, 1987; Nunan, 1993; Skehan, 1998) who have been concerned with the development of ELT, especially for Non-native Speakers. They think that teaching English for them is no longer concerned with general and limited purposes, but rather as a vehicle for bringing together learners’ classrooms needs (Nunan, 1993; Skehan, 1998), using appropriate language teaching methods to future academic and professional expectations of where and when this English is used. Considerable research has gone even beyond the focus on its general communicative objectives to specific purposes. To search for this change, it is needed, first, to explain how did the concept of ESP emerge and develop? And what for ESP was introduced and approached as a new branch of ELT context?

1.2.1 ESP as a New Subject in ELT

By the coming of the 21st century, teaching English has witnessed many changes and developments to an extent that each discipline becomes in need to introduce English in its curriculum and designed syllabus. With regards to the academic discipline, English is no longer restricted to teaching field work but rather has become widely needed in other scientific, technical, and professional contexts. Thus, the need to learn English is now necessary to communicate with others, have access to knowledge and fulfil business purposes. In the light of the aforementioned demands, a sub-field of ELT was introduced under the label of ‘ESP’ to meet learners’ disciplinary communicative needs. It has been established as a branch of ELT to an extent that it has an impact on the teaching and learning of English in terms of what teaching methods and approached should be followed, the content to be used, and for what purposes it should be used.

1.2.2 Reasons for ESP Emergence

It is argued that: “ESP was not planned as a coherent movement, but rather a phenomenon that grew out of a huge number of convergences of trends which have been operating differently in different communicative contexts” (Hutchinson & Waters, 1987, p.06). Arguably, based on the varied number of communicative contexts where English is used, it is advisable to consider the reasons behind this variety. Three prominent reasons have been highlighted by Hutchinson and Waters (1987).

Firstly, the consequences of the Second World War (2WW), the economic power of the United States and the United Kingdom dominated the world of technology and commerce and very soon generated an urgent need for international means of communication to get access to ‘International currencies of technology and commerce’ (Hutchinson & Waters, 1987). Consequently, English became the accepted language of science, technology,

commerce and even communication. Nowadays, people from all over the world become in a need to learn English, not just for academic purposes or pleasure, but rather as a key to have access the world of profession and marketplace.

Secondly, the widespread of learning English as a foreign language has gone beyond its general communication purposes. Various aims have been generated to cover the economic, scientific, social, political, and even cultural purposes. Thus, focus on the linguistic features of English usage that is morphological and syntactic structures of the language seem to be not enough. Attention, then, shifted to describe the way English functions and actually serves other communicative skills in the different context (Widdowson, 1978). One finding of Hutchinson and Waters (1987) was that the language people speak and write varies considerably, and in different ways, from one context to another. In teaching English, for instance, differentiation between teaching English for business and English for engineering has to be acknowledged. Swales (1990) refers to these contexts as ‘communicative events’ where he emphasised on describing the nature of particular varieties of English and trying to determine their features according to the purpose as well as the situations where they are used.

The third reason that helps to rethink ELT and learning is the focus on the importance given to the learner as the central entity in the teaching learning process. Practitioners’ attitudes towards learners have changed from considering learners as receiver of knowledge only, to a participator and contributor in constructing their own knowledge. Rodgers (1969) explains this idea, psychologically, and considered the individual differences of learners’ needs and interests as important factors to motivate them to learn the language. For this reason, new teaching methods and strategies ought to be implemented to fit their needs and interests. Therefore, ESP has become one of the significant branches in ELT.

1.2.3 Definition of ESP

As English has become the accepted international language of science, technology, economy and commerce, a new vision of teaching and learning has been introduced. Learners should know specifically why they are learning English. Teachers also need to authentically adapt the suitable teaching strategies and materials. This type of English gave a new definition to English teaching and learning, and urged researchers to rethink its definition with a particular reference to its varied contexts of use under the term ESP in the ELT scope.

Mackay and Mountford (1978) define ESP as the teaching of English for a ‘clearly utilitarian purpose’. This means that the purpose depends on the utility of the language in different contexts of communication based on learners’ needs which can be either of academic, occupational, or scientific nature. In this vein, Munby (1978) maintained that learners’ needs are essential ingredients in both syllabus and materials’ design. He writes: “ESP courses are those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learners” (Munby, 1978, p.02).

In another context, Harmer (1983) considers ESP as, “situations where the student has some specific reasons to learn the language” (p.01). In other words, learners want to learn English to fulfil specific reasons which can be academic or professional. Four years later, Hutchinson and Waters (1987) went beyond the view of ESP as an outcome of the process of teaching and learning and gave a theoretical dimension providing a profound definition to ESP. For them, ESP is: “An approach to language teaching in which all decisions as to content and methods are based on the learner’s reason for learning” (Hutchinson & Waters, 1987, p.19). Accordingly, understanding why a learner needs to learn a foreign language, would help to determine the type of the language to be taught, the method and strategy to be

implemented, and most importantly the linguistic as well as the communicative aspects of the language to be emphasised.

In 1991, Robinson associates the acquisition of a given linguistic repertoire to the specialty of the learner. She argues: “The nature of the relationship between context or domain and the learning and use of the language is clearly vital to ESP and highly worth investigating” (Robinson, 1991, p. 23). In the same line of thought, Basturkmen (2006) states that, “ESP is understood to be about preparing learners to use English within academic, professional or ESP course design is that the syllabus is based on an analysis of the needs of students” (p.18).

Another definition of ESP that is attributed to variable characteristics highlighted by Dudley-Evans and St John (1998) who are influenced, in turn, by that of Strevens (1988). They modified and improved a version in which both authors included the following characteristics:

- ❖ ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be used for learners at secondary school level.
- ❖ ESP is generally designed for intermediate or advanced students.
- ❖ Most ESP courses assume basic knowledge of the language system, but it can be used with beginners.

Similarly, Basturkmen (2006) states: “ESP is understood to be about preparing learners to use English within academic, professional, or workplace environments and a key feature of ESP course design is that the syllabus is based on an analysis of the needs of the students” (p.18).

Based on the definitions aforementioned, one may say that most researchers agree on the fact that ESP is about both specific context and learners' specific needs for learning the target language. That is, learners of different subject matters require specific English repertoire that better suits their own disciplines.

1.2.4 English for Specific Purposes VS General English

ESP learners are often highly motivated, having already some background knowledge of the English language because they had an exposure to it as a subject in the pre university levels and even at university. Besides, they are aware of their target language communicative needs as they generally seek to learn English to fulfil particular purposes; academic, professional, or scientific. Their awareness of ESP importance in their studies and future jobs is supposed to be of significant and even much higher than that of GE. Hutchinson and Waters (1987) support this view, by claiming that the nature of ESP teaching and learning is different from GE: "What distinguishes ESP from General English is not the existence of a need as such but rather an awareness of the need" (p.53). In this vein, the difference lies on the learners' aim. If learners' aim in GE is to pass either exams or tests, it does not give much attention to the level of proficiency whether they are able to communicate effectively in this language. As opposed to ESP whose main aim and focus is to help learners to better communicate in their target situations.

This view is further supported by Mackay and Mountford (1978, p.28) who deem that English is taught: "Not as an end itself but as an essential means to clearly definable goal" (p.28). This goal may vary according to the situation; academic, professional, or scientific. This idea has been reinforced by Strevens (1988) who argues that ESP differs from GE in that it is based on a close analysis of the learners' communicative needs for a specific occupation or activity, as well as a detailed analysis of the language of that occupation or

activity. He goes a step further by maintaining that to identify the difference between ESP and GE, one sought to distinguish between absolute and variable characteristics. The absolute characteristics are as follow:

- ❖ Designed to meet specified needs of the learners.
- ❖ Related to content, to disciplines, occupations, and activities.
- ❖ Centered on the language appropriate to those activities, in syntax, lexis, discourse, and semantics.

In contrast with GE, ESP may be, but is not necessarily restricted as to the language skills to be learned and not taught according to any pre-ordained methodology.

1.3 Characteristics of ESP Teaching

As far as ESP learners are concerned, one may say that they are often adult learners who already have background in English, and who seek to learn English for a, ‘clearly utilitarian purpose’ (Mackay & Mountford, 1978) to meet specific target needs. In most cases, those learners are supposed to have an intermediate or advanced level. Yet, in this case, the use of authentic materials as a component of the ESP course adopted or adapted is inevitable. Carver (1983) suggested that there are two main features common to ESP courses related to authenticity and specificity.

1.3.1 Authenticity

In its broader sense, authenticity is an essential criterion for creating any healthy language teaching context. It is used with reference to the format and content of the course as well as the way this content is transmitted to learners. According to Dudley-Evans and St John (1998), authenticity is a double issue regarding ESP because it is considered as a critical validity requirement of ESP courses in terms of content, activities, and evaluation. Besides,

the concept can clearly be represented in the content of the course, the situations created by both teachers and learners in the teaching learning process.

Many authors (Basturkmen, 2006; Dudley-Evans & St John, 1998; Kennedy & Bolitho, 1984; Robinson, 1991) share the view that authenticity is a key concept in ESP courses. They define it as follows: “Authenticity lies in the nature of the interaction between the reader (or hearer) and the text.... finding out exactly how learners use different sources so that activities in the ESP class can reflect what happens in real life” (Dudley-Evans & St John 1998, p.28). In other words, to consider a given ESP course as effective, the teaching material should reflect real life situations.

Besides, the concept of authenticity may have a different meaning as far as the context where it is used and functioned. That is, it is developed and designed according to the cultural, social, and psychological characteristics of the context where ESP is taught and learned. The context of Algeria, for instance, differs from other contexts in different parts of the globe at the educational, cultural and, most importantly, the linguistic level of English. Kramsch and Sullivan (1996) claimed that authenticity is problematic especially when the target language is international, as English, because teaching methodologies and course contents must be culturally, socially, and even scientifically appropriate. These objectives can only be achieved if there is a demonstrable correspondence between learners’ needs and the target language use situation.

Going deep in the explanation of the concept of authenticity, it is composed of two main aspects: First, as expressed and discussed by Carver (1983), authenticity is ‘purpose related orientation’, the situation of communicative tasks required by the target situation. According to him, the main aim of the ESP course is to enable learners to become communicatively competent in the target field through note taking, conducting research and

presenting oral tasks. Second, as viewed by Carver (1983), authenticity is self-direction or what he defines as: ‘turning learners into users’ of the language. Therefore, it is crucial for the ESP teachers to develop the course on NA procedure at the first step, while in the second step they are invited to encourage students to decide what, when and how to study; displaying a certain level of autonomy or freedom. In this respect, Kennedy and Bolitho (1984) write, “A prime concern for the teacher is to enable a student to become more and more autonomous in his learning as the course goes on” (p.141).

Overall, ESP courses hold specific characteristics which differ from other GE courses. Learners’ needs, wants, and lacks constitute the primary step in the process to course design and development which could be possible for the teacher to design an authentic course.

1.3.2 Specificity

Another feature of ESP is related to what extent should ESP teaching be specific. As mentioned earlier, learners are meant to learn the target language to fulfil specific reasons which could be academic or occupational. Hyland (2002) argues that generic labels are introduced to refer to the concept such as scientific language, business English or academic skills. In some communicative contexts, such labels are misleading in that they misrepresent the discursive complexity and variation between how different communicative events of language use and their aims in doing so.

In short, features of authenticity and specificity characterise LSP in harmony and one cannot function without the existence of the other in any academic course. Dudley-Evans and St John (1998) explain: “Where a support relates to a particular academic course, the course becomes really specific ... geared to the specific needs of the target situation and of the individuals concerned making extensive use of authentic materials” (p.09).

Providing an example of one of the studies conducted on the need of a specific context and authentic material for a specific group of learners in each academic or professional context of ESP, Hutchinson and Waters (1987, p.178) find through:

A glance at a mechanical engineering class in a Technical College ... will reveal that the topic is concerned with mechanical engineering, that there are texts about mechanical engineering, and so on; but what the students are expected to cope with should not be confused with what the students require in order to cope. A distinction needs to be drawn between the end ... and the means. It is necessary to examine the underlying competence which the learner must bring to the mechanical engineering classroom, or to the study of any specialised subject.

1.4 ESP Teaching Methods

It is worth noting that ESP teaching has been developed at different speeds in different countries along with the adaption of specific teaching methods that fit the context of ESP teaching. Hutchinson and waters (1987) identified stages of development of ESP teaching through time where each stage projects a given teaching approach.

1.4.1 Genre-based Teaching

In fact, research in ESP has been interested in genre as a reference for analysing and teaching both written and spoken ESP skills at the academic and professional levels. Being interested in studying the academic genres of learners might help in designing efficient ESP courses that match the real needs of the learners. Adapting genre analysis in ESP research, Swales (1990) claimed that academic genres serve specific communicative events which in turn have links with communicative purposes. Bhatia (1993) was in agreement with Swales (1990) suggesting that participation in specialist communicative events requires having

knowledge communicative goals related to specific use of language. Therefore, both learners and teachers should be aware of the rhetorical conventions typically associated with specific discourse community, and hence specific genres. Thus, research findings called for a genre-based approach to ESP teaching which involves two aspects of analysis: register and discourse.

1.4.1.1 Register Analysis. Before exploring the concept of register analysis, it is need, first, to define the term register. Register is:

a variety of language most likely to be used in a specific situation and with roles statuses involved. Examples might be a toast at a wedding, sports broadcast or talking to a baby. A register is marked by choices of vocabulary and other aspects of styles. (Spolsky,1998, p.34)

To link register analysis to ESP, it is suggested that materials writers tend to analyse the set of grammar and vocabulary of the various registers. Then put forward the kind of courses, syllabus and curricula depending on what they have identified and what they have judged relevant to a particular specialty.

According to Dudley-Evans and St John (1998), the assumption behind register analysis is that there is much focus on a certain grammatical and lexical forms. Basturkmen (2006) extended this view by providing the example of analysis of scientific and technical texts by Barber (1985) which showed that the passive tense is used more frequently in such writing than in GE, and identified a set of sub technical vocabulary items that were more likely to occur. Additionally, register analysis operates only on the word and sentence level, and does not go beyond these levels. As a reaction to register analysis, another approach emerged beyond the sentence level which is best known under the label ‘Rhetorical’ or ‘discourse analysis’.

1.4.1.2. Discourse Analysis. It is the way sentences are combined to perform an act of communication, which the syllabus and the material are based on the findings of the latter as well. In this vein, Hutchinson and Waters (1987) maintained that text-diagramming exercises constitute a mean for teaching students to recognise textual patterns. In discourse analysis, ESP shifted attention from the emphasis on language at the sentence level to the level above the sentence. According to Hutchinson and Waters (1987) ESP at this phase, became closely involved with the emerging field of discourse or rhetorical analysis where the organisation of sentences to form discourse is the core of this approach. Robinson (1991) advocated that the focus in discourse analysis is on the text rather than on the sentence, and on the writer's purpose rather than on the form. In this vein,

Any study of language or, more specifically, text at a level above that of the sentence is a discourse study. This may involve the study of cohesive links between sentences, of paragraph structure, or the structure of the whole text. The results of this type of analysis make statements about how texts –any texts- work. (Dudley-Evans & St John, 1998, p.87)

1.4.2 The Learning-centered Approach

Since learners are the key-parameter in the ESP teaching and learning process, their needs, wants, and lacks are viewed as the starting point in the process of syllabus design and the teaching act. The latter should suit and fulfil precise purposes either for the learners' present situation or for their future career. A syllabus has been defined by Hutchinson and Waters (1987) as, "what is to be learnt with some indication of the order in which the items should be learnt and the interpretation" (p.81). According to them, it can be said that the syllabus should be designed according to the learners' needs wants and lacks. This process is commonly known under the label NA which is the vital part in this study (See chapter

two). Once material designers and curriculum developers get a full idea about what learners want to learn, lack or simply need, as well as the socio-economic and cultural context in which the language program will be designed, and for whom it will be implemented, it would be possible for them to set the course' objectives and determine the content of the course. This process would not then be achieved unless an assessment and evaluation of the learners' abilities to function easily in the target situation to which the course syllabus and materials have been identified occurred. In this sense, Dudley-Evans and St John (1998) argue that: "the concept of a learning-centered approach is outlined. This involves considering the process of learning and student motivation very fully and working out exactly what is needed to enable students to reach the end target" (p.26). To put it differently, the ESP learner alongside with the process of NA became the main core of this approach at this stage of ESP development.

Nevertheless, this approach has been criticised by Basturkmen (2010). She claimed that this approach produces a systematic learning based on a systematic analysis of learners needs in each specialty. This criticism has been summarised by Hutchinson and waters (1987), in three main weaknesses. First it restricts learners to certain needs that are generalised on all types of learners. Second, ESP language used in this approach is static and lacks flexibility according to communicative situations. Finally, this approach violates NA norms in which contextual features such as the content and the teacher's profile are taken into account in teaching ESP.

1.4.3 Communicative Language Teaching Approach

During the 1970's, learner centeredness in ESP teaching moved to develop a communicative need for using language in real life situations. This need came as a reaction to the focus on language correctness rather than appropriateness. In other words, linguistic aspects are important in ESP but developing language skills are more important. According to Nunan (1988), learners must not only make grammatically correct statements, but develop the ability to use language in real communicative situations. Thus, communicative language teaching has been suggested as an alternative approach in ESP teaching development. The notion of the usefulness of language gets more importance than grammar which does not necessarily serve the purpose of communication. In this approach, ESP class is seen as a place where learners get trainings to use the language in real life situations, and for different purposes. This approach, therefore, falls under two main paradigms of analysis.

1.4.3.1 Target Situation Analysis (TSA). ESP focus is to enable learners to function adequately in their target situation. Hutchinson and Waters (1987) define target situation as, “the situation in which the learners will use the language they are learning” (p.12). At this stage, ESP course design according to both authors should proceed by: First: identifying the target situation. Second: carrying out a rigorous analysis of the linguistic features of that situation. Finally, the identified features will form the syllabus of the ESP course. Chambers (1980) states:

By the language I mean the language of the target situation. Thus, needs analysis should be concerned with the establishment of communicative needs and their realisations, resulting from an analysis of the communication in the target situation – what I will refer from now on as Target Situation Analysis (TSA). (p.25)

One of the significant examples of TSA is the one developed by Munby in (1978) which is 'Communicative Syllabus Design' (CSD). The latter analyses learners' needs in terms of communication goals, the setting where a particular language would be used to communicate, means which can be either oral or written, and the language skills possessed by the learners, function and structures.

1.4.3.2 ESP Skills Analysis. ESP has witnessed a radical change in communicative language teaching approach. No more attention was given to the surface of language' forms, but rather to the thinking processes that govern language use. In this regard, Hutchinson and Waters (1987) argue: "no need to focus closely on the surface forms of the language the focus should rather be on the underlying interpretive strategies, which enable the learner to cope with the surface forms" (p.13). Dudley-Evans and St John (1998) move a step ahead where they associated the focus on skills with the idea of communicative language teaching. According to them, these interests have grown and developed naturally from what they have labelled 'functional-notional material'. While examining this phase, one may say that strategy analysis seeks to emphasise much more on the learners' expectations for the way they should learn than what they want to learn. Depending on the characteristics of a typical situation, there are priorities among skills; a skill which is emphasised in one situation such as reading, is inappropriate for another situation, consequently, another skill would be more adequate such as writing. In this regard, Dudley-Evans and St John (1998) maintain:

In many situations, especially when the medium of instruction was not English, for example in Latin America, this meant a focus on reading. In other situations, it might involve a different skill, such as listening for international students embarking on academic courses in the UK. (p.24)

1.5 ESP Practitioners

Dudley-Evans and St John (1998) classified the ESP practitioners according to their key roles: Teacher, course designer and material provider, collaborator, researcher and evaluator. Details are provided in the subsequent sections.

1.5.1 ESP Practitioner as a Teacher

According to Robinson (1991), “the role of the ESP teacher is a controversial issue since there is no single ideal role description” (p.79). Hence, different roles have been identified in ESP teaching starting from describing learners’ needs, moving to the design of materials, to structuring the classroom and preparing the learning environments, ending with evaluating the learners’ achievements and the teaching materials. The main point which most of the researchers (Dudley-Evans & St John, 1998; Hutchison & Waters, 1987; Kennedy & Bolitho, 1984; Robinson, 1991) agreed on, is that the ESP practitioner is a teacher with good teaching qualities including the ability to generate communication, showing interest in the learners’ specialty, and being flexible in the teaching learning process. With reference to flexibility, Dudley-Evans and St John (1998) state: “The willingness to be flexible and to take risks is one of the keys to success in ESP teaching” (p.14). While examining the role of the ESP practitioners as a teacher, it might be suggested that it implies a set of sub-roles they are required to play: the classroom organiser, the consulter, and the negotiator. In this vein, the ESP practitioner is required to play different roles together at the same time.

1.5.2 ESP Practitioner as a Course Designer

As it has been mentioned before, the ESP practitioners do not only teach; there has been an agreement among researchers (Dudley-Evans and St John 1998; Mackay & Mountford, 1978; Robinson, 1991; Swales, 1990) that they are required to have other roles to perform such as designing, setting up and administering the ESP course. While

undertaking an ESP course, ESP practitioners at a first step needs to plan their course and then develop their own teaching materials which should be relevant to their learners' needs. At this level of analysis, Dudley-Evans and St John (1998) explained the role of ESP teachers as course designer and material provider in choosing suitable material which has been published, adopting them or writing their own materials. Nevertheless, when it is not possible for teachers to find something suitable, most of them favour to adopt materials developed by other ESP practitioners. This has been referred to by Swales (1980) as 'ready-made materials'. He states:

The role of the materials writer has become such a desirable characteristic of the ESP teacher in the eyes of employers that there is a danger that the advantages of published material are ignored even when that material is suitable for a given situation. (Cited in Dudley-Evans & St John 1998, p.15)

1.5.3 ESP Practitioner as a Collaborator

It is presumed in this sense, that teaching ESP is best practised through either collaboration or cooperation with subject specialist or by cooperation with learners. Dudley-Evans and St John (1998) refer to the term cooperation:

When the ESP teacher finds out about the subject syllabus in an academic context or the tasks the students have to carry out in a work or business situation. And collaboration: "When there is some integration between specialist studies or activities and the language. (p.16).

According to them, collaboration takes place where subject expert and a language teacher team meet and decide together what content should be taught to their classes. In the same line of thought, Kennedy and Bolitho (1984) linked the success of team-teaching to

cooperation from both sides; that of the subject teachers and ESP specialists alongside with mutual trust. Cooperation and trust are the most essential ingredients for the success of such process. To collaborate, cooperate or team-teach classes seem quite helpful for the ESP practitioners, but they need to be updated, through keeping in touch with the most relevant and updated research.

1.5.4 ESP Practitioner as a Researcher

ESP practitioners need, therefore, to be in touch with research in different areas of ESP like English for occupational purposes (EOP), English for science and technology (EST), English for academic purposes (EAP). They are also required to include and use the findings of research in their own situation to better cope with the learners' needs. According to Dudley-Evans and St John (1998):

An ESP practitioner has to go beyond the first stage which identifies key target events, skills and texts- to observe as far as possible the situation in which students use the identified skills and analyse samples of the identified texts. (p.15)

ESP practitioners are required to conduct research about genre and discourse analysis. This might help to get a clear idea about the type of texts used for specific specialties and disciplines of learners.

1.5.5 ESP Practitioner as an Evaluator

Various types of evaluation can be applied to ESP courses. Hence, ESP practitioners are required to evaluate and assess their courses, their learners' achievements as well as their teaching materials. They need to assess themselves, the teaching methods and approaches they follow, to check how much success it brought to their classes. Evaluation and

assessment hold a crucial significance in ESP. In this vein, Dudley-Evans and St John (1998) write:

It is important to follow up with students sometime after the course in order to assess whether the learners have been able to make use of what they learned and to find out what they were not prepared for. They, even, go further to state that “Evaluation through discussion and on-going needs analysis can thus be used to adapt the syllabus. (p.17)

To be updated in terms of research, evaluation and assessment would help ESP practitioners to better cope with the requirements of their learners’ needs and that of the target situation. Being able to assess the needs of their learners along with the teaching materials, methodologies and practices would benefit the process of ESP teaching and learning, and hence improve learners’ academic and professional attainments.

1.6 Trends of ESP

ESP is a sub-field of ELT which consists of branches. English for academic purposes (EAP), English for occupational purposes (EOP) and English for science and technology (EST) are the most two prominent ones.

1.6.1 English for Academic Purposes (EAP)

EAP can be referred to as studying or teaching English in academic contexts, such as universities in order to fulfil academic purposes. Being one of the most common forms of English for specific purposes (ESP), English for academic purposes (EAP), commonly known as Academic English, entails training students, usually in a higher education setting, to use language appropriately for study and for research in their career. In this vein, Kennedy and Bolitho (1984) point out: “EAP is taught generally within educational institutions to students reading English in their studies” (p.4). An EAP course focuses on developing

students' skills required to perform in an English academic context across core subject areas (seminars, conferences presentations, writing articles, preparing dissertations, etc) generally encountered in a university setting. Programs may also include a narrower focus on the more specific linguistic demands of a particular area of study. Generally, EAP courses may be intended to raise students' general English levels so that they can study at university. It may also constitute of teaching specific skills such as reading texts, writing reports, and taking notes for students at a tertiary-level institution.

1.6.2 English for Occupational Purposes (EOP)

EOP refers to English which is either used or learned to fulfil occupational purposes which may include: medicine, law, banking, administration. Kennedy and Bolitho (1984) write: "EOP is taught in a situation in which learners need to use English as part of their work profession" (p.04). A similar, but a more precise definition has been given by Dudley-Evans and St John (1998) in which they assert: "The term EOP refers to English that is not for academic purposes, it includes professional purposes in administration, medicine, law and business and vocational purposes for non-professionals in work or pre-study work" (p.7).

Johns (1991) suggested that ESP is divided into two main areas: EOP and EAP. The latter has two subdivisions: EST and EAP. Apart from EAP which has been divided into two main branches where EST appears as the oldest branch of ESP and EAP which includes all other labels regardless EST. EOP has its own two majoring fields, too: English for Professional Purposes (EPP) and English for Vocational Purposes (EVP). In short, since EOP is either for professional or vocational purposes, its main focus is preparing learners to better cope with the requirements of everyday working needs. The latter which are necessary for their effective and successful communication at the professional level.

Hutchinson and Waters (1987) draw a distinction between ‘EAP’ and ‘EOP’ as the main subfields within ESP by saying that: “there is no clear-cut distinction” and they argue that “in many cases the language learnt for immediate use in a study environment will be used later when the student takes up, or returns to, a job” (p.16). Four years later, Robinson (1991) offers a distinction between these two subfields: “EAP is thus specific purpose language teaching, differentiated from EOP by the learner: future or practicing student as opposed to employee or worker” (p.100). In other terms, learners are the main concern of both EAP and EOP where their either present or future situation may define their needs and the type of ESP course that they might be involved in.

1.6.3 English for Science and Technology (EST)

The third branch of ESP is ‘EST’ which has been a matter of debate among researchers (Dudley-Evans & St John, 1998; McDonough, 1984) about whether it is a branch of its own or a sub-branch shared by both ‘EAP’ and ‘EOP’. McDonough (1984) put EST as a subdivision of EAP in which he emphasised the view that it has an academic orientation. Kennedy and Bolitho (1984) argue: “The term ‘EST’ presupposes a stock of vocabulary items, grammatical forms, and functions which are common to the study of science and technology” (p.6). They elaborate further for more precision and clarification to this notion considering it as an important branch of ESP emphasising scientific content.

1.7 ESP and Globalization

The global use of the English language in the world goes back to globalization which has been initiated by the United States of America when it became the leader of the world in all domains and sectors. As a result, English has become the world language of communication which accompanied globalization. According to Crystal (2003), one condition for a language to be considered as global is that its nation should be strong and

powerful in most useful domains mainly Economy, Science, and Technology. He confirmed that there is a closest cause effect relationship between language dominance and economic, technological and cultural power and this relationship either increases or decreases based on maintaining this power.

Accordingly, English has been always the language of economy, science and more importantly the language of superpower in the world namely USA and UK. In contrast, weak countries cannot impose their languages as communicative languages in the global world. Crystal (2003) adds: “when countries succeed in the world market and economy on the international level, their languages succeed. When they fail, their languages fail as well” (p.07). Besides, due to the new international demands marked by the widespread English use in the global economy, communication in the workplace (companies, factories, hospitals, and business places has been restructured. This urges to call for specific language skills for workers, which further result the so-called ‘workplace English’.

Because of the dominance and spread of multinational companies over the world economy in developing and non-developed countries with the aim of increasing their incomes and production, and Algeria is no exception, they sought that English is a key to guarantee a job in one of these companies. Block and Cameron (2002) believed that the workplace requires workers who are willing to learn an English that involves new technological repertoire and specific communicative skills.

Moreover, language of communication in those business companies is English as the Lingua Franca of economy and industry. Business meetings, international correspondences and negotiations are carried out using English. Therefore, business English teaching became an important subject needed in institutions to provide learners with language skills and linguistic repertoire that allow them to communicate effectively in business situations.

Additionally, there should be a mutual respect between people involved in business communication as they belong to different countries and cultures across the globe. In this regard, Dudley-Evans and John (1996) states: “a sensitive to differences between cultures is necessary for successful business communication in matters such as the purpose of meetings, structuring information or the use of polite strategies” (p.69).

1.8 Communicative Challenges of Contextualizing ESP Teaching

Communication in the scope of ESP remains a debatable issue among researchers in the field, especially when it comes to using English for different purposes in different communicative contexts. The contextual features that characterise a given context of English language learning and teaching make it specific for a particular discourse community in terms of both linguistic materials and communication in different fields. Howard and Major (2005), criticised the content of ELT and materials addressed to different groups of learners who belong to different cultural and contextual backgrounds, let alone enrolled in different subject areas. For many teachers, then, designing and adapting ESP teaching content should consider the learning environments’ specifications. However, it becomes a controversial subject among practitioners, stakeholders, and researchers on the content of teaching ESP, the way of teaching it, and its target audience.

Describing scientific objects or expressing a technical process in English could be one of the challenges for students to express using specific lexical materials. The latter should be selected from scientific repertoire the students use in their classes and future career context. Brooks (1973) states:

Although most students are well aware of their linguistic deficiencies and are privately anxious to remedy them, the legacy of the history outlined earlier coupled with the students' antipathy to anything that reminds them of English lessons of their school days means that any claim to teach English will be met by passive resistance or worse. (p.61)

That is to say, the most significant challenge for both ESP teachers and their students is how to provide an ESP content that contextualises the needs of its use. Therefore, a deep study and analysis of academic and professional needs of students then designing the content and providing necessary materials would be suitable.

According to Jordan (1997), ESP teachers face a number of challenges especially at the beginning of their work, they are required to know the language structure and skills needed in the subject specialty. Hutchinson and Waters (1987) referred to some of the challenges including difficulty in grasping the subject matter because of their migration from GE to other scientific or technical departments such as Medicine, Chemistry, Physics, Science. Besides that, satisfying the needs of the learners with specific expectations related to the nature of the subject, and achievements of the course. because learners are familiar with their specialty better than the ESP teacher. So, they are more aware about their lacks and needs in the area. Henceforth, the issue has grown in importance in light of ESP teachers delivering effective courses. On the one hand, learners are the main element in the context of teaching / learning, they can even reject the ESP content delivered to them if it is not motivating and matching their needs. On the other hand, it is quite impossible for ESP teachers to reach the objectives of ESP if they neglect the importance of collaborating with learners enrolled in different specialties through one-way coined needs analyses.

Conclusion

This chapter started with describing the concept of ESP from different perspectives, and provided an overview of its development as a diverse field in ELT over time. Differences between ESP and GE were also discussed. An outline of the subdivisions within ESP alongside with the characteristics of the ESP courses, in addition to the various roles applied to the ESP practitioner in the success of ESP teaching was provided. Yet, the success of any ESP course could not be possible without gathering information about these practitioners and context of ESP use. Therefore, NA has been introduced in the scope of ESP research as a key concept to explore, investigate and analyse the appropriate ESP teaching approach (es).

CHAPTER TWO. NEEDS ANALYSIS IN ESP

Introduction

Needs analysis has been considered as a condition for an effective and purposeful ESP teaching/learning. To go deep in this vein, this chapter elaborates on the notion of NA with a particular reference to ESP teaching context and workplace of communicative needs. The chapter begins by laying out the theoretical dimensions of NA in ESP, and looks at its definitions and characteristics. Then, it discusses different types of needs in ESP teaching, as well as its models and approaches. The chapter ends up with highlighting NA procedures with a particular reference to most recent studies conducted on this issue.

2.1 Reviewing the Concept of Needs in ESP

Discussions of learners' needs in ESP requires a preliminary understanding of what the term 'needs' means in the context of language learning in general and ESP in particular. In fact, the concept has been defined differently in ESP context by several researchers (Benesch, 2001; Chambers, 1980; Hyland, 2006; Richterich, 1983; Robinson, 1991) both in terms of functions and objectives. It has been synthesised in their studies that needs cover a range of meanings in the ESP context, such as learners' goals, preferences, demands, interests, necessities, wants, lacks, expectations, requirements and motivations.

Widdowson (1983) supported the idea that aims and objectives of learning languages define the needs of learners. In other words, he explains the concept of needs as basically related to the purpose behind learning a language (what learners have to do with the language once they have learned it). Widdowson (1983) further highlighted that needs have two main dimensions: first, a leading to an end-oriented needs which are related to the ends of learning the language. The second dimension is related to what the learner has to do in order to learn the language, which indicates a process-oriented needs that are related to the means used in

learning the language. It can, therefore, be understood from these two complementary dimensions that needs are often closely related to the aims and objectives of learning the language.

In this respect, Holec (1980) followed the same line of thought and emphasised that determining objectives is very important to the identification of needs. He expressed the view that the definition of objective falls under either ‘content-based’ or ‘learner –based’ factors. While there is a distinction between general and specific knowledge to be acquired in the content of knowledge, learner-based factors entail that the minimal level of competence is defined by criteria that are independent of the learner. Another factor is that the purpose of defining needs is to set up a teaching method and to develop teaching materials which are efficient and cost-effective.

Going beyond the above views, West (1994) suggested that the concept of needs stems from the nature of needs themselves. Terminologically speaking, various contradictory concepts are used interchangeably with the term needs such as necessities or demands (also called objective, product-oriented or perceived needs), learners’ wants (also known as subjective or felt needs) and the methods of bridging the gap between these two (also called process-oriented needs). Moreover, other researchers still have different definitions of needs. Robinson (1991, p. 23) who offers a practical description of needs as, “a matter for agreement and judgment, not discovery”. This suggests that needs already exist with learners and are merely required to be brought into the light. However, Brindley (1984) shared the idea needs are built up by individuals or groups of individuals from an actual example of experience. Needs in this case do not exist prior to a project, but rather appear to be a product of a given previous educational experience negotiated by members of the same discourse community (teachers, learners, employers).

Although learners' needs are described differently, most researchers agree on the idea that needs are different from one person to another depending on individuals and their environment and on their activities. In ESP context, needs have been constantly attributed to foreign language teaching in general and particularly LSP. Richterich (1983), suggests that the issue is not only finding an accurate definition of needs but rather trying, "to measure pragmatically the educational, ideological, and political effects, scope and impact in the actual process of teaching and learning, of the methodological issues related to the identification of needs" (p. 3).

Accordingly, in ESP, learners' needs are understood to include their reasons for studying ESP, their current abilities in the main language skills, English language tasks, functions and activities that will be used both in their academic studies and target careers. Needs also include the extent of English language proficiency in each main skill required in their academic studies and target careers. The means for teaching and learning ESP, such as methodology and materials preferences, difficulties or problems encountered while learning and using English, in addition to the information about the circumstances in which English is learnt and will be used are also covered.

2.2 Dichotomies of Needs in ESP

It is clear from the above that there is no absolute agreement regarding the definition and consequently the types of needs. This does not necessarily mean that it is difficult to know what needs are, only that their nature may vary according to who is discussing them. The following sub-sections provide a description of the different ways of categorising ESP needs.

2.2.1 Real vs Ideal Needs

De Escorcia (1985) distinguished between two types of needs: real and ideal needs. According to his distinction, real needs are immediate needs which are realised in most cases towards the end of learners' careers, "when more specialised up-to-date reading material has to be handled" (p.229). This type has three implications. First, learners may not feel a real need for specialised English at the time they are offered their ESP courses. Thus, it is important to raise their awareness of the target situation and of its associated real needs. Second, learners should not often be expected to make sound judgments about their real needs, because as argues that students genuinely do not know what they need or want (Scrivener, 2005). The latter observes that, "experience shows that in general the learner is little aware of his needs and, in particular, he is unable to express them in very clear terms" (p.71). This suggests that teachers or instructors are responsible for investigating learners' needs and for raising their awareness of the need to express and explain their needs and difficulties. Third, real needs are usually seen to be closely related to what occurs in the target situation. In contrast, ideal needs, as the term implies, refer to an ideal situation or state in which learners are expected or supposed to be. This type of need may vary according to one's standpoint and particular circumstances, whereas the real or primary need, refers to the minimum knowledge that learners must accomplish.

2.2.2 Subjective vs Objective Needs

Researcher classified needs to subjective and objective needs. They referred to both as complementary rather than contradictory. Graves (2008) pointed out that subjective needs are often as important as objective ones in that the latter may not be met unless the former are considered. This suggests that in ESP teaching, objective and subjective needs should be balanced. In the same vein, Avermaet and Gysen, (2006) pointed that objective needs are

those which can be derived from information about learners, their use of language in real-life communicative situations, current language proficiency and language difficulties. Whereas subjective needs are those of learners in their learning situation, derived from both cognitive and affective factors such as self-knowledge, awareness of target situations, attitudes towards learning English, wants and instructional expectations. In other words, subjective needs refer to unobservable data such as desires. Avermaet and Gysen (2006) mentioned that while considering only subjective needs formulated by learners themselves, without paying attention to their objective needs, this may not be in their long-term interests, an exclusive focus on objective needs may also not be desirable.

2.2.3 Target vs Learning Needs

Another dichotomy of needs is highlighted by Hutchinson and Waters (1987) who made a distinction between target needs and learning needs. The former are what learners require in the target situation, knowledge and abilities they must have to be able to perform the required level of competence and proficiency in the target situation. Hutchinson and Waters (1987) classified target needs into three types:

2.2.3.1 Necessities. These are the demands of the target situation. That is, what learners need to know to function effectively in the target situation (linguistic features: discoursal, functional, structural, lexical). Necessities represent the destination.

2.2.3.2 Lacks. It is important to match the target proficiency against the existing proficiency of the learners. The gap between them is what the learner lacks, for example, in order to read text in a particular subject area. Lacks are considered to be the starting point of a journey towards the above destination.

2.2.3.3 Wants. These represent the learners' view of what their own needs are. They refer to what they feel they need, which might be different from or conflict with the views of other

people involved such as course designers, teachers and sponsors. Wants are considered to cause disputes as to what the destination (represented by the necessities) should be.

In view of the above descriptions, it could be argued that all sub-types of target needs are concerned mainly with language use, particularly in the target situation, which, has so far been largely ignored in NA research Chambers (1980). In addition, language needs appear to be a matter of negotiation between learners and their society. If these types are linked to Brindley (1989), Brown (1995), Avermaet and Gysen (2006), research studies, it might be suggested that both necessities and lacks represent objective needs, whereas wants refer to subjective needs. Yet, the perceptions of particular needs as objective or subjective seem to be varied among researchers which raises the possibility of conflicting needs and wants among them.

For example, Robinson (1991) maintains that students and teachers may be expected to have divergent views of ESP needs. This does not mean, however, that the needs of a particular project are inherently contradictory. Harris and Bell (2013) emphasised that, different individuals and different groups will have different needs, while Kennedy and Bolitho (1984) write more optimistically of the possibility of, “agreement on needs between teacher and student” (p.14). What seems to be required, as Chambers (1980) suggests, “is to establish the different levels of need and allot some system of priority among them” (p. 26). Porcher (1983) identifies three levels of needs in language teaching and learning as follows:

- ❖ For what purpose does a person learn a language? What does he want or what will he do with this language at the end of the course? This, it might be said, is the non-language aspect of the language need. What purpose will the acquired language serve?

- ❖ To achieve these aims, what language competencies must the learner have? What communicative skills does he need to do what he wants or has to do? This is the language translation of language needs.
- ❖ To acquire these competencies, to obtain these communicative skills, what types of language knowledge must he possess such as lexis? Conversely, what types of linguistic knowledge must the teacher teach?

Porcher (1983) suggested that these three levels must be taken in the above order, because it is in this order that the link of dependence between them operates. This implies that to take one level without the others might be ineffective. It is suggested that researchers involved in analysing students' needs might classify the questions which they want to ask according to these levels.

Nevertheless, Robinson (1991) asserts that: “whereas needs analysis formerly focused rather exclusively on target or end-of-course requirements, now it is usual to take account of students' initial needs, including learning needs” (p.3). The latter refer to what learners need to do to learn the language. They correspond to the route that enables the learners to move from the starting point (lacks) to the destination (necessities) and could include their knowledge of English, skills, strategies, preferred styles, and ways of learning the language, problems encountered in doing so and their motivation for and attitudes towards this learning. This suggests that learning needs are primarily concerned with why and how the language is learnt in the learning situation. In other words, learning needs are entirely pedagogic in nature. However, Savage and Storer (1992, p.141) argue that learning needs are, “instructional logistics needs” in that they relate to questions of the purpose of the course, type of instructional resources and setting (location and time) of the course.

2.3 Needs Analysis

In ESP teaching, there has been an increasing amount of literature on the importance of investigating learners' needs as a prerequisite for effective course design. Such needs are usually identified and analysed through a process called 'Needs Analysis' (Belcher, 2009; Dudley-Evans & St John, 1996; Graves, 2008; Harding, 2007). The term NA was, first, introduced by Michael West in India in the 1920s when he taught Indian civil servants and was attempting to identify why learners should learn English and how they should do so. This suggests that the notion of NA was once simple and limited; it explains that it originally focused on analysis of the target needs by and which best means to realise them. But, Nunan (1988) widened its coverage considerably to include, "the analysis of students' subjective views about their learning and life goals, their preferences for methodology and learning styles, and the opinions of any other stakeholders in the courses" (p. 57). Going in the same line of thought, Chambers (1988) writes:

The term 'needs analysis' itself is, of course, not original to EFL; it is one that has been adopted as relevant from other fields. When it was adopted it filled a gap, and served its purpose by creating an object from an activity for us to be able to manipulate. However, by taking wholesale someone else's terminology, we have ended up with a term that is by no means entirely appropriate. We have accepted the term 'needs' as the end product of the analysis. (p.33)

It is, therefore, important to analyse needs in relation to curriculum and course design and with a particular reference to EFL. Dornyei (2001) recommends: "to make the curriculum and teaching materials relevant to the students, one should use needs analysis techniques to find about your students' needs, goals and interests, and build these into your

curriculum as much as possible” (p.140). This implies that NA might help to avoid basing courses or overreliance on published textbooks or ready-made courses as a quick solution. There also seems to be a common realisation that the intuition and knowledge of curriculum developers, materials designers and teachers concerning specific language and learning needs are insufficient and that identifying and analysing these needs through a thorough NA is essential.

In the context of language learning and teaching, Brown (1995) considers NA as, “a systematic collection and analysis of all subjective and objective information necessary to define and validate defensible curriculum purposes that satisfy the language learning requirements of students within the context of particular institutions” (p.36). Yet, Graves (2008) states that NA is not only a systematic process but also, “an ongoing process of gathering information about students’ needs and preferences, interpreting the information, and making course decisions based on the interpretation in order to meet the needs” (p.98). This suggests that learning preferences which enable learners to acquire skills are another aspect that should be considered when conducting NA. Richards et al. (1992) consider additional aspects and define it as:

The process of determining the needs for which a learner or group of learners requires a language and arranging the needs according to priorities. Needs analysts gather subjective and objective information about the learner in order to know the objectives for which the language is needed, the situation in which the language will be used, with whom the language will be used, and the level of proficiency required. (p. 242)

2.4 Needs Analysis Importance in ESP

Any effective ESP course should give much importance to NA. Thus, a successful teaching activity of ESP is conditioned by identifying learners needs. However, the fact is that learners have different needs, and that there are different social and cultural factors which should all be considered individually and systematically. Teachers must collect information from various sources, due to the multiplicity and diversity of needs, situations, and contexts. Such vision is seen as being conducted through NA and is used as the base for designing any ESP course (Belcher, 2009; Bhatia, et al. 2011; Dudley-Evans & St. John, 1998; Graves, 2008; Hutchison & Waters, 1987). That is to say, no language teaching programme should be designed without a thorough NA.

Several studies in the literature have also discussed the importance of NA as a significant stage in designing and developing ESP courses. Uvin (1996) showed the importance of learners' involvement in the process of syllabus design. However, despite the NA that he conducted, he failed at first, because he realised that the course had been designed without students' participation. Soon after the course had begun, Uvin discovered that he had only considered the work-related needs of the learners and forgotten the learners' voice and the cultural aspects of working in an American nursing home. The results obtained revealed that the content was too narrow, and the teaching methods did not match students' expectations and abilities. He also discovered that many learners demonstrated resistance and inconsistent attendance.

Richards (2001) also dealt with NA from the point of curriculum development. He argued that information gathered from students, teachers, administrators, and employers in the planning process helps to identify general and specific language needs and aids the development of the content of a language programme. He also explained that this approach

assures a flexible and responsive curriculum, rather than a fixed one, which provides information to the practitioners and learner about what the learner brings to the course, what has been accomplished, and what the learner wants and needs to know next. Richards (2001) suggested that NA can be used for many different purposes, he listed some of the purposes which NA can serve in language learning and teaching:

- ❖ To find out what language skills a learner needs to perform a particular role, such as sales manager, tour guide or university student.
- ❖ To help determine if an existing course adequately addresses the needs of potential students.
- ❖ To determine which students from a group are most in need of training in particular language skills.
- ❖ To identify a change of direction that people in a reference group feel is important.
- ❖ To identify a gap between what students can do and what they need to be able to do.
- ❖ To collect information about a particular problem that learners are experiencing.

Since, ESP is understood to be about preparing students to use the target language within academic or professional environments, a key characteristic of ESP course design is that the syllabus is grounded on an analysis of the needs of the students. This means that language is learnt not for the purpose of gaining a general education, but to achieve specific education. In addition, the ESP content is based on students' needs, which is more likely to be motivating for students because it is produced according to their needs.

In brief, what makes NA popular and unique in the field of ESP is that it provides a means of obtaining wider input into the content, design and implementation of a language programme that can be used in developing goals, objectives, and content. It helps practitioners to separate learners' and learning needs into order of priority (Richards, 2001).

This shows the importance of NA in investigating learners and learning needs which include not only ‘target needs’, of what learners need to do in the target situation, but also learners’ subjective needs, such as their interests, wishes, expectations and preferences. To gain a better understanding of learners’ needs, a number of approaches have been suggested for this purpose.

2.5 Needs Analysis Approaches

Diverse approaches to the analysis of learners’ needs, teaching context needs, and course content needs have been suggested. The subsequent sections go to discuss in details approaches related to target situation analysis, present situation analysis, learning situation analysis, critical NA, means analysis, and finally language audits analysis.

2.5.1 Target Situation Analysis (TSA)

Target Situation Analysis (TSA) is an approach of NA, which was first developed by the pioneer in this area, Munby (1978). Based on his model ‘Communication Needs Processor’, TSA provides a comprehensive data profile about students, and establishes what they need to know to function effectively in the target situation. Dudley-Evans and St. John (1998) refer to this process as tasks and activities for which learners are using English; what they should ideally know and be able to do. Likewise, Hyland (2006) claimed that TSA investigates learners’ future roles. The latter need the linguistic skills and knowledge to perform efficiently in their academic and workplace contexts. TSA, therefore, investigates communication needs. This involves analysis of mainly product-oriented data, such as identifying the contexts of language use and observing the language events in these contexts.

Other supporters of the TSA are Hutchinson and Waters (1987), who classified TSA them into three types: lacks, wants and necessities. These can be identified by observing the kinds of situations in which they will need to function, and then analysing the type of

language used in these situations (Hutchinson & Waters, 1987). Hutchinson and Waters provide a comprehensive TSA framework, which includes a list of questions to be used to identify learners' 'real world' communicative requirements. Such information can be obtained from people working or studying in the field, students, and documents relevant to the field, employers, colleagues and ESP. Consequently, the results are then used to prepare the intended learners' group for the purpose of the target language which can be later presented in a form of a syllabus (Jordan, 1997). Therefore, this approach is necessary in NA investigations as it provides reliable and relevant information about the target situation of learners.

However, researchers like McDonough (1984), Jordan (1997), and Nelson (2000) and argued that whilst Munby's approach has a theoretical value in which he assembled and classified target situations where learners would probably need to operate, it is time consuming and could not easily be operated in practice.

2.5.2 Present Situation Analysis (PSA)

The Present situation analysis is considered as complementary to TSA, in which are two sides of the same coin (Basturkmen, 2010; Hyland, 2006). It attempts to identify what learners are like at the beginning of the course including their strengths and weaknesses, their skills, perceptions, and familiarity with the subject. In other words, it refers to the term 'means needs' which enable learners to learn and pursue their language goals as the course progresses and 'ends needs', or those associated with target goals. In this regard, Basturkmen, (2010) pointed out that three basic sources of information for this approach: learners themselves, the teaching establishment, and the user-institution, which can be collected from various sources: students, teachers and the place of study or work.

It is, then, clear that the assumed difference between TSA and PSA is that the latter represents constraints on the former, which should be carried out first. Considering that there are multiple sources of data, the approach proposes that detailed guidelines and techniques regarding the kind of information collected should be included. Such information can include students' level of ability and their attitudes towards language learning.

2.5.3 Learning Situation Analysis (LSA)

Learning situation analysis necessitates exploring the learning situation to discover how students learn to do what they do with language (Hutchinson & Waters, 1987). This suggests that LSA is usually concerned with identifying the preferred learning styles and strategies of students. It tries to discover how the students wish to learn, rather than what they need to learn. Ideally, it is conducted with a group of learners before a language course takes place to determine what their expectations are, and to consider the most suitable methodologies to adopt as well as what type of course is needed. To do so, a distinction between needs (skills which are relevant to them), lacks (the gap between the learners' present competence and their desired competence) and wants (needs on which learners place a high priority in the limited time available) have been made. In this regard, Hutchinson and Waters (1987) suggested a framework designed to help analysing the learning needs of students which consists of four questions: Why are the learners taking the course? How do the learners learn? What resources are available? And who are the learners?

It can be, therefore, argued that the investigation of students' preferred styles and strategies conducted would give a clear picture of their conception of learning and guide the researcher to what areas require focus. To exemplify, learning factors such as language level, cultural background, motivation, age, task requirements, are taken into account when teaching ESP.

2.5.4 Critical Needs Analysis (CNA)

Critical needs analysis was developed by Benesch (2001). It examines target situations of learners or groups of learners. Then, it endeavours to address future learning conflicts by examining the academic contexts in which learners' needs are situated. CNA reflects on the target situation as a site of possible reform, which, "takes into account the hierarchical nature of social institutions, and treats inequality, both inside and outside the institution, as a central concern" (Benesch, 2001, p.23). Benesch went further and believed that it is necessary to think that NA should go beyond the academic scope and consider social issues affecting students' future professional lives, such as budget cuts and deteriorating job opportunities. She, also, suggested that NA should include an investigation of, "who sets the goals, why they were formulated, whose interests are served by them, and whether they should be challenged" (Benesch 2001, p.43).

2.5.5 Means Analysis

Means analysis first appeared in the late 1970s and early 1980s. This type of analysis aims to find out information about the classroom environment in which the course takes place (Swales, 1990). It is mainly concerned with the contextual variables of the teaching and learning environment, rather than with the language and the learner in particular (Jordan, 1997). Certain factors are considered; classroom management and culture are the major ones. It is argued that what might work well in one situation, may not work in another (Dudley-Evans & St. John 1998). Even though different situations might share some language needs, the conditions in which learning takes place where and how learners apply language are not the same. In this regard, Swales (1990) suggested five factors related to this approach that should be considered: classroom culture, ESP teacher profile, pilot target situation analysis, status of service operations and study of change agents. Means analysis, however, is time

consuming in case of using ‘observation’ since observing both teachers and students for an extended time where access might be difficult if conducted properly.

2.5.6 Language Audits Analysis

This term was used in language training for business and industry to set out the target for learning needs, and to bridge the training gap between present performance and the required performance in the target language. It aims to discover the strong and weak points of a company in terms of the communication process carried out in a foreign language (Nelson, 2000). Therefore, tasks or activities that people perform in their jobs including formal meetings, making presentations, should be investigated and then the level of language performance required by these tasks must be ascertained (Robinson, 1991).

Long (2005) argued that language audits take institutions as the unit of analysis and that they are usually conducted through a quantified general survey. Such an approach requires a full investigation of the target situation, which involves four main considerations: First, identifying the situation in which the language is used, together with the specific tasks that are carried out. The second consideration is the goal which refers to the establishment of the level of employee competence required for the successful completion of the tasks identified (job specifications). Third, the starting point where the current levels of competence of the employees, and the design of the training programme are determined. The latter would help the employees move from their current levels of competence to the levels of competence established to reach the goal. Finally, a full report of the programme should be presented to the organisation or sponsor. In short, language audits analysis appears to be more suitable if conducted within an organisation, but that it can also be carried out in an ESP teaching context.

In view of the above, NA is an essential process for collecting information about learners' needs and situations. No matter what method is used to collect the information, it seems that identifying needs in ESP has often been a crucial and central issue; every method aims to determine what the learners need, because needs are often determining factors in course design. However, needs generally include not only the requirements of linguistic features of a target situation, but also communicative preparation and association with the target community, and NA is very much dependent on how these needs are perceived.

2.6 Models of Needs Analysis

Two different models to the analysis of learners' needs are widely known. The first is the model of Richterich and Chancerel (1987) and the second is Munby's (1978) 'Communicative Syllabus Design'.

2.6.1 Language Situations and Language Operations Model

According to Richterich and Chancerel (1987), language NA is based on two main criteria: Language situation criterion and language operating criterion.

Language Situation Criterion. This feature is composed of three types of information:

- ❖ Information about the agents (people involved in the communication process such as learners, teachers, and employers). Information is needed from these agents regarding their identity, their numbers, and their social and psychological roles.
- ❖ Information about the time when the act of communication takes place, such as its duration and its frequency.
- ❖ Information about the place where the act of communication takes place, such as its geographical and physical characteristics.

The Language Operating Criterion. This criterion is shaped by three types of information:

- ❖ Information about the functions or purposes which the act of communication has to fulfil (expression, description, argumentation).
- ❖ Information about the objects to which the act of communication will relate (whether the object of communication is to convey a neutral message, to report an affective state or to maintain or break social ties).
- ❖ Information about the means used to produce that act, such as the language skills needed, whether the communication is spontaneous or controlled, direct or indirect and whether it is affected either partly or wholly by means of nonverbal signs.

What can be understood from these two components is that the authors take the act of communication as their key concept. However, in a later work, Richterich and Chancerel (1987) present a broader understanding of the definition of needs within their model to make it more comprehensive. The model includes desires, requirements, motivation, and methodology as observed not only by the learners but also by all those involved (language teachers, subject teachers, and employers).

Despite its improvements, it could be argued that the model of Richterich and Chancerel (1987) has some limitations. Gardner and Winslow (1983) identified some of these limitations after applying the model in their study. First, some of the techniques listed for use (intelligence tests) would require specialists to design them. Secondly, some of the categories seem to be not very necessary and important (marital status, number of children, brothers and sisters, religion, occupation of mother and father). Thirdly, it would be difficult for those who are directly concerned with running language courses to have both sufficient time and the ability to perform the procedures outlined by the model. Thus, it seems that the model would need a team of specialists to apply it.

2.6.2 Communicative Syllabus Design Model

The second model is proposed by Munby (1978), which has been a turning point for ESP, probably because it established needs as central to ESP course design (Kim, 2008). McDonough (1984) points out that the procedures in Munby's model, "are very detailed and represent an attempt to be both explicit and comprehensive" (p. 31). Munby called this set of procedures the 'Communication Needs Processor' (CNP). The theoretical bases of the model, as West (1994) argued, are contemporary views on the nature of communicative competence derived from Hymes (1972) rational of language analysis and acquisition. Even though the model is heavily based on theoretical assumptions, its proposed techniques have been used in many parts of the world to set up language teaching and learning programmes.

In attempting to evaluate Munby's model, Hawkey (1980) proposed that it presupposes a language-training situation with specific occupational or educational objectives involving a reasonably homogeneous group of learners. This would help course designers to produce a detailed profile of what learners need to be able to do in English in the occupation or studies for which they are being trained; and a specification of the language skills, functions and forms required to carry out the communication described in the needs profile. This also involves answering some questions, such as: Who are the learners? Which study or occupational area will they need English for? Where and when will they need English? With whom to participate and in which communicative activities? Information collected to answer such questions can form a communicative needs profile, which is a prerequisite of the next stage: specifying the language skills required by the learners for their target communication (Hawkey, 1980).

McDonough (1984) maintained that what characterises Munby's model is the place of the CNP at the heart of the model: information about the learner's age, nationality, sex, mother tongue and so on is fed into the CNP, which consists of a range of categories. Hawkey (1980) explained that this is in a two-sector model which might be represented in a diagram. The variables in the first sector reflect the socio-cultural orientation of the model involved in the CNP, identified by Richterich (1983) as objective needs which are foreseeable and generalisable. The headings under which information is collected in the first sector of the model are logically sequenced, rather than random. Munby's model excludes socio-political, logistical, administrative, psycho-pedagogic and methodological variables, because, as Munby explained, he is concerned with the dimension of course design, which is subsequent to syllabus specification. This suggests that Munby's ultimate purpose is to inform course designers how to construct a syllabus. Besides, Munby confirmed that it is difficult to link a functional specification of a language with actual language use.

Criticism of Munby's Model (1978)

Despite its widespread use, Munby's model has been subject to criticism. Though Hawkey (1980), considered it as an effective tool mainly to course design, it ignores those at the heart of the process, learners, mainly. West (1994) also criticised the model for collecting data about learners rather than from them. This implies that any determination of needs as being primarily concerned with course design or development will be inadequate if it does not consider the learners' own views and wishes. There has been a recent recognition that learners as reflective community members should participate in NA alongside ESP specialists (Belcher, 2009; Benesch, 2001). Furthermore, Munby's model is essentially performance related, referring to communicative activity and communicative event, which are categories of real-world language use rather than elements of a construct of

communicative competence which covers the grammatical, discourse, sociolinguistic and strategic characteristics of communication (West, 1994).

Besides, it seems that Munby has adopted a performance repertoire which has often been questioned by others, such as Hutchinson and Waters (1987) who stated that Munby failed to specify the non-linguistic, contextual factors affecting communicative competence. Munby might be also criticised for not attempting to specify procedures for the actual collection of relevant data. The explanation would appear to be that Munby merely presented a useful set of headings under which data needs to be collected and, in some cases, lists inventories of information from which selections should be made; the method to be followed seems to be left to the users. This, in turn, according to Hawkey (1980), resulted in the collection of a large amount of detailed information required for application of the model, which is difficult to obtain without a practical knowledge of the target environment. This environment would often not be accessible and collecting the data would in most cases be both expensive and time consuming, while the method of analysis is unsure.

Jordan (1997) claims: “Munby’s approach and model have been very influential: either developments have stemmed from his work, or because of reactions to it” (p.24). It is often seen as a landmark in NA studies, particularly those concerned with the design of ESP courses. However, a very important point that should be considered is that needs are normally variable and can be reshaped by the way they are analysed. That is, deciding the target situation plays an important role in NA. Furthermore, the requirements of linguistic competence for communication are important, but not sufficient. A link should exist in ESP course design between needs and the target community. Jordan (1997) stressed that needs are not about a description of a hypothetical future but about the students’ relationship to the community with which they want to integrate. He recommended that NA should proceed

from the conception of a course as an interaction among students and teachers in a context shaped by the target situation.

Consequently, according to Jordan (1997), NA in this sense, has two aspects: A continuous self-evaluative course that can relocate itself according to its goals and which finds methods that reflect this outlook and an understanding of the target situation as a subculture or social group that the student wishes to join. Jordan seemed to interpret this by making a practical assumption that the ESP course will comprise more than just tasks; language practice is developed out of the target situation. In addition, these tasks are developed from the activities of the target situation community, while activating its discourse clarifies to students what they must learn in order to become full participants or members of this particular community.

2.7 ESP Needs Analysis Procedures

Literature of ESP mentioned different ways used in approaching needs analysis. Dudley-Evans and St John (1998) focused on a specific way in which NA is conducted. They emphasised on the point that any needs analysis differs according to the situation where it takes place. Dudley-Evans and St John (1998, p.125) outlined the concept of NA in ESP by listing the following types of information:

- ❖ Professional information about learners: the tasks and activities that they are/will be using English for, via TSA and objective analysis.
- ❖ Personal information about learners: factors which may affect the way they learn, such as previous learning experiences, cultural information, reasons for attending the course, expectations of it and attitudes to English, i.e. wants, means and subjective needs.

- ❖ English language learning about learners: what their current skills and language use are, via PSA.
- ❖ Learners' lacks are defined as gaps.
- ❖ knowing how language and skills are used in the target situation, via linguistic analysis, discourse analysis and genre analysis.
- ❖ Information about the environment in which the course will be run, via means analysis.

One main shortcoming which could be addressed to the list above is that a deficient concept of needs might impede analysis, or probably render the outcomes insufficient and inapplicable. For instance, ignoring affective factors (motivation and attitudes towards the target language) might limit needs to the merely linguistic aspects. West (1994) suggested that this approach might reflect interesting differences in points of view and help the undertaking of different forms of NA.

Jasso-Aguilar (1999) stressed another procedure in conducting a NA. it is suggested that it is necessary to examine the social context in which the participants live and behave. This implies that there are some contextual factors which might have an influence on the way a NA is undertaken or the process in which it is done. It can be suggested, then, that while the significance of needs and NA in language learning in general and in ESP cannot be ignored, the process in which NA is undertaken has an almost equal significance.

Jordan (1997, p. 23) presents the following list of steps for undertaking a NA which could also be applicable to different types of ESP:

- ❖ Identify the purpose of the analysis.
- ❖ Delimit student sample.
- ❖ Decide upon approaches.

- ❖ Acknowledge constraints/limitations.
- ❖ Select methods of collecting data.
- ❖ Collect data.
- ❖ Analyse and interpret results.
- ❖ Determine objectives.
- ❖ Implement decisions (decide upon syllabus, content, materials, methods).
- ❖ Evaluate procedures and results.

It is significant that for Jordan the first step in carrying out a NA is to identify its purpose. Therefore, the reasons for analysing learners' needs should be as clear and specific as those identified by Richards (2001). For instance, when a NA of future professionals is carried out in each discipline as the domain of engineering, the purposes may be:

- ❖ To determine to what extent the present ESP course helps them to improve their language skills (reading, listening, speaking, writing), grammar and vocabulary.
- ❖ To identify language difficulties and problems encountered in their current place of learning English and future workplaces.
- ❖ To determine to what extent the present ESP course adequately prepares them both for their studies and target careers.
- ❖ To determine to what extent their needs are met by the present ESP course and its materials.
- ❖ To determine the extent to which the English language needs assumed by their sponsors are actual needs.
- ❖ To determine what language skills, activities and tasks will be required to enable them to function effectively in their academic discipline and future workplaces.
- ❖ To identify their attitudes towards learning English and ESP.

Taking these purposes into consideration in ESP teaching, NA process of the current study started by identifying its reality, lacks and wants in a particular reference to workplace needs. In short, NA is seen in ESP as the foundation on which all other decisions are or should be made (Belcher, 2009) and that it is the starting point for a successful ESP teaching.

2.8 A Review of Needs Analysis Research Studies in ESP

Several studies in NA have been conducted within the field of ESP both in teaching and course and curriculum design. At the level of ESP teaching learning methods and activities, using a questionnaire survey, Lombardo (1988) investigated the needs and attitudes towards learning English of 200 students in the School of Economics of an Italian university. A parallel questionnaire was also given to 51 non-language members of the teaching staff. The survey found that students were motivated to learn English to improve their chances of employment. The activities most needed to succeed in their field were understanding oral reports and reading professional materials. It was also found that listening skills were the most important, followed by speaking, reading, and writing. Both students and teachers viewed technical terminology as the greatest source of problem for students in reading in English.

Alagozlu (1994) investigated the English language needs of students at the Faculty of Medicine in Cumhuriyet university, Turkey. He interrogated three different sources, students, teachers, and administrators, by means of two data collection methods: questionnaire and interview. Findings indicated that reading and translation were the language skills most needed by the students. Significant differences were also found among the perceptions of students, teachers, and administrators regarding students' needs. In addition, it was found that most of the informants were dissatisfied, to some extent, with the current English language curriculum and that it did not fulfil the needs of the students.

Chan (2001) carried out a large-scale NA study to identify the English language needs of students at the Polytechnic university in Hong Kong. The objectives of the study were to determine students' perceptions of their needs and wants, to measure their ratings of their own competence in their academic and professional domains and to compare the extent to which their opinions matched those of their English language teachers. Using a questionnaire survey, Chan sampled 701 tertiary learners and 47 English language teachers at the university. Results showed that there was consistency of response between students and teachers. The activities perceived as the most important for academic studies were reading magazines and periodicals and speaking at seminars and meetings, while those seen as the most important for future professions were listening and speaking at conferences and listening on the telephone. The study also found that a major concern for both students and teachers was improving the ability to communicate orally for academic and professional purposes.

Although the studies reviewed above are important and informative because they provide indications of the language needs of non-native students, some of them seem to suffer from methodological problems in conducting NA. First, some utilised only one method of data collection, namely a questionnaire. Second, although they had a large number of participants, in most of the reported studies these fell into only two groups: students and teachers. Several recent scholars (Gilabert, 2005; Kim, 2006; Long, 2005) recommended using multiple methods and sources of information when investigating learners' needs to overcome the problem of identifying irrelevant needs.

In contrast to the above studies, the present study used mixed method approach to collect data from different sources among the participants involved in addition to document analysis and course design. It is believed that this involvement of multiple methods might

help to provide a clearer picture of the situation under investigation. Until recently, most NA studies focused on learners' views rather than those of domain experts (Gilabert, 2005). The suggestion was that they could provide useful information about their work-related needs, the activities they performed and the skills they used within their career domains. Most importantly, most NA studies were conducted on curriculum and course design ignoring the role of classroom teaching tasks. Without an investigation to this latter, a deep clear image to the actual ESP teaching and learning in each context and a specific specialty could not be reached.

2.9 Limitations of Needs Analysis Approach in ESP

Although NA plays an important role in any ESP course, several limitations of this approach need to be acknowledged. Firstly, most ESP learners are not homogeneous, therefore, students' needs in a group are not identical, and in many cases may vary quite significantly (Flowerdew, 2012). Second, some necessary information for conducting the analysis may be inaccurate or unavailable as information about students' needs is difficult to predict. For example, asking students about their language needs can be challenging because they may lack the ability to describe these needs in any meaningful way, and sometimes this can be misleading. Basturkmen (2006) argued that objective needs of students are not necessarily the same as their subjective needs or wants, because students may objectively need to deal with laboratory report texts concerned with study matter but may want to read topics in English on other subjects of general interest. A third limitation of this approach is that perspectives of needs are different, and the decision of whose perspective to consider in designing or developing ESP courses often depends on individual and subjective judgment.

Nevertheless, NA is still an effective method, and has had the beneficial effect in the context of language teaching and learning. It might be used for reminding language teachers and syllabus designers that the aim of language teaching in general and ESP is to enable the learner to use the language effectively in the situations they will need to communicate in. It has also helped to focus on the range and variety of uses to which language is put.

Conclusion

In summary, the chapter content accords that NA goes along with any ESP investigation or teaching. The variation of its approaches and models are concrete examples of the different goals and objectives of its practitioners. Though some of models have been criticised, it does not deny their theoretical and practical value. What matters is that before conducting any NA investigation, the user (teacher or researcher) should take into account the purpose of using NA so that the choice of the approach and model would be adequate and appropriate. It is noteworthy that while NA is seen as a defining feature of ESP, the subject has not yet received sufficient attention from researchers and language teaching professionals, particularly, in the Algerian academic context. Perhaps, there is not yet a sufficient awareness, from institutions and teachers of the importance to identify learners needs. In Algeria, in which the current study was undertaken, NA studies in ESP teaching and learning seem to be very rare. The following chapters go in deep and spotlight on the current situation of ESP and NA in the Algerian context.

CHAPTER THREE. RESEARCH METHODOLOGY

Introduction

This chapter discusses the methodology used for the present study. It describes the context of the study, methodological procedures, instruments applied to answer the research questions, research design, participants and sampling. Findings of the pilot study with changes in the main study, issues of ethical consideration, as well as different methods for quantitative and qualitative data analysis are also highlighted. Data for this study are retrospectively collected from questionnaires, ESP course evaluation, and interviews to answer the following research questions:

1. To what extent does ESP teaching/learning in Petrochemical Studies Department at Skikda University reflect the workplace communicative expectations?

- a) What is the reality of ESP teaching and learning in the respective department in terms of teaching methods used, content taught, communicative skills developed?

- b) What are the British Petroleum company workplace needs for ESP Petrochemical graduates?

2. What should be done to ensure the ESP teaching/learning in Petrochemical Studies Department meet the workplace needs and expectations?

It is worth mentioning that the study attempts to explore ESP teaching/learning situation in the department of Petrochemical Studies at Skikda University in Algeria and how does students' level reflect their English use in the workplace. It seeks also to inform higher education institutions and syllabus designers with insights to design courses that promote ESP teachers' awareness about their ESP teaching practices and hence improve them according to students varied specialties and expected workplace needs.

3.1 Research Method

Research methodology has been influenced by researchers who have played a significant role in directing educational inquiries in the field of social sciences. Within the latter, a new perspective of approaching educational research combines both objective scientific methods and subjective stances (Lodico et al., 2006). While objective methods give value to scientific statistical truth (quantitative), the subjective approach focuses more on human interpretation, construction, and application of knowledge in different contexts (qualitative). A combination of both research approaches has been referred to by mixed method approach. The use of different research methods would be more effective to develop a deep understanding of the problem under investigation, and get convincing interpretations to the findings through comparison, contrasting and correlation (W. Creswell ,2014).

Therefore, drawing upon the aim of the present study, mixed method approach which combines both quantitative and qualitative data collection tools is adopted. Dornyei (2007) states: “A mixed methods study involves the collection and analysis of both quantitative and qualitative data in a single study with some attempts to integrate the two approaches at one stage of the research process” (p.163). In this vein, the aim of using this type of research is based on understanding the complexity of the present research situation taking holistic stances and seeking to gain deeper insights into the explored issue.

3.1.1 Significance of Mixed Method Research

Mixed methods research is an approach to inquiry which involves collecting both quantitative and qualitative data, through integrating the two forms of data, and using distinct designs. The core assumption of this form of inquiry is that the integration of qualitative and quantitative data yields additional insight beyond the information provided by either the quantitative or qualitative data alone (W. Creswell & D. Creswell ,2018). Dornyei (2007)

suggested that two main factors would claim mixed method approach superior to investigations conducted by either quantitative or qualitative research alone.

3.1.1.1 Understanding the Complexity of the Phenomenon. Using one research strategy might not help the researcher to get a deep insight into the issue under investigation. Therefore, getting a deep and full understanding of a given target phenomenon requires increasing the number of research strategies, and elaborates a comprehensive understanding of a given study exploring it from different angles.

3.1.1.2 Multiple Audience Community. Mono-method studies tend to split research audience into two research schools of thoughts: One favors the quantitative research based on their research interests in statistical reasoning. The other one might not be interested in any kind of research which is basically quantitative but rather qualitative where more space is open for interpretation and individual criticism. Each camp builds its own strengths on the shortcomings of the other in terms of rational, method, strategies, data collection and analysis. Therefore, mixed method research came to combine both audiences by accompanying qualitative study with qualitative elements and vice versa.

Accordingly, the mixed method approach has a number of purposes, as both quantitative and qualitative methodologies would compensate the drawbacks of each other, and hence add strength to the study. Moreover, quantitative and qualitative data collection instruments would provide an overall clear picture of the study that gathers data from different sources, and thus obtain more accurate data.

3.2 Research Design

3.2.1 Quantitative Research Method

This method is used to describe the stable reality in an objective way. It aims to identify the causal relationship between variables through controlled, structured, and objective

instruments such as questionnaires, surveys, tests, and quizzes. As it is connected to qualitative investigations, quantitative research holds a philosophy of causality, which is mainly based on the relationship of causes that probably determine effects or outcomes. It is centered around numbers and statistics, using standardised procedures while collecting and analysing data to gather profound information that depicts participants' perspectives. This method is closely associated with experimental research design where hypotheses are tested and verified (Dornyei, 2007).

As far as the present research is concerned, quantitative research is regarded as a suitable method for measuring and analysing statistical data collected from questionnaires as the main research tool. Though the present research is not following an experimental research design, it is still an and an exploratory analytical investigation that could be conducted using numbers, standardised procedures, and statistics to achieve reliability.

3.2.2 Qualitative Research Method

Unlike quantitative method, the qualitative research design appears to be more appropriate for descriptive and exploratory investigations which utilises limited standardised instrumentation such as interviews, observations, journals and diaries. These types of instruments follow less structured analytical procedures for both data collection and analysis in order to generate a detailed account of human behaviour (Dornyei, 2007). In other words, this method is used to widen the scope of understanding and interpretation of the research problem in its natural context. The aim behind is to explore the meanings of individuals' behaviours, actions and perceptions by recording and collecting rich and in-depth data about participants' opinions, experiences and feelings.

Both quantitative and qualitative methods were used in the present study. The aim of this combination is to gain in-depth understanding of the reality of ESP teaching/learning in

the department of Petrochemical Studies, and its reflection and effectiveness in the BP workplace. The combination also tended to achieve a deeper understanding of the target phenomenon, and to verify one set of findings against the other by means of cross checking of the results.

Making sense of what ESP teachers know about ESP teaching in terms of content development and useful teaching methods requires knowing about the particularity of each situation, the uniqueness of the type of students, their specialty and the context where ESP knowledge is used. In brief, to answer the research questions of the present study, confirm or disconfirm its hypothesis, data were collected by means of both quantitative tools (questionnaires), and qualitative instruments (course content evaluation, semi-structured and structured interviews).

3.3 Description of the Research Context

3.3.1 ESP Teaching at Skikda University

English has gained more attention in all Algerian universities, and Skikda University is no exception. Both students and their teachers seek to look for ways that better enhances the process of English language teaching and learning. Students learn the language to gain more knowledge to show more progress with assistance from their teachers who are normally required to apply recent and updated data for their pedagogical and research purposes (Bouafia, 2021). Teachers also need to focus on an efficient communicative skill for academic (teaching skills, conferences, research publications) and/or professional communication (workplace).

It is, thus, important to note that, the same as in most if not all university in Algeria, Skikda University does not offer adequate specialised ESP courses (Bouafia, 2021). This might not be an accurate estimation of the ESP teaching situation unless research

investigations are conducted. The fact that ESP courses are assigned randomly to students of English and without any fixed syllabi, in addition to the lowest credit and coefficient allocated to ESP courses in comparison to specialty modules, make students from different specialties take this course for granted. This leads to claim that English is just one of the subordinate subjects taught and learned in non-English departments, and petrochemical studies department is one example.

3.3.1.1 ESP Teaching in the Department of Petrochemical Studies. In the department of petrochemical studies, students are requested to take English throughout their academic career (Licence and Master) depending on their field of specialty. The ESP course offered within this formal system of education is labelled ‘English language’. The course content delivered to students’ engineers aims to introduce them to petrochemical terminology in English and to ease the communication process in the field with local or foreign personnel. It is supposed, then, to meet the requirement of industrial companies from various workplace needs.

3.3.1.2 ESP Teaching in the CEIL (Centre d’ Enseignement Intensif des Langues). The CEIL was created out of a decision made by the Algerian Ministry of Higher Education and Scientific Research which provides trainings in foreign languages mainly English for students from different specialties. The centre has two main functions: first, to develop students’ level in foreign languages. Second, to help foreign students who are enrolled in full-time programmes in fields related to science and technology to remedy the failure rate of first-year higher education level, which is partly due to their low level in foreign languages mainly French. The CEIL of Skikda therefore takes place in this framework of support program for the establishment of language courses (French, English, Spanish, and many other languages). Concerning the English courses provided in the centre, they are meant to

facilitate access to specialised language learning and to participate in the effort to improve the level of ESP among students. However, this mission has been assigned to teachers who lack the expertise for this job. Consequently, students would not achieve successfully their expected communicative goals.

3.3.2 Skikda University and Petroleum Industry

Oil and gas industry constitutes a key market sector in today's globalised economy and an important job provider. It is evident then that English language proficiency in this field becomes compulsory among preservice (students) as well as in service (workers) people, at all job profiles. The latter focus on the professional profile and the communication skills that are relevant to the processes of exploration, extraction, drilling, refining, transportation, marketing products, and even management roles.

The oil and gas industry, which is one of the most important industries in Algeria, is a working place led by The Société Nationale pour la Recherche, la Production, le Transport, la Transformation, et la Commercialisation des Hydrocarbures 'SONATRACH' which was created on December 31st, 1963. Over time, it has become a powerful element of national development mainly at the economic and social levels. However, as it does not yet owe high developed technology of oil and gas production, Algeria signs ongoing agreements of partnership and cooperation with international companies of oil and gas industry to mobilise resources of the oil revenue. These international companies such as British Petroleum require engineers from different specialties; geologists, production engineers, and drilling engineers, with mastery of the English language as a prerequisite for recruitments. The Algerian University and, Skikda is no exception, still takes steady steps in producing graduates with highly qualified ESP communicative skills.

3.3.3 British Petroleum Company

British Petroleum company is one of the world's leading international oil and gas companies. The company was incorporated in England as The Anglo-Persian Oil Company in 1909. From 1920s-1930s becomes the pre-eminent oil producer ownership in the Middle East. The company enters into international marketing in continental Europe, Africa and Australia. In 1954 The company name becomes The British Petroleum Company Limited. Marketing activities extend to New Zealand, Africa and more countries in Europe. Nowadays, the company branches operate and market their products in more than 80 countries worldwide and Algeria is no exception. They provide their customers with fuel for transportation, energy for heat and light, retail services and petrochemical products for everyday items. As a global group, the company interests and activities cover two business segments: Exploration/ Production and Refining/ Marketing. BP's activities in low-carbon energy are managed through Alternative Energy business.

BP has business in Algeria including gas-producing In Amenas and In Salah concessions. BP holds working interests of (33.15%) and (45.89%) in different projects of oil and gas industry. Anja-Isabel Dotzenrath, BP's executive vice president, gas & low carbon energy, said: "BP has worked successfully with Algeria and our partners over almost 30 years, developing and supporting operations on major oil and gas projects for the country. We believe this agreement represents a good outcome for bp and for Algeria." Retrieved from www.bp.com, Wednesday, 12 February 2020.

As far as this study is concerned, two contexts are selected to be the setting where the study is conducted. First, the department of Petrochemical Studies at Skikda University, Algeria represents the ESP teaching/learning context. The main reasons of such a choice is that the department is one of its ancient departments that passed through different stages of

developments and changes in terms of teaching contents and expert staff. This advantage motivates the researcher to know about the place of English in such a development knowing that students graduates from this department are expected to work for national and multinational petroleum companies locally and abroad. The second context represents the BP company branch in the Algerian industrial zone of Ein Aminas, Ilizi as a workplace context where Algerian engineers use ESP for communicative purposes. This context has been chosen as a for two reasons. From one hand, it is one of the most important foreign petroleum companies which has history and experience in the Algerian petroleum industry. From the other hand, this company is considered as an authentic context of ESP use where Algerian engineers have a direct contact with British managers.

3.4 Population and Sampling

There is a consensus among social sciences that samples are selected based on the characteristics of the population and the research methods used (Ritchie & Lewis, 2006). Previous research reported that the quality of the research is not only based on the successful choice of research methods, but also on the suitability of sampling. Cohen (2007) argued that the type of research, expense, time, and accessibility are also key parameters for the researcher to determine the size of the sample or collect data from a large population. Therefore, “They often need to be able to obtain data from a smaller group or subset of the total population in such a way that the knowledge gained is representative of the total population under study” (Cohen, 2007, p.100). This is to ensure that the sample is representative of the whole population.

With regards to the study, a sample of 60 from a population of 147 Master one students enrolled in petrochemical specialty and a whole population of 13 ESP teachers in the department of Petrochemical Studies at Skikda University are surveyed. Students’

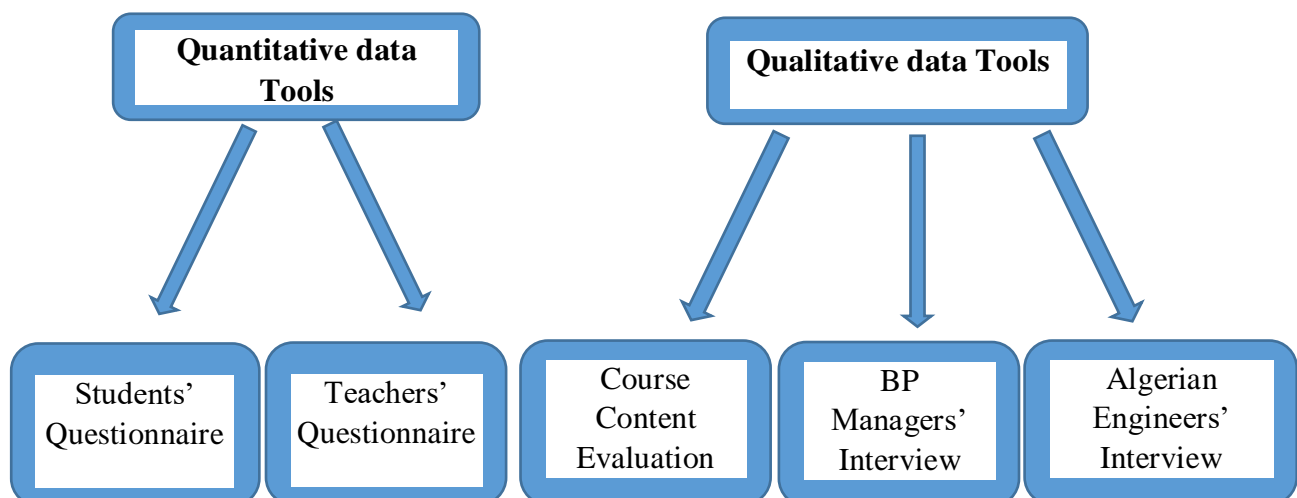
participants are randomly selected without any specific considerations such as age and gender. Besides, a sample of lessons is collected from the same ESP teachers to be evaluated based on the standards of specificity and authenticity of language aspects and skills in ESP course design. Concerning the workplace population, a sample of six from 52 Algerian engineers recruited in BP company branch in Algeria and three British managers in the respective company are interviewed. Data obtained from the samples would help in widening the researcher's understanding of the English taught and learnt at the aforementioned department highlighting its weaknesses and shortcomings based on workplace communicative needs.

4.5 Data Collection Tools and Analysis

To uncover the situation of ESP teaching in the Algerian university and its reflection on the workplace context, a set of qualitative and quantitative research tools were set to collect data from both settings so that results could help to link both contexts and bridge academic and professional gaps. Figure 4.1 below summarises the different data collection tools adopted in the present study.

Figure 3.1

Quantitative and Qualitative Data Collection Tools



3.6 Quantitative Data Collection Tools (Questionnaires)

Questionnaires refer to, “Any written instruments that present respondents with a series of questions or statements to which they have to react either by writing out their answer or selecting from among existing answers” (Brown, 2000, p.6). They are the most useful data collection tools in the field of second and foreign language research, as they allow for gathering a large amount of data from a number of individuals in a limited time (Dornyei & Tagushi, 2010). Questionnaires generally include two types of questions; closed-ended and open-ended questions.

In the closed-ended questions, the researcher determines the possible answers, and the respondents are not required to produce any free writing. Usually, they do not have the opportunity to elaborate an answer. They are asked to select one from among a limited range of responses such as yes/no, or multiple-choice questions. The Likert-scale as the most popular closed-ended items type provides the respondents with a set of fixed response options representing degrees of agreement or disagreement (for example, strongly agree, agree, disagree, strongly disagree), from which they select one answer, or rank preferences from a number of fixed options. According to Dornyei (2007), most researchers opt for the closed-ended questions as they are easy to present and analyse, provide a lot of data but offer less opportunity for deeper research. They include categories which are established in advance, and responses in a range of options. In this regard, to add greater reliability to the questionnaire, Dornyei (2007) points: “It is true that the more response options an item contains, the more accurate evaluation it yields, there might be cases when only a paralysed yes-no decision can be considered reliable” (p.106).

Open-ended questions are also another type included in designing questionnaires, in which respondent have more freedom and flexibility of expression to answer in their own

way. Open-ended questions are useful aids for a researcher in the sense that they can provide richer qualitative information from the respondents' answers. They also help to investigate the participants' intended behavior, feelings, views and beliefs. Though, they are easy to design, they are complicated to analyse (Dornyei ,2007).

In designing questionnaires, criteria of wording and piloting should be taken into consideration.

Wording. This is an essential element in questionnaire construction, concerning clarity and accessibility, therefore, researchers need to take into consideration the following rules about item wording when designing a questionnaire:

- ❖ Items should be short and simple. They should be preferably written in simple sentences rather than compound or complex sentences.
- ❖ Items should contain only one complete thought. (only one idea in item).
- ❖ Avoid ambiguous and loaded words because they may bias the answer.
- ❖ Ensure that the responses are not difficult to process in a statistical way. (Dornyei, 2007, p. 108)

Piloting. Another key point of questionnaire construction is piloting. Piloting the questionnaire at different stages of its development is an integral part of its design. It helps researchers to check and evaluate the efficiency of the questionnaire in gathering the intended data. Thus, it seems very important for researchers to pilot, and finalise the questionnaire before administration. Questionnaires can be administered via different ways: by e-mail, mail or by hand (in person). In educational research, in person administration and group administration are the most common methods of having questionnaires completed, mostly because the targets of the surveys are learners. It is possible to arrange and distribute the questionnaire to them while they are grouped together in class. In this kind of situation,

researchers can collect a very large number of data within a short period of time. This makes the questionnaire more practical and provides researchers with quantitative and qualitative data than many other research instruments in a short period of time.

Although researchers demonstrate the usefulness of questionnaires in social sciences research, they still have certain limitations and lacks such as the ‘low response and return rate’. It is sometimes difficult for researchers to get back exactly the same number of the administered questionnaires as not all the target respondents answer them. Additionally, participants may not be accurate in answering the questions because of problems related to their motivation, misunderstanding of some items, and lack of seriousness and honesty (Gillham, 2007). This might then result in doubting the responses provided as they may not reflect what the respondents really think or believe. To remedy this problem in the present study, further information was sought through the use of other tools including course content evaluation and interviews.

3.6.1 Pilot Study of Students and Teachers Questionnaires

Data collection tools in the present study were piloted and changes were applied to the main study. First, questionnaires were administered to a number of teachers and students to check whether questions are clear, purposeful and straight forward. In terms of questionnaires’ items, some questions were found to be ambiguous for some teachers and needed revision and reformulation. Therefore, ambiguous and leading questions were reformulated. Similar to teachers’ questionnaire, some difficult and ambiguous items were reformulated, and changes applied to the main study in students’ questionnaire. (See Appendix one and three).

3.6.2 Students and Teachers Questionnaires in the Main Study

One objective of this study is to explore the reality of teaching/ learning ESP focusing on the teaching content, teachers' qualifications, learners' language skills development and needs in the department of Petrochemical Studies of Skikda University. Administering the questionnaires to students and teachers may provide important insights into the nature of the content taught, and the training qualifications of ESP teachers based on the needs of students in Petrochemical specialty.

Two different questionnaires are respectively administered to Master one students and their teachers in the department of Petrochemical Studies at Skikda University. The questionnaires are designed to collect data on:

- ❖ Students' opinions and attitudes about their satisfaction of the ESP content delivered to them, the teaching method used, and their awareness of the expected workplace communicative needs.
- ❖ Teachers' profile and experience in the field of ESP teaching and course design with reference to their challenges and difficulties faced.

Both questionnaires are in English as it is the language of instruction used in the classroom. Besides, the English language used was kept simple and easy to follow especially with students' participants so that they could understand the content and that the questionnaire would measure what they are supposed to measure. Furthermore, the emphasis on administering the questionnaires in English might be beneficial as the present study is conducted in English and that translation to Arabic or French may not be always accurate. Through their answers, the researcher may get insights into students' mastery of the target language. Further discussions on the use the two questionnaires content in the present study are provided in the following sections.

3.6.2.1 Description of Students Questionnaire (Appendix Two). Students' questionnaire consists of four sections with a total of 28 items.

Section I: General Information

This section of the questionnaire deals with the general information about Master one students. Students are asked to rate their level in English. Questions are also related to students' specialty, the number of years of learning English, self-evaluation in studying English and reasons for studying English.

Section II: Present Situation of English Learning in the Department of Petrochemical Studies

This section seeks to explain and interpret students' study practices in class following both closed ended and Likert scale questions. It aims at obtaining data on students' exposure to and level of proficiency in English, and to evaluate the ESP course, the teaching methods and materials adopted in the classroom. Figure 4.2 is an example of questions in this section:

Figure 4.2

Students' Satisfaction of the Present ESP Course

Does the present English course content have a relation with the nature of petrochemical specialty?			
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
		Some of it	<input type="checkbox"/>

Section III: Students' ESP Needs for Target Communicative Situations

Participants' perceptions of study communicative skills in English are explored in this section. It also covers the extent to which students' skills are developed from the present ESP course (Figure 3.3).

Figure 3.3

Petrochemical Students' English Communicative Skills

Rate the following skills according to their importance to you (which one you need most)?				
Language areas	Not important	Fairly Important	Important	Very important
Speaking skill				
Writing skill				
Listening skill				
Reading skill				
Grammar				
Pronunciation				
General vocabulary				
Technical vocabulary				

Section VI: Learning Situation Needs Analysis

This final part of the questionnaire deals with students' wants in the ESP teaching and learning environment. Participants are also asked to provide suggestions to overcome the shortcomings of ESP teaching and learning for the petrochemical discipline, along with some general suggestions relevant to the aim of the study. An example of items in this section is figure 3.4.

Figure 3.4

Students' Preferred Activities in the ESP Course

Which types of activities do you prefer to practise?				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Role-plays				
Simulations				
Discussions				
Matching				
Gap filling				
Open ended reading comprehension questions.				
Multiple-choice questions				
True/False questions				
Writing paragraphs				
Writing essays				
Writing summary and paraphrasing				
Translation of texts into English				
Translation of texts into Arabic				

3.6.2.2 Description of Teachers Questionnaire (Appendix Four). Teachers' questionnaire was made of four sections with a total of 23 items, including both closed and open-ended questions. In the first section '**ESP Teacher Profile and Experience**', teachers are asked to provide general information about themselves such as qualifications, teaching experience, teacher training, and teaching methods they are familiar with. The second section on '**ESP Teaching Situation in Petrochemical Department of Skikda University**', aimed at evaluating students' level of English and the skills mostly needed for their academic studies and specialism from their teachers' perspectives. Parts of the section are devoted to teachers' familiarity with ESP teaching practices (content, authenticity and specificity of the teaching materials, and methods used in the Petrochemical specialty), and NA before conducting any ESP course. Figure 4.5 below is an example of questions highlighted in this section.

Figure 3.5

Teachers' Familiarity with ESP Teaching

Are you familiar with ESP teaching for petrochemical specialty in terms of academic needs and workplace communicative expectations?	
a) Yes	<input type="checkbox"/>
b) No	<input type="checkbox"/>

Section three on **‘ESP Teaching Lacks in Petrochemical Specialty’** asks teachers about their views on the lacks on ESP teaching, including students’ language skills difficulties in the ESP class. An example of questions is provided in Figure 4.6. The last section **‘Perspectives to Improve ESP Teaching in Petrochemical Specialty’** provides some recommendations to develop ESP teaching in the Petrochemical Studies Department by suggesting ways to make the course more effective and relevant to students’ needs. Key concepts that ESP teachers should take into account were also highlighted in this section.

Figure 3.6

Teachers' Attitudes towards Language Skills Difficulties Faced by ESP Students

Do your students have difficulties in language skills in ESP class?	
a) Yes	<input type="checkbox"/>
b) No	<input type="checkbox"/>
If yes, cite the biggest difficulty they face and what do you do to overcome such difficulty:	

3.6.3 Quantitative Data Analysis

Data obtained from both teachers and students’ questionnaires are separately entered in a numerical form to a software program called Statistical Package for Social Science (SPSS) version 26. The latter is considered as an accurate program for statistical quantitative

analysis for social research studies (Larson Hall,2015). This kind of software is, nowadays, recommended in research because researchers gain accurate statistics and hence obtain more reliable and objective data. SPSS helps to run different types of tests such as normality, correlation, and reliability. For instance, Spearman's Rank Order Correlation tests the association and correlation between variables, ANOVA to test the effect of independent variables on dependent ones, and Cronbach's Alpha to measure reliability. For the descriptive nature of the present study, Cronbach's Alpha test of reliability is used to measure the value of reliability of both students and teachers' questionnaires. Additionally, descriptive analysis of frequencies and percentages of data is processed.

3.7 Qualitative Data Collection Tools

In social sciences, researchers attempt to differentiate between quantitative and qualitative research. That is, whereas quantitative methods generate data through instruments such as questionnaires and surveys, the principal data for qualitative are gathered by means of content evaluation, observations and interviews, to name few. As far as the present study is concerned, course content evaluation from the university context and interviews from the professional setting are found to be the suitable research tools to gather qualitative data.

3.7.1 ESP Course Content Evaluation (Appendix Five)

The evaluation of any course content generally refer to a series of procedures carried out on different aspects and components of the course to ascertain its strengths and weaknesses, and hence to improve its quality (Saldana, 2009). Thus, in order to bring up an alternative ESP course as a suggestion, to evaluate the existing one in terms of lacks. As far as this study is concerned, a sample of eight ESP lectures taught to Master one students at of petrochemical specialty at Skikda University are collected and evaluated. This evaluation

falls under two main criteria: First, a description and evaluation of the linguistic aspects in the content including pronunciation, vocabulary, and grammar. Second, language skills presented in the ESP lectures are discussed. Cultural dimensions of the topics and translation issues are taken into account in the content evaluation.

3.7.2 Algerian Engineers and BP Managers Interviews

Interviewing is one of the types of qualitative research instruments used to collect data about a given topic. It is described by Irving (2019) as:

A powerful way to gain insight into educational and other important social issues through understanding the experience of the individuals whose lives reflect those issues. As a method of inquiry, interviewing is most consistent with people's ability to make meaning through language. (p.13)

As interviews are the 'gold standard for qualitative research' (Silverman, 2000) that can provide an effective way to elicit in depth personal, academic and professional information, they are used to collect data for the present study. One major strength of interviews is their flexibility. Although interviewers sometimes maintain the order of the interview, they allow space for spontaneity. This way the researcher not only receives comprehensive answers, but also gets insights into complex and deep issues (Cohen et al, 2011).

While questionnaires are subject to limitations in terms of the low response rate, interviews have a higher response rate for several reasons. First, because interviews are generally conducted face to face, they enable more to be said about the research than is usually mentioned in the cover letter to a questionnaire. This value gives the researcher a good chance to explain the aims and objectives of the interview and reassures the interviewee by removing any threatening doubts and uncertainty about research purposes. Second,

interviews would allow for more explanation and clarification of difficult and open-ended questions which might create potential ambiguity. Third, due to the given-take nature of interviews, respondents become more involved, hence, motivated to share their views and exchange interpretations of the situation explored.

3.7.2.1 Types of Interviews. In qualitative data collection research studies, three types of interviews are highlighted:

Structured Interview. This type of interview has the same structure of the questionnaire. It is organised around a set of pre-planned short and direct questions which require short ‘yes’-‘no’ responses or indicators of frequency (‘never’, ‘seldom’, ‘sometimes’, ‘often’, and ‘always. In this type of interview, both the interviewer and the interviewee have little freedom since it does not allow a lot of flexibility in the answers (Cohen, 2011).

Semi-structured Interview. Brinkmann and Kvale (2018) define semi-structured interview as, “an interview with the purpose of obtaining description of the life world of the interviewee in order to interpret the meaning of the described phenomenon” (p.6). In the use of this type, the researcher needs to develop an interview question guide beforehand, (mostly open-ended questions), to be able to cover all the important points of the research during the conversation. According to Cohen (2011), “Semi-structured interviews have the advantages of allowing the researcher and learners to pursue topics of interests which may not have been foreseen when the questions were originally drawn up” (p.70).

Unstructured Interview. This type of interview allows more freedom and flexibility for both the interviewer and the interviewee. Dornyei (2007) points out: “Unstructured interview allows maximum flexibility to follow the interviewee in unpredictable directions, with only minimal interference from the research agenda” (p.135). That is, instead of using a pre-

prepared interview questions guide, the interviewer uses a more flexible open-ended questions to elicit the interviewees' experiences during the interview.

In sum, interviews remain an important tool providing the researcher with greater flexibility and opportunity for exploration. Interviews stand as a useful research tool in this study, providing the researcher with deeper insights and more detailed information regarding the use of ESP in multinational companies' workplace in Algeria.

3.7.2.2 Conducting The Interviews in this Study. Based on the aims of this study, semi-structured interview with pre planned questions that needed elaboration are used. The unstructured interview, though might yield further insights into social phenomena, was unsuitable for this study, mainly, since it takes more time and longer interview sessions. This makes it inappropriate for small-scale studies like the present one where the researcher needs to approach busy managers with full time work schedules and lots of responsibilities. The structured interview, thus, was contextually more acceptable, appropriate, and potentially conducive to collecting rich data in the context of this study especially that the interview is conducted during a critical period of Covid 19 restrictions.

3.7.3 Algerian Engineers' Semi-structured Interview (Appendix Six)

In the present study, semi-structured interview is intended to get insights from Algerian engineers hired in BP multinational oil company in Algeria. Through this tool of investigation, the researcher tried to:

- ❖ Identify Algerian engineers' qualification in English in relation to petrochemical specialty.
- ❖ Explain the ESP Communicative skills challenges encountered by Algerian engineers in BP workplace.

- ❖ Meet the ESP Communicative needs in BP through their suggestions and recommendations.

Six Algerian workers recruited in BP company accepted to take part in the interview. They all expressed their high willingness to contribute to the study and share their views and experiences about the difficulties and lack in ESP use in workplace. Although Gillham (2007) argues: “face-to-face interviewing may be appropriate where depth of meaning and the research is primarily focused in gaining insight and understanding” (p.11). Certain circumstances such as the availability of interviewees would prevent researchers from conducting faced to face interviews. Therefore, researchers lean to use other ways to collect data such as phone interviews or Audio-visual online meetings via online platforms such as google meets.

As far as this study is concerned, the researcher could not have face to face interview with all interviewees because of Covid 19 Pandemic restrictions. Hence, phone interview was an alternative way used to gather data with three interviewees, whereas the other three were interviewed face to face. In terms of structure, the interview questions guide consists of six open-ended questions, which promote discussion with the opportunity for the researcher to explore deeply the situation through generating questions interviewing the participants and encourage the respondents to fully describe their own experiences regarding their language use in fieldwork.

3.7.4 British Managers’ Structured Interview (Appendix Seven)

The interview conducted with BP company managers helps to describe and argue the communicative difficulties that Algerian engineers’ face in BP workplace. Covid 19 pandemic prevented the researcher from having direct access to the company in the Sahara. BP managers expressed their pardon to physically access the company because of some

regulations and restrictions. Therefore, the interview is conducted only through phone with three managers who are native speakers of English. In terms of structure, six questions form the content of the interview and each question includes sub-generated question based on the richness of the discussion.

In a nutshell, data obtained from both Algerian engineers' interview and their managers are compared to find out the common points in terms of linguistic and communicative skills lacks in the workplace. Most importantly, some questions with the British managers' interview are generated to express their wants of the expected ESP skills that Algerian graduate engineers should develop before joining multinational companies' workplace.

3.7.5 Data Collection Procedure of the Interviews

In qualitative data collection, the interviews are proceeded in four phases. During the first phase, the interviews' list of questions was designed on the basis of the main research questions. The second phase started by focusing on the interview timetable arrangements. After receiving the consent from the participants, they were contacted via email for the interviews. Once they accepted to take part in the interview, the interview sessions were recorded and about 30 minutes was the time allocated for each interview. Interviews were then transcribed, coded and analysed. While we were listening to the interviewees' answers, we noticed the change in their tone and stops. This encouraged to try to understand the causes of Algerian engineers' linguistic problems and BP managers' jargon features.

3.8 Qualitative Data Analysis

Qualitative data analysis from both content evaluation and interviews followed a thematic analysis. The latter has been proved to be an effective way of analysing data gathered through qualitative data (Saldaña, 2016). Analysis of the ESP course content taught

in Petrochemical department at Skikda University was run qualitatively following these steps. A sample of lectures were first collected from teachers in the respective department. After collecting the necessary documents, the researcher, then, tried a Target Situation Analysis (See chapter one section 1.4) which is based on Hutchinson and Waters communicative model (1987) of ESP NA. Since the main aim of the evaluation of the course is to break down all lectures components into different linguistic aspects included and language skills discussed, Hutchinson and Waters' communicative model (1987) seems to be appropriate to the aims of the study.

As regard to Algerian engineers and British managers' interviews, they were first audio recorded to get the accurate and an exact response. Then, the researcher carefully read the transcripts to skim the most commonly given responses, and coded them using Microsoft Word format. After that, data were categorised under major themes which they serve the aims of the present study and lead to answer its main questions.

3.9 Reliability and Validity in this Study

To enhance the rigour of the mixed method research in the present study, different techniques were followed. First, data were gathered using multiple data collection tools (both qualitative and quantitative data collection methods) to gain in-depth insights into the phenomenon under study and hence, to maximize reliability. Then, correlation and cross checking of data gathered from multiple instruments were provided. Another measure of reliability is the statistical Cronbach's Alpha which predicts the internal consistency of items in the questionnaires to ensure that all items measured the same construct. The higher the Cronbach's Alpha is (generally near 1), the more reliable is the instrument. Moreover, piloting the data collection instruments and keeping records of interviews, are all important aspects of increasing validity and reliability of the research study (Lodico et al., 2006).

3.10 Ethical Issues in this Study

To ensure that the present study would not cause any unexpected risks to the participants, the researcher explicitly explained to all participants the overall aim of the study, rationale for choosing them, and guidelines of their anonymity and confidentiality. Cohen (2011) explained that regardless of the nature of the project, researchers must consider the possible effects of the research on the participants, and make sure to protect their dignity as human beings.

Before conducting the interviews, therefore, participants were invited to express their readiness and acceptance via email as part of the ethical process of data collection. This is a process by which participants showed their agreement to take part in the research project. Additionally, an email was sent to British managers in BP company asking them to take part in our research and give permission to Algerian engineers to participate. Yet, BP managers hesitated at first to take part in the study as they claimed for security reasons. Thus, only two managers accepted to be interviewed, while one participant refused voice recording and preferred to answer in written form.

Conclusion

The chapter brings a description of the research methodology applied in the present study. Features and significance of the mixed method approach in research have been stated. Both quantitative and qualitative research methods have been explained in terms of their contributions to meet mixed method approach objectives. The chapter also provides a description of the context and the sample population (students, teachers, Algerian engineers, and BP managers) of the study. Importantly, tools of data collection including questionnaires, course content analysis and interviews are presented in details. Moreover, a description of data collection procedures and methods used in analysis is provided.

CHAPTER FOUR. ANALYSIS AND INTERPRETATION OF STUDENTS QUESTIONNAIRE

Introduction

This chapter is concerned with the presentation, analysis and interpretation of findings gathered from students 'questionnaire. The latter was used to get insights into the status of ESP teaching and learning in the department of Petrochemical Studies at Skikda University. It focuses on three main themes: students' satisfaction or dissatisfaction with the ESP content taught, the evaluation of their teachers' qualifications and checking their awareness of the expected communicative skills of the of workplace. This could be achieved through answering the following question:

To what extent does ESP teaching and learning in Petrochemical Department at Skikda university reflect Master one students' workplace communicative expectations?

4.1 Students Questionnaire

Data collected from students' questionnaire were analysed statistically using SPSS 26 software, following descriptive statistical procedures. The latter began with entering the quantitative data gathered manually in the software. After processing them, results were presented in terms of percentage, frequency, mean and standard deviation. Statistical results were shown in terms of tables and figures.

4.1.1 Reliability Analysis of Students Questionnaire in the Pilot Study

To check for the internal consistency students' questionnaire in the pilot study, reliability test using Cronbach's alpha was calculated. Based on reliability analysis (Table 4.1), changes were applied to the questionnaire of the main study. That is, the standard norms of Cronbach's alpha values range from 0.0 to 1.0, with a minimal acceptable measure of reliability of 0.70 (Larson Hall,2010). Items with less than 0.5 are considered to be of a very

low reliability, whereas “By convention, an alpha of .65–.80 is often considered adequate for a scale used in human dimensions’ research” (Vaske et.al, 2017, p. 165).

Table 4.1

Reliability Statistics of Students’ Questionnaire in the Pilot Study

Reliability Statistics	
Cronbach’s alpha	N of items
0.358	21

Based on the accepted minimal measure of Cronbach’s alpha value (0.5), the reliability test of the total items (21) in the questionnaire, as shown in the table above, reveals a low Cronbach’s alpha value of (0.358). A possible explanation of this result is the type of questions asked which were not clear for the respondents. In addition, the questions contained long instructions which might make it difficult for students to understand let alone answer them. Moreover, the respondents’ mood at the time while completing the questionnaire might be another factor resulted in the low reliability value (Thorsen & Bjorner, 2010). Therefore, to obtain details about the shortcomings in the questions and items from the pilot study, a reliability test was processed on each item separately in the questionnaire.

To find out convincing interpretations for the low Cronbach’s alpha value of the total items of the questionnaire, an analysis of the value of each item was measured (Table 4.2). After identifying items of lower reliability, they were revised and changed in the main study.

Table 4.2*Reliability Statistics of Students Questionnaire in the Pilot Study*

Items	M if Item Deleted	CA if Item Deleted
Students' gender	42.36	0.983
Students' specialty	39.36	0.481
Language (s) of instruction of your specialty in the classroom	41.63	0.439
Importance of attending the English language session for students	42.54	0.349
Students' satisfaction with the English course delivered in meeting their academic needs in petrochemical specialty	42.09	0.370
Relevance of the English course objectives to the needs of workplace expectations	41.54	0.309
Relevance of topics of the English lessons to the field of students' specialty	41.63	0.268
Language aspects emphasised in the English lesson	41.09	0.184
Effectiveness of the teaching methods and techniques applied in the English class in developing students' level	41.90	0.405
Importance of English in developing petrochemical engineers' communication skills	41.18	0.308
Students' perception of the level of relevance of each language skill in their studies	41.36	0.383
Frequency of students' listening to English to develop their listening skill in the classroom context	42.81	0.346
Listening materials relation to students' petrochemical specialty	42.54	0.368
Students' use of English to develop their speaking skill in classroom context	42.54	0.397
Difficulties to understand listening and speaking lessons of ESP in petrochemical specialty	41.72	0.318
Participation in discussions in the ESP session	42.27	0.319
Reading materials provided in the classroom	42.63	0.333
students' practice of English writing in their specialty	42.90	0.359
Students' views about English as a language of teaching in petrochemical specialty	40.18	0.346
Suggestions for making the English course more effective	42.81	0.346
If yes, can you please grade the importance of the suggestions	41.00	0.217

As shown in Table 4.2, the majority of items have a low value of reliability. This might be attributed to factors such as the specificity of the type of the questionnaire in the field of

ESP in terms of both content and context. To illustrate, item eight in the questionnaire '*What are the language aspects that the English lesson content focuses on*' was of a very low reliability value of 0.184. Students may find a difficulty to answer this question because it goes beyond their capacities of evaluating the lesson content and describing its aspects from the perspective of what should be included and excluded in the ESP course.

SPSS allows for possibilities to increase the reliability of quantitative tools with the option reliability 'if item deleted'. For example, if the first item '*What is your gender*' is deleted, Cronbach's alpha value increases to 0.983. A possible explanation for this may be the limited number of participants who answered the questionnaire. Thus, this item was deleted in the main study for its unimportance as a variable which could impact the whole study. Item 12 '*Do you listen to English language to develop your listening skill in classroom context*' was also of low reliability (0.346). Therefore, a deep revision of items in terms of instructions and options provided was mandatory.

4.1.2 Reliability Analysis of Students Questionnaire in the Main Study

There was an increased number of participants in the main study from one in the pilot study to 60 students. Before providing details of the reliability value in the main study, it is worth to mention that the number of participants increases from 13 in the pilot study to 60 in the main study. Adding more participants was not done randomly but rather to seek the representative number of population from one hand, and to get data from a large number of participants so that results could be generalised. Below is a statistical summary of the participants and questionnaires answered.

Table 4.3*Case Processing Summary*

		(N) of Participants	Percent (%)
Cases	Valid	60	100%
	Excluded	0	0%
	Total	60	100%

As shown in Table 4.3 above, all the 60 copies of the questionnaire submitted effectively answered and returned back to the researcher. This result may be explained by the fact that students were interested in the research topic and their willingness to take part in the development of ESP teaching and learning in their department through suggesting a number of recommendations. Concerning the changes applied to the questionnaire of the main study, they were related to its major sections, type of instructions raised and, the way questions were stated. More elaborate options were also provided, thus, the total number of items increases from 21 in the pilot study to 28 item in the main study.

Table 4.4*Reliability Statistics of Students Questionnaire in the Main Study*

Reliability Statistics	
Cronbach's Alpha	N of Items
0.764	28

Results showed that reliability of the questionnaire increased from 0.358 in the pilot study to 0.764 in the main study. This suggested that the questionnaire was of an acceptable reliability statistic as suggested by Vaske et al., (2017). After calculating Cronbach's alpha

for the whole questionnaire with the changes made, the test was run for each section separately.

Table 4.5

Reliability Statistics of the Students Questionnaire Sections

Questionnaire Sections	C A	N of Items	Valid Cases	Excluded Cases
General information	0.842	12	60	00
Present situation of English learning in the department of petrochemical studies	0.753	27	60	00
Students' ESP needs for target communicative situations (workplace)	0.883	36	60	00
Learning situation needs analysis	0.473	29	60	00
Total	0.764	104	60	00

Reliability analysis run demonstrated that sections of the questionnaire were approximately of similar values. As shown in Table 4.5 while, general information, present situation of English learning in the department of Petrochemical Studies, and students' ESP needs for target communicative situations (workplace) were of adequate reliability with Cronbach alpha of 0.842, 0.753, and 0.883 respectively, the last section '*learning situation needs analysis*' showed a low Cronbach alpha value (0.473). Possible interpretations for such results could be provided. The number of items and options provided in those section might be one reason as suggested by Pallant (2016): "Cronbach's alpha values are dependent on the number of items in the scale. When there are a small number of items in the scale (fewer than 10), Cronbach's alpha values can be quite small" (p. 23). Additionally, students' willingness to provide details about their profile, depiction of the situation of English

language learning in the department of Petrochemical Studies at Skikda University, besides their interest in ESP needs for target communicative situations might be another factor for the adequate reliability value. Nevertheless, although the number of items in the last section was nearly the same as the three first section, still Cronbach's alpha value was very low. It may be that students did not provide accurate responses because they may lack knowledge and awareness of their present academic and future professional ESP needs.

4.2 Analysis and Interpretation of the Students Questionnaire Findings

Analysis and discussion of the results obtained from students' answers to the questionnaire are presented in this section. The presentation of data is based on three main themes: Basic information about students, students' perceptions of the current ESP course, and students' communicative needs.

4.2.1 Basic Information about the Students' English Proficiency Level

The importance of this section lies in gathering enough information about students' age, specialty, level of English proficiency, years of study, and profession. Results are demonstrated in the tables and figures below.

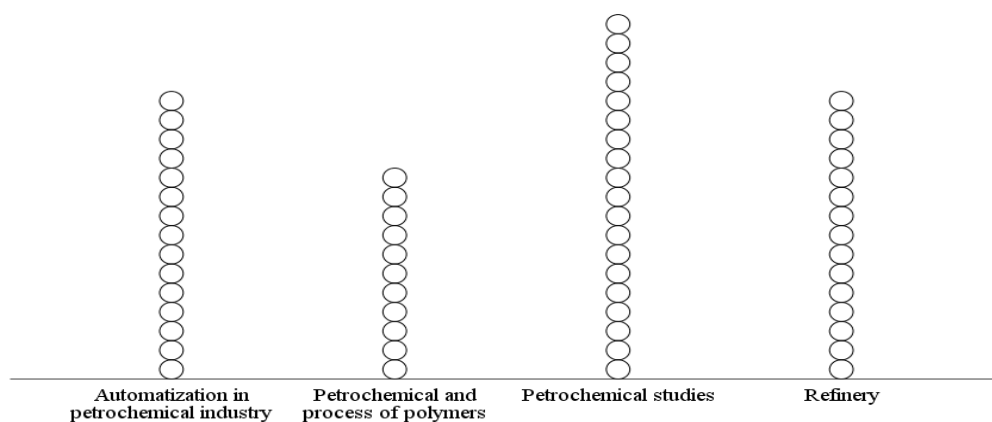
Table 4.6

Students' Specialty

	Options	Frequency	Percent (%)
Valid	Automatisation in petrochemical industry	15	25%
	Petrochemical and process of polymers	11	18.3%
	Petrochemical studies	19	31.7%
	Refinery	15	25%
	Total	60	100%

Figure 4.1

Students' Specialty



It is apparent from Table 4.6 and Figure 4.1 that Master one students in the department of Petrochemical Studies were specialised in different fields. (31.7%) of the students indicated that they were specialised in Petrochemical Studies, with (18.3%) of the students specialised in Petrochemical and Process of Polymers. Another 18.3% reported that their specialty was Automatisation in Petrochemical Industry and Refinery. Such variation of specialties makes it quite difficult for ESP practioners to design an ESP course content taking into consideration the specificity of each specialty.

Table 4.7

Experience in Studying English

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	10-12 years	29	48.7%	48.7%
	Over 13 years	31	61.3%	61.3%
	Total	60	100%	100%

In response to the question: ‘how long have you been studying English?’, 61.3% of the students had an experience of more than 13 years, while 48.7% of them reported that they had an experience between 10 -12 years. Students’ experience in studying English denotes that they can be a source of learning for their teachers of ESP. In other words, as the role of ESP teachers is a language guide and facilitator, not necessarily mastering students’ field of study, students therefore, are more experienced in their specialty who can make up for deficiencies shown by their teachers in the ESP course.

Table 4.8

Students’ Profession

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Student only	57	95%	95%
	Student and worker	3	5.0%	5.0%
	Total	60	100%	100%

Of the 60 respondents to this question, 95% reported that they are students and 5% mentioned that are workers who joined university to carry on their academic career. Students only might be more knowledgeable about the academic context as opposed to the marketplace. However, students-workers who belong to the workplace can provide answers related to ESP professional needs and hence recommend suggestions and solutions to academic setting of ESP teaching and learning.

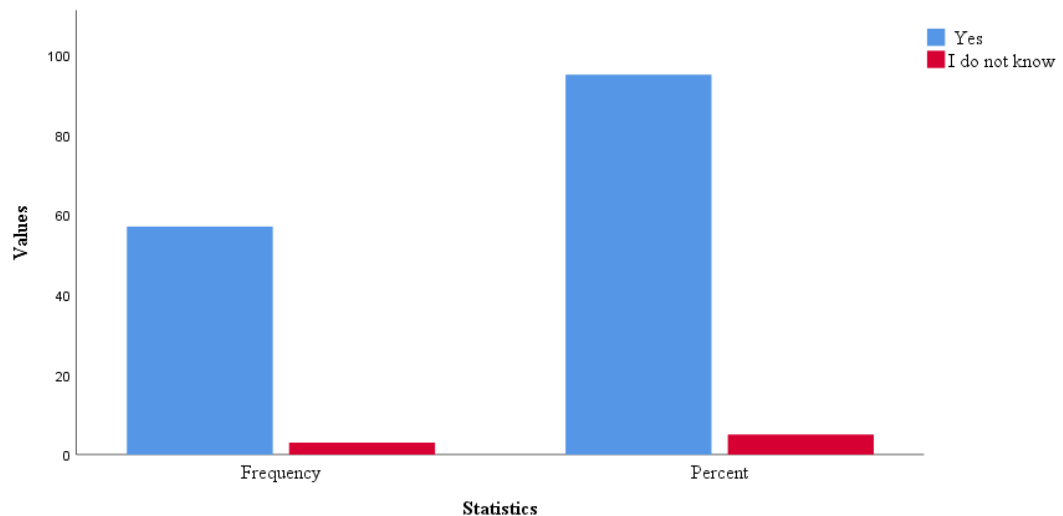
Table 4.9

Importance of English for Students

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	57	95%	95%
	I do not know	3	5.0%	5.0%
	Total	60	100%	100%

Figure 4.2

Importance of English for Students



Though English is considered as a subordinate subject for Master one students, 95% of the participants expressed their interest in studying and mastering the language. Students' interest was due to a number of important reasons for them which are summarised in Table 4.10; 5.0% of the participants indicated that they were unaware of the importance of English in their academic and professional career, without providing any further reasons. This might be related to their lack of knowledge or awareness about the importance of English in their

workplace. Perhaps that did not know that the language needed in the workplace is English and not the language of instruction they are normally exposed to it in their field of study, which is French generally.

Table 4.10

Reasons for the Importance of English to Students

Options	Frequency Percent (%)	
To understand lectures of petrochemical specialty in English	4	6.7%
To read and translate documents in petrochemical specialty in English	2	3.3%
To pass exams	4	6.7%
To find a job when you graduate	5	8.3%
To understand lectures of petrochemical specialty in English+ To read and translate documents in petrochemical specialty in English	8	13.3%
To understand lectures of petrochemical specialty in English+ To pass exams+ To find a job when you graduate	7	11.7%
To read and translate documents in petrochemical specialty in English	3	5.0%
To pass exams+ To find a job when you graduate	2	3.3%
To understand lectures of petrochemical specialty in English+ To find a job when you graduate	4	6.7%
To understand lectures of petrochemical specialty in English+ To find a job when you graduate+ I love this language	1	1.7%
To understand lectures of petrochemical specialty in English+ To read and translate documents in petrochemical specialty in English	1	1.7%
To understand lectures of petrochemical specialty in English	4	6.7%
All of them	15	25%
Total	60	100%

To build on the previous item of the interest in studying English, various academic and occupational reasons were suggested. Because reasons for being interested in studying English vary from one to another based on factors related to their motivation and individual

interests, the present study sought to give participants a space to express themselves freely. They were allowed to add other reasons in an open question rather than the ones suggested in the question.

Consequently, as shown in Table 4.10 students did not restrict themselves to one reason only for learning English. Of the 60 students who completed the questionnaire, 25% reported that their interest lied in all the reasons provided in the questionnaire. However, most of them shared common reasons of interest in learning the language. For example, understanding lectures of English in the specialty, passing exams and gaining grades are motivating academic goals in learning English and developing language skills in Petrochemical specialty. This category of students had an academic view of using English. Additionally, a considerable number of participants also Thought of their future workplace needs as is an important reason. 13.3 % of the students expressed that they wanted to acquire the language to find a job when they graduate, and to communicate effectively in foreign communicative context. This reveals awareness of some students of the place of English in the world market.

Table 4.11

Students' Use of English in their Studies

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	48	80%	80%
	No	12	20%	20%
	Total	60	100%	100%

Respondents were asked to indicate whether they used English in their studies. 80% of them mentioned that they use it. This does not, however mean that the department of Petrochemical Studies at Skikda University adopted English as language of instruction and

a tool of teaching instead of French in the specialty. It could not be therefore interpreted that Master students have a good level of English. Their ESP teachers indicated that they were of low and below the average (More details in Table 5.6). This result rather demonstrated that students were aware of the usefulness of English in their future career. Their willingness to maintain a good level in English might be a reason for them to individually practise the different language skills. Some Master students in the respective department accepted to conduct their research (mainly Master dissertation) in English rather than French. 20% of participants indicated that they did not use English in their studies. An explanation for this lies in the weak level in English either at the level of the language aspects (pronunciation, grammar) or skills (speaking, reading, writing, listening).

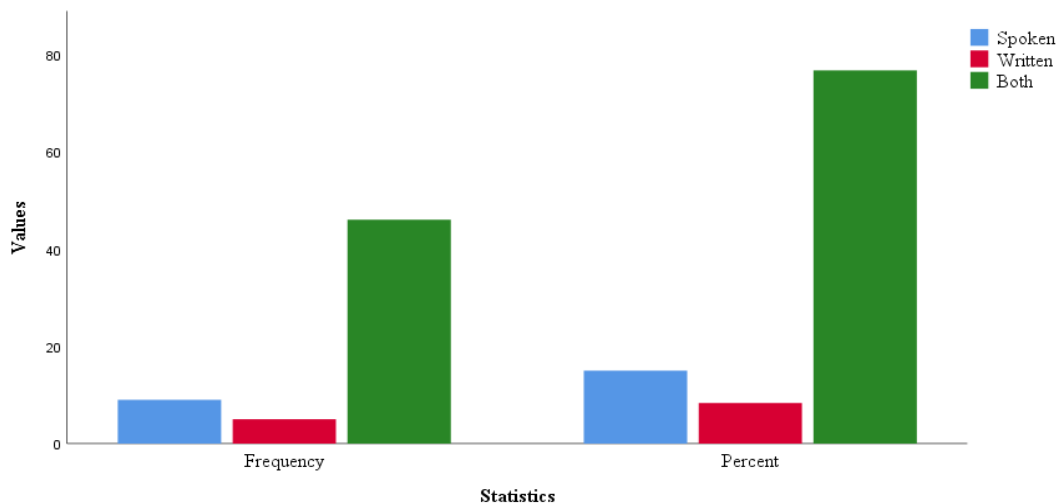
Table 4.12

Type of English Practised by Students in their Studies

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Spoken	9	15%	15%
	Written	5	8.3%	8.3%
	Both	46	76.7%	76.7%
	Total	60	100%	100%

Figure 4.3

Type of English Practised by Students in their Studies



76.7% asserted that they used both spoken and written forms of English. Those students are, therefore, expected to have a good level in speaking and writing productive skills; against 15% indicated that they only relied on spoken English. One possible interpretation is that they either lacked the necessary vocabulary, or the syntactic structures which they would help them to perform well in the writing tasks. In contrast, 8.3% of students preferred the written form of the language because, may be, this skill is much more conscious, gives them enough time to think of what they produce, and revise what might not appropriate before submission; whereas, spoken language is more spontaneous and immediate, students feel embarrassed of making mistakes when they speak English in front of their classmates and ESP teacher.

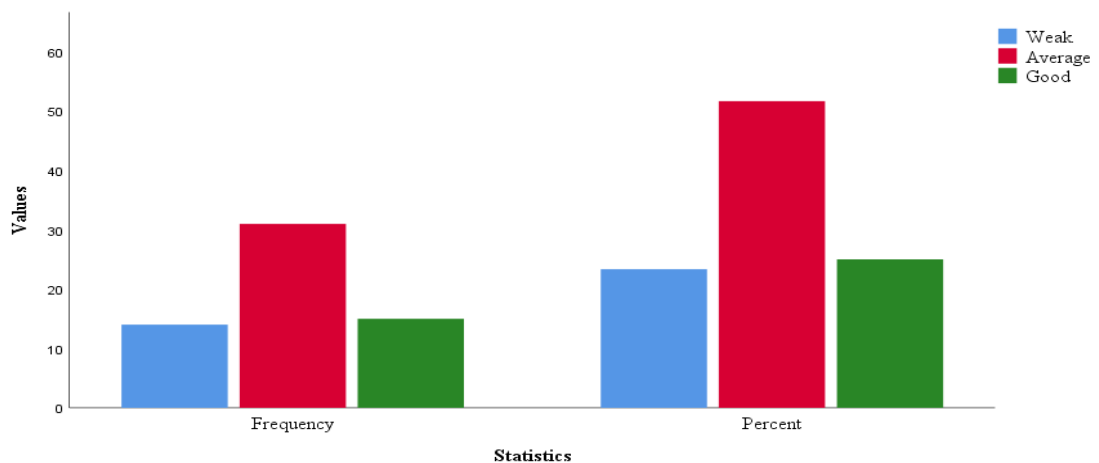
Table 4.13

Students' Description of Their Overall Level in English

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Weak	14	23.3%	23.3%
	Average	31	51.7%	51.7%
	Good	15	25%	25%
	Total	60	100%	100%

Figure 4.4

Students' Description of their Overall Level in English



Data presented in Table 4.13 and Figure 4.4 denotes students' awareness of their level of English. 51.7% of the participants responded that their level of English was average. 23.3% of the students indicated that they had a good level of English. If this evaluation is taken for granted, then students would not have serious problems in their academic and professional contexts as the majority were good and intermediate in English. To confirm this claim, teachers' views about satisfaction with their students' level and the quality of the ESP

content delivered to them were explored. Additionally, workplace interviews results would guess the qualities of petrochemical graduates regarding their ESP mastery.

4.2.2 Students Perceptions of the Current ESP Course

In ESP teaching and course design, the learner may play a significant role in the process of designing what suits learning needs (See Types of Needs in chapter two). Therefore, a significant section in the students' questionnaire is devoted to express their satisfaction or dissatisfaction of the current ESP course content. Results are presented in the following tables and figures.

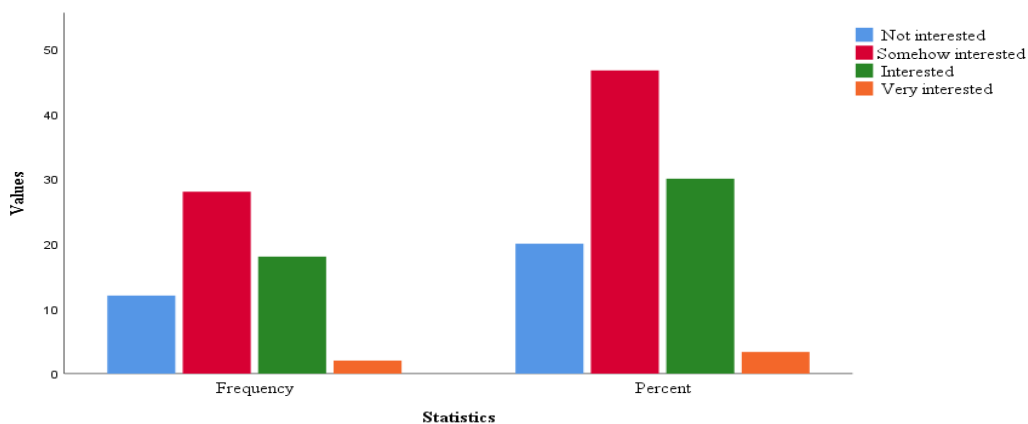
Table 4.14

Students' Interest in the Present English Course

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Not interested	12	20%	20%
	Somehow interested	28	46.7%	46.7%
	Interested	18	30%	30%
	Very interested	2	3.3%	3.3%
	Total	60	100%	100%

Figure 4.5

Students' Interest in the Present English Course



Though the course delivered to Master one students was described as being general and related only to structural aspects of the language (See chapter six section 6.1), students showed their interest in the content of the subject. Eighteen students were interested in English and considered it as important as other subjects in the specialty. Because of the importance of English in academic and workplace contexts, students' interest in this language would maximize their chances to master it, and hence academic and future profession would be increased; while 28 students stated that they were somehow interested in the present English course, only 12 of them mentioned that they were not interested. This ignorance may be related not to their rejection of the subject itself, but rather to their dissatisfaction with the quality of its content.

Table 4.15

The Focus of the Present English Course

Options	Frequency	Percent (%)	Valid
			Percent (%)
Grammar and vocabulary	39	65.6%	21.7%
Terminology and translation	3	5.0%	5.0%
Grammar and vocabulary+ Terminology and translation	11	18.3%	18.3%
Listening, speaking, Reading and writing skills	16	4.3%	26.7%
All of them	1	1.7%	1.7%
Reading only	1	1.7%	1.7%
Reading and writing skills+ Grammar and vocabulary+ Terminology and translation	1	1.7%	1.7%
Listening, speaking, Reading and writing skills + Grammar and vocabulary	1	1.7%	1.7%
Total	60	100%	100%

Table 4.15 above shows that the content of the present English course addressed to Master one students at Skikda University focused more on developing students' competences grammar and vocabulary (65.6%). Language skills were not given much more importance (4.3%). This means that the overall responses provided focused on the linguistic aspects of language rather than language skills. Based on students' answers, it might be noted that the content of the ESP course delivered to the students was based on general structural aspects of English. Analysis of the ESP course content (See chapter seven) would confirm or disconfirm such interpretation.

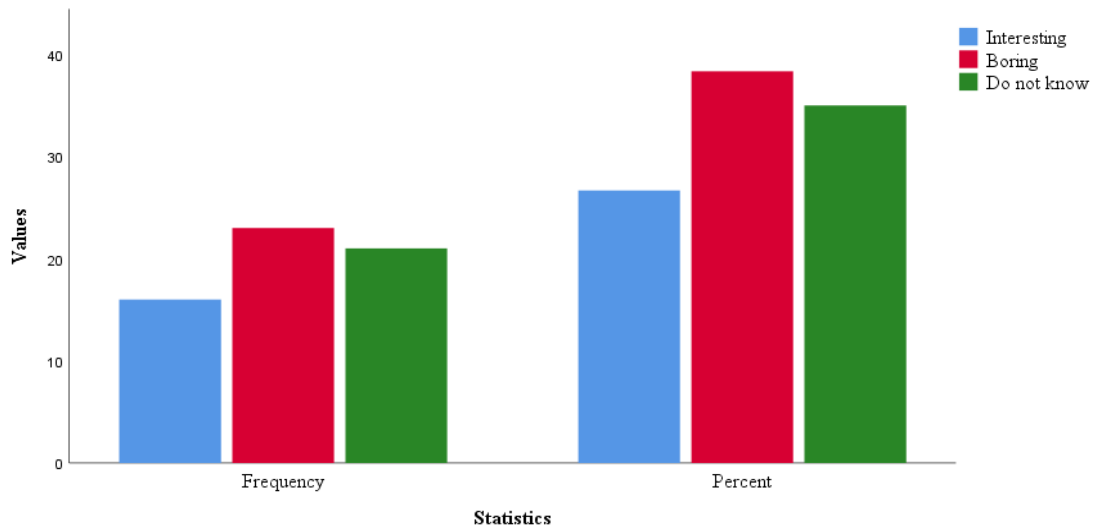
Table 4.16

Students' Views of the Present English Course

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Interesting	16	26.6%	26.7%
	Boring	31	51.6%	38.3%
	Do not know	13	21.6%	35%
	Total	60	100%	100%

Figure 4.6

Students' Views of the Present English Course



While (51.6%) of the participants indicated that the English course was boring, as boring, only (26.6 %) expressed the view that the course was not interesting. This result may be due to the nature of the content of ESP courses which might not be specialty- based. That is, students were not satisfied with the present English course delivered as for being beyond their expectations. The ESP course objectives and content should not go under their expected needs otherwise they would not feel any kind of development in their level. The remaining (21.6%) of students stated that they had no idea about the relevance of the content taught to them to their specialty. This category either did not attend the sessions of English at all, or their low level of English did not help them to grasp the content of the course to a large extent.

Table 4.17*English Proficiency Level in Language Skills and Aspects*

Options	Very weak		Weak		Acceptable		Good		Very good	
	Count	%	Count	%	Count	%	Count	%	Count	%
Speaking	4	6.7%	31	51.7%	16	26.7%	8	13.3%	1	1.7%
Writing	4	6.7%	11	18.3%	33	55.0%	9	15.0%	3	5.0%
Reading	3	5.0%	9	15.0%	31	51.7%	16	26.7%	1	1.7%
Listening	3	5.0%	16	26.7%	29	48.3%	11	18.3%	1	1.7%
Grammar	5	8.3%	11	18.3%	32	53.3%	10	16.7%	2	3.3%
Pronunciation	4	6.7%	32	53.3%	13	21.7%	10	16.7%	1	1.7%
General	6	10.0%	10	16.7%	31	51.7%	13	21.7%	0	0.0%
Vocabulary										
Specific	6	10.0%	33	55.0%	9	15.0%	10	16.7%	2	3.3%
Vocabulary										

When the participants were asked about their English language proficiency level, the findings revealed that they had close and shared levels of proficiency in different language aspects and skills. Yet, Table 4.17 illustrated that (51.7%) of students' participants linked their difficulties in the language to their weakness in the speaking skill, (53.5%) to pronunciation, and (55%) to technical vocabulary. These three aspects are key features in ESP communication either in class or in any communicative situation which has a relation to students' specialty.

Reading and writing skills were not considered as obstacles for students. The latter claimed that they were good in both skills (55. % in reading and 51.7% in writing). These results would be confirmed through the analysis of the type of reading and writing tasks students were asked to do, and upon which they could evaluate themselves of being good. In Chapter six, qualitative analysis of the course content and activities assigned to students were not really related to their petrochemical specialty. Reading was almost absent and a mere simple writing tasks were provided.

Moreover, through workplace interviews, Algerian engineers and British managers of BP Company identified the type of reading and writing skills needed in the professional context. Concerning the listening skill, it was considered as easy in which approximately half of the participants (48.3%) said they had an acceptable level in this skill. Grammar also did not cause a big issue for most of them. 53.3% reported that they had an acceptable level this might be because students went through the process of comparing English inflectional system which is more or less easy than that of the French language.

Table 4.18*Students' Satisfaction with the Components of the ESP Course*

Options	Very satisfied		Satisfied		Fairly satisfied		Not satisfied	
	Count	%	Count	%	Count	%	Count	%
The course reflects my workplace needs expectations	3	5.0	4	6.7%	8	13.3	45	75.0%
The number of presented ESP lectures is sufficient	0	0.0%	6	10.0%	12	20.0	42	70.0%
Level of lectures/lessons (quality)	2	3.3%	4	6.7%	12	20.0	42	70.0%
Students' participation and interaction in the classroom	2	3.3%	6	10.0%	6	10.0	46	76.7%
The activities are discipline related to petrochemical specialty	4	6.7%	6	10.0%	7	11.7	43	71.7%
The ESP course timing fits learners' schedule appropriately	0	0.0%	9	15.0%	7	11.7	44	73.3%
Speaking and writing are stressed in this course	0	0.0%	8	13.3%	11	18.3	41	68.3%
Listening and reading are stressed in this course	0	0.0%	8	13.3%	13	21.7	39	65.0%
Learning materials used are discipline related to petrochemical specialty	0	0.0%	6	10.0%	7	11.7	47	78.3%
The teachers' methodology of teaching is effective	0	0.0%	10	16.7%	4	6.7%	46	76.7%
Simulation of communicative situations	2	3.3%	4	6.7%	8	13.3	46	76.7%

To go deep in the ESP needs for the target communicative situation mainly professional context (workplace), a set of teaching learning aspects and communicative

situations were put through for students to express their satisfaction or dissatisfaction with the course content. That is, students were asked to provide their views and attitudes towards the teaching learning tasks and activities which took place in the ESP class. Surprisingly, data obtained marked high percentages of dissatisfaction. For example, 75.0% said that the course content did not reflect their workplace needs expectations. There are several possible explanations for this result.

First, this might be due to the limited number of sessions devoted to the English subject. Additionally, the teaching methods followed by teachers in their ESP classes might not be appropriate and relevant to the nature of the course. (76.7%) of the students reported that they were not satisfied with the statement ‘the teacher’s methodology of teaching is effective’. Students were not also satisfied with other aspects of the ESP course including the quality of the lectures provided, learning materials, timing, and activities and language skills stressed). In short, findings of this questions give depict the ESP course content taught to the students, as well as their ESP teachers’ profile.

4.2.3 Students Situational Communicative Needs

After they give their views of the course content delivered to them, Petrochemical Master students are giving their wants based on ESP Communication. This section is meant to know to what extent students are aware of their expected ESP workplace communicative needs. Data is illustrated in the following tables and figures.

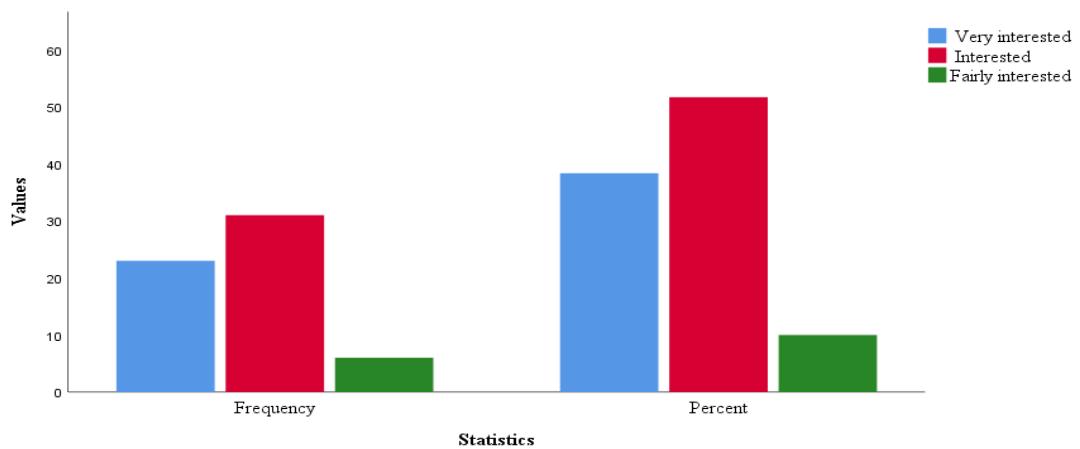
Table 4.19

Students' Interest in Taking an English Course

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Very interested	23	38.3%	38.3%
	Interested	31	51.7%	51.7%
	Fairly interested	6	10%	10%
	Total	60	100%	100%

Figure 4.7

Students' Interest in Taking an English Course



Although English is not a fundamental subject in the Caneva of Petrochemical Master specialty, it has an important place in the professional career of students. As it is revealed in Table 4.19 and Figure 4.7, (51.7%) of the respondents said they were interested in taking an English course to improve their proficiency. This might argue their awareness of the effectiveness of mastering the ESP communicative skills in determining their professional success. Despite that students were not satisfied with (Table 4.18) the content of the course, for it did meet their expected needs, they still showed high interest and willingness in

English. (10%) indicated that they were fairly interested in the English course. This could be explained by the ignorance of the workplace context from one hand and the low quality of the ESP course from the other hand.

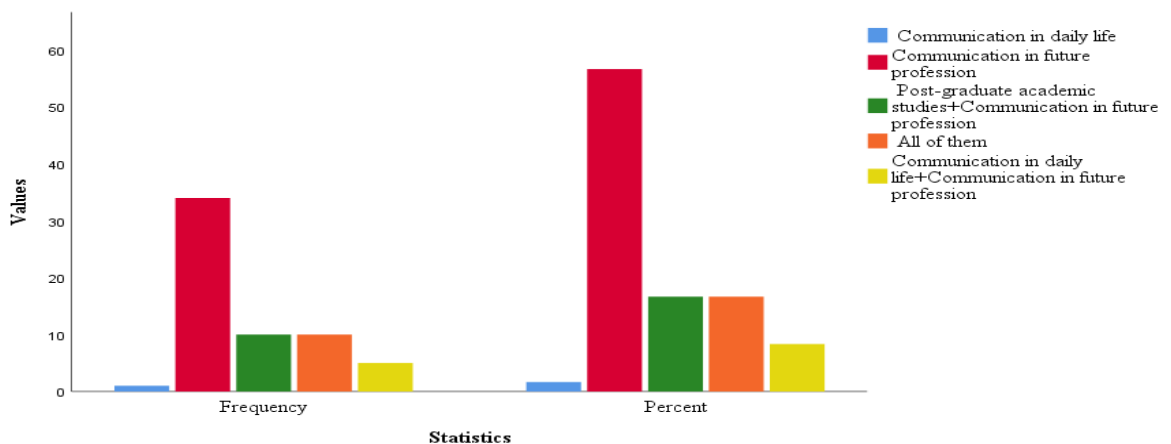
Table 4.20

Students' Reasons for their Interest in English

Options			Frequency	Percent (%)	Valid Percent (%)
Communication in daily life			1	1.7%	1.7%
Communication in future profession			34	56.7%	56.7%
Post-graduate	academic	studies+	10	16.7%	16.7%
Communication in future profession					
All of them			10	16.7%	16.7%
Communication in daily life+ Communication in future profession			5	8.3%	8.3%
Total			60	100%	100%

Figure 4.8

Students' Reasons for their Interest in English



To elicit information about students' needs from their own ESP leaning experience, different purposes from learning the language were suggested. Data shown in Table 4.20 and figure 5.8 demonstrated that (56.7%) of the participants reported that they needed English for their future professional career. This denotes the awareness of students of the importance of English in the workplace, or the so-called EOP. Only (16.7%) of participants expressed their willingness to carry on their studies in their specialty. Therefore, they felt a need for English as a medium to get access to academic references, to write articles and, to participate in academic events including conferences and seminars. This type of ESP was coined in the literature by EAP. (8.3%) suggested that they tended to use English in their daily life because it is not a common language in the Algerian society. The latter is known for social linguistic phenomena of code switching and mixing between Algerian Arabic dialect and French. Those students, then, use GE in communication but not for academic or professional needs.

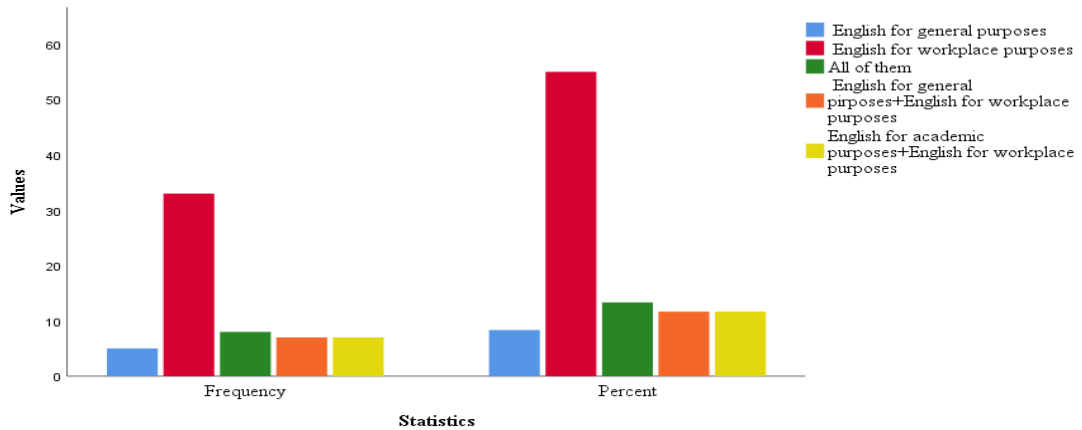
Table 4.21

Type of English Course Needed

Options	Frequency	Percent (%)	Valid Percent (%)
English for general purposes	5	8.3%	8.3%
English for workplace purposes	33	55.0%	55.0%
All of them	8	13.3%	13.3%
English for general purposes+ English for workplace purposes	7	11.7%	11.7%
English for academic purposes+ English for workplace purposes	7	11.7%	11.7%
Total	60	100%	100%

Figure 4.9

Type of English Course Needed



Answers provided to item 15 in the questionnaire confirmed the results shown in Table 4.20 aforementioned. That is, when students were asked about the type of English course that might meet their expected needs, they were not only aware of the need of learning English in general but rather know what type of English needed to learn. Hence, English for workplace purposes was the ultimate need (55 %) for students to communicate effectively and successfully in their future job. (11.7%) of the participants were in favour of studying English for academic purposes. This category of students did not only think of short-term professional objectives after graduating from university, but rather to carry on their advanced academic studies in PhD for instance. Yet seven students reported that they need English for both general purposes and for workplace purposes. The same number of students thought of both profession and studies claiming that English for specialty is needed in both academic and professional contexts.

Table 4.22*Students' Rating of the Importance of Language Skills and Language Aspects*

Options	Not important		Fairly important		Important		Very important	
	Count	%	Count	%	Count	%	Count	%
Speaking	1	1.7%	2	3.3%	33	55.0%	24	40.0%
Writing	1	1.7%	4	6.7%	38	63.3%	17	28.3%
Listening	1	1.7%	4	6.7%	37	61.7%	18	30.0%
Reading	1	1.7%	5	8.3%	40	66.7%	14	23.3%
Grammar	1	1.7%	15	25.0%	34	56.7%	10	16.7%
Pronunciation	1	1.7%	11	18.3%	31	51.7%	17	28.3%
General vocabulary	2	3.3%	16	26.7%	28	46.7%	14	23.3%
Technical vocabulary	2	3.3%	4	6.7%	30	50.0%	24	40.0%

Results in Table 4.22 revealed that the productive skills (speaking and writing) represented the held the greatest part of interest for students. Respectively, (40, %) of the participants considered writing and speaking as the most important. On the one hand, it seems possible that these results were due to the fact that the speaking skill relies on direct, immediate, and spontaneous communication. Hence, developing this skill might be a challenge for most students. Writing on the other hand was also an important skill for students for its conscious nature. (1.7%) of students showed any importance practising the productive skills in ESP class.

Besides, the participants were asked to provide their views on the receptive skills, though the latter might not have direct impact on communication, they still occupied a significant place in their studies. (30.0%) of students thought of an integration of both listening and speaking. This means that students are aware of the impact of listening on speaking and reading on writing. Additionally, (23.3%) of the respondents considered reading of less importance for its limited use in communication.

Table 4.23

Students' Needs of the ESP Course

Options	Strongly agree		Agree		Disagree		Strongly disagree	
	Count	%	Count	%	Count	%	Count	%
To use correct grammar	5	8.3%	51	85.0%	4	6.7%	0	0.0%
To expand vocabulary	6	10.0%	49	81.7%	5	8.3%	0	0.0%
To improve pronunciation	15	25.0%	39	65.0%	6	10.0%	0	0.0%
To improve the reading skill	12	20.0%	43	71.7%	5	8.3%	0	0.0%
To improve the writing skill	18	30.0%	38	63.3%	4	6.7%	0	0.0%
To become a fluent speaker	33	55.0%	23	38.3%	4	6.7%	0	0.0%
To improve the listening skill	28	46.7%	24	40.0%	8	13.3%	0	0.0%
To communicate effectively in future workplace	40	66.7%	16	26.7%	3	5.0%	1	1.7%

A set of linguistics and communicative situations were suggested to gain insights into the participants' aims of using English as a target language during their studies and after graduation. Data showed that the linguistic aspects including grammar, vocabulary, and pronunciation were not among the ultimate objectives for students. (8.3%) of the respondents considered mastering grammatical structures as important. Similar to grammar, less attention

was given to vocabulary and pronunciation. Nevertheless, (55 %) of the participants strongly agreed on the idea of learning English to be fluent in the use of the language.

Table 4.24

Aspect(s) of the Course that Requires Teachers' Attention and Focus

Options	Not important		Fairly important		Important		Very important	
	Count	%	Count	%	Count	%	Count	%
Reading printed documents related to your discipline	4	6.7%	12	20.0%	34	56.7%	10	16.7%
Reading extra references from the internet	3	5.0%	10	16.7%	39	65.0%	8	13.3%
Understanding meaning from the context	3	5.0%	10	16.7%	33	55.0%	14	23.3%
Asking and answering questions	3	5.0%	6	10.0%	36	60.0%	15	25.0%
Speaking to native speakers in the same specialty	2	3.3%	6	10.0%	32	53.3%	20	33.3%
Speaking on the phone/chatting online in the same specialty	2	3.3%	2	3.3%	37	61.7%	19	31.7%
Speaking in conferences and seminars in petrochemical specialty	3	5.0%	5	8.3%	35	58.3%	17	28.3%
Giving presentations and research projects about petrochemical discipline	2	3.3%	5	8.3%	36	60.0%	17	28.3%
Listening to lectures/lessons in class and online	1	1.7%	3	5.0%	37	61.7%	19	31.7%
Listening to online presentations and reports	1	1.7%	7	11.7%	38	63.3%	14	23.3%
Listening to conversations on general and/or specific topics	1	1.7%	4	6.7%	36	60.0%	19	31.7%
Watching TV shows and listening to radio	1	1.7%	8	13.3%	36	60.0%	15	25.0%
Writing well-structured paragraphs	1	1.7%	6	10.0%	36	60.0%	17	28.3%
Writing summary and paraphrasing	1	1.7%	8	13.3%	37	61.7%	14	23.3%
Developing ideas using correct punctuation and spelling	2	3.3%	8	13.3%	38	63.3%	12	20.0%
Writing research reports in the specialty	2	3.3%	5	8.3%	38	63.3%	15	25.0%
Writing letters and CVs	2	3.3%	0	0.0%	38	63.3%	20	33.3%

It is clear from Table 4.24 above that the highest frequencies were given to communicative tasks and pedagogical activities related to petrochemical specialty. Giving

presentation and research projects, writing reports, writing CVs and letters in their specialty were the most important practices for the students because they need to develop their skills in concrete tasks that are similar to the ones would be encountered in the workplace. Besides, the variation of modern materials of learning and sources of knowledge might be beneficial for students to develop their communicative skills. Therefore, online sources such as chatting and using sites of communication were highlighted as important means (61.7%) for students to communicate with peers, teachers, and even native speakers and foreigners of the same field.

In terms of language skills, respondents classified their objectives based on their importance in the expected workplace (as mentioned in Table 4.22). (61.7%) of students emphasised particularly the importance of the productive skills in the mastery of the language. They needed to speak and write a correct English in terms of structure and appropriateness to their specialty and context of use.

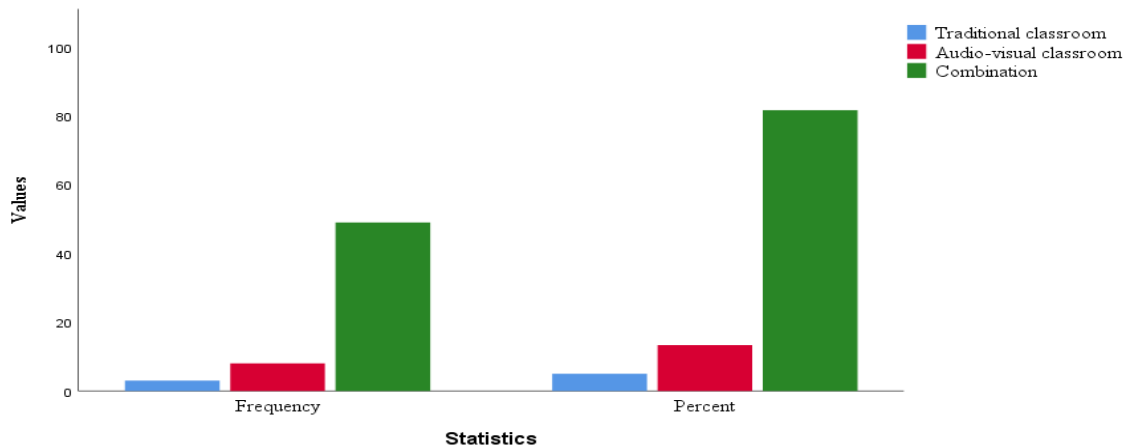
Table 4.25

Students' Preference of the Type of the ESP Class

	Options	Frequency	Percent (%)	Valid Percent (%)
	Traditional classroom	3	5.0%	5.0%
Valid	Audio-visual classroom	8	13.3%	13.3%
	Combination	49	81.7%	81.7%
	Total	60	100%	100%

Figure 4.10

Students' Preference of the Type of the ESP Class



Both Table 4.25 and Figure 4.10 illustrated the importance of changing the way modern university classrooms are shaped. Traditional classrooms, where students, teachers, and board shape their main components, are no longer suitable for a modern ESP classroom because the way ESP is taught and learned is not the same as other subjects in the specialty. (81.7%) the students favoured to study English in classrooms which are equipped with the necessary audio-visual materials. This might facilitate the teaching learning process from one hand, and evaluate students' development in the four language skills in an accurate, appropriate, and a visible way.

Table 4.26

Students' Views about the Sufficient Timing Devoted for the ESP Course

Options	Frequency	Percent (%)	Valid Percent (%)
Two hours per week	4	6.7%	6.7%
Four hours per week	8	13.3%	13.3%
More than four hours	48	80%	80%
Total	60	100%	100%

In response to question 20, (80%) of the students indicated that more than four hours would be for them to develop their language skills in the ESP class. Only (6.7%) of them reported that two hours per week are sufficient. (13.3%) of those surveyed mentioned that their language skills would be developed if the course run for four hours per week. This reveals the importance of English for students' studies and future career.

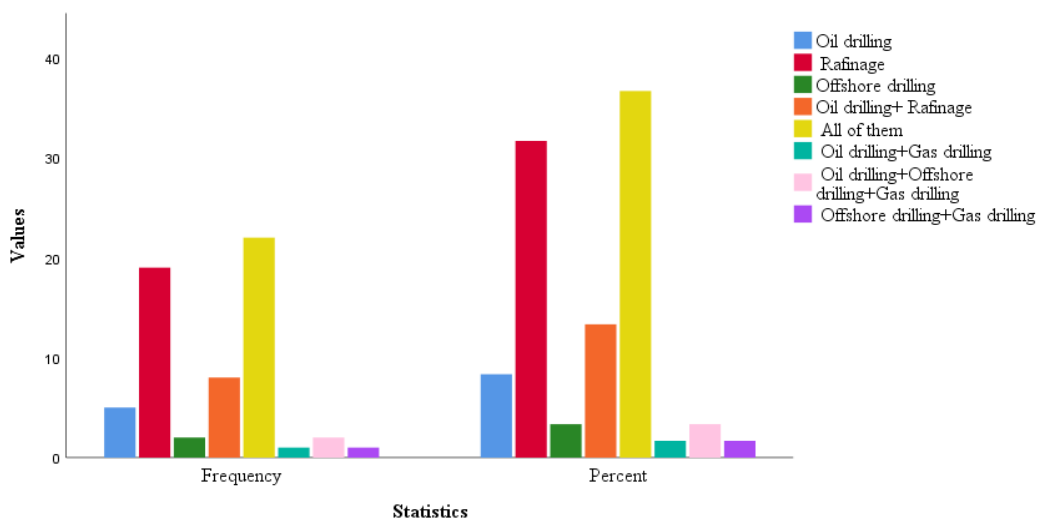
Table 4.27

Students' Preferences of the ESP Topics Discussed in Class

Options	Frequency	Percent (%)	Valid Percent (%)
Oil drilling	5	8.3%	8.3%
Refinery	19	31.7%	31.7%
Offshore drilling	2	3.3%	3.3%
Oil drilling+ Refinery	8	13.3%	13.3%
Offshore drilling+ Gas drilling	1	1.7%	1.7%
Oil drilling+ Gas drilling	1	1.7%	1.7%
Oil drilling+ Offshore drilling+ Gas drilling	2	3.3%	3.3%
All of them	22	36.7%	36.7%
Total	60	100%	100%

Figure 4.11

Students' Preferences of the ESP Topics Discussed in Class



According to students answers to item 21 of the questionnaire, all participants were eager to discuss topics relevant to their specialty. While (36.7%) of the participants preferred all the topics suggested, (31.7%) commented that they preferred topics related to refinery. The latter is important for all the specialties of petrochemical studies including oil and gas transformations, hydrocarbons, and plastic themes.

Table 4.28*Students' Preferences of the Type of ESP Class Activities*

Options	Strongly		Strongly	
	agree	Agree	Disagree	disagree
Role-plays	7	37	15	1
Simulations	14	43	2	1
Discussions	15	41	3	1
Matching	5	44	10	1
Gap filling	5	43	11	1
Open-ended reading comprehension questions	8	41	10	1
Multiple choice questions	7	43	10	0
Writing paragraphs	10	45	5	0
Writing essays	8	47	5	0
Paraphrasing and summary writing	8	45	7	0
Translation of texts into English	14	41	5	0
Translation of texts into Arabic	6	23	30	1

Question 22 of the questionnaire required students to pick up the types of activities and tasks which they wanted their ESP teachers to focus on. Students were provided with options compatible with the specificity of their future professional communicative needs. Forty-three students reported that they need to simulate problem solving situation similar to the ones encountered in the workplace. Students also preferred role plays and discussions activities (37 and 41 respectively) to practise more their speaking. Writing tasks were also emphasised, with 47 students preferring writing essays. This might be explained by the fact students might know that academic writing has its own conventions and norms which should be followed correctly and appropriately. Moreover, translation activities were also mentioned by students, with 41 students agreeing on translation of texts into English, and 23

preferring translation of texts into Arabic. Possible, translation might help in comparing and contrasting the changes occurred when a given information is translated from one language to another, or when a given communicative discourse takes place between people from different linguistic backgrounds.

Table 4.29

Students' Preference of the Type of Classroom Activities

Options	Frequency	Percent (%)	Valid Percent (%)
Individual work	4	6.7%	6.7%
In pairs	16	26.7%	26.7%
Small size group (less than 10 students)	13	21.7%	21.7%
As a class	6	10%	10%
Individual work+ In pairs+ Small size group	2	3.3%	3.3%
Individual work+ In pairs	3	5.0%	5.0%
Individual work+ As a class	7	11.7%	11.7%
Small size group+ As a class	3	5.0%	5.0%
All of them	1	1.7%	1.7%
Individual work+ Small size group	4	6.7%	6.7%
In pairs+ As a class	1	1.7%	1.7%
Total	60	100%	100%

When asked about their preferences regarding the way they would like to study in class: individually, in pairs, small groups or large groups, (26.7%) and (21.7%) of the participants in Table 4.29 were relatively interested in working in pairs and small size groups respectively. This could be due to the fact that using group work is not popular in

petrochemical ESP classes at Skikda University. They seem to rely heavily on their teachers and less on their own initiative for their learning. This teaching and learning strategy may prevent students from creating spaces of language communication and discussion.

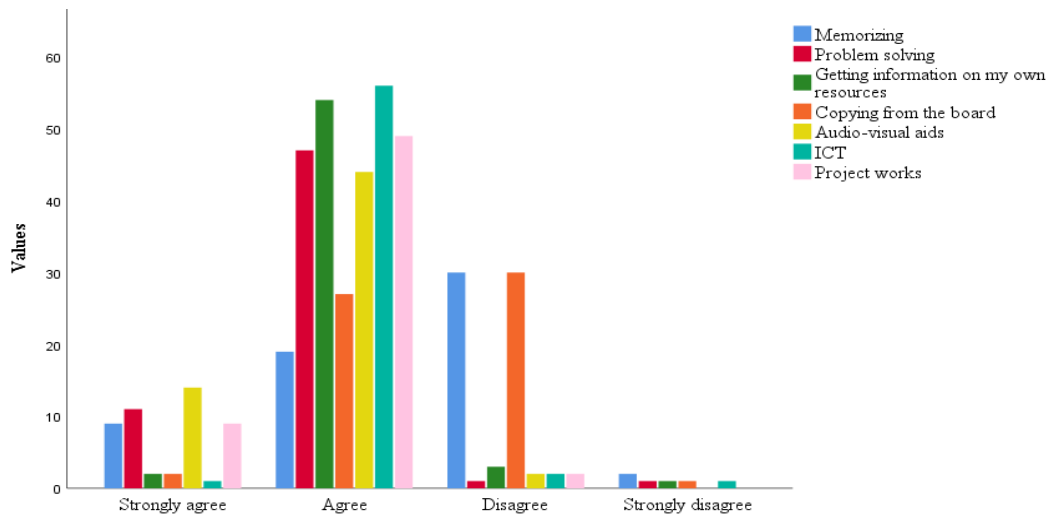
Table 4.30

Students' Strategies of Learning

Options	Strongly agree				Strongly disagree			
	agree		Disagree		disagree			
	Count	%	Count	%	Count	%	Count	%
Memorizing	9	15.0%	19	31.7%	30	50.0%	2	3.3%
Problem solving	11	18.3%	47	78.3%	1	1.7%	1	1.7%
Getting information on my own resources	2	3.3%	54	90.0%	3	5.0%	1	1.7%
Copying from the board	2	3.3%	27	45.0%	30	50.0%	1	1.7%
Audio-visual aids	14	23.3%	44	73.3%	2	3.3%	0	0.0%
ICT	1	1.7%	56	93.3%	2	3.3%	1	1.7%
Project works	9	15.0%	49	81.7%	2	3.3%	0	0.0%

Figure 4.12

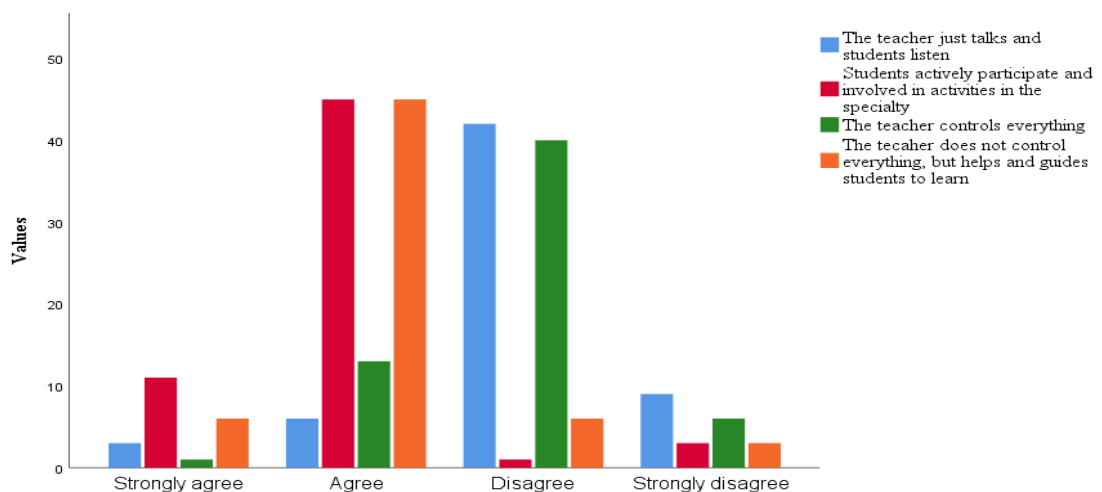
Students' Strategies of Learning



Item (24) dealt with technical and semi technical materials preferred to be used by applicants regarding English texts and materials. Findings summarised in Table 4.30 revealed that a considerable number of students desired to use audio visual aids and project works, rather than traditional techniques which rely on just copying from the board. However, some of respondents did not mind integrating innovative strategies which may foster their communicative skills such as problem solving and getting information from using their own sources. This may help in developing their autonomous learning and self-efficacy. ICT is another new strategy that (93.3%) of the students agreed to use. Yet, it is not accessible to all, let alone, knowing how to use it academically and professionally.

Table 4.31*Students' Preference of Classroom Interaction*

Options	Strongly agree		Agree		Disagree		Strongly disagree	
	Count	%	Count	%	Count	%	Count	%
The teacher just talks and students listen	3	5.0%	6	10.0%	42	70.0%	9	15.0%
Students actively participate and involved in activities in the specialty	11	18.3%	45	75.0%	1	1.7%	3	5.0%
The teacher controls everything	1	1.7%	13	21.7%	40	66.7%	6	10.0%
The teacher does not control everything, but helps and guides students to learn	6	10.0%	45	75.0%	6	10.0%	3	5.0%

Figure 4.13*Students' Preference of Classroom Interaction*

Data presented in the table and figure above described the extent to which the way students and teachers interact with each other in the ESP course is important. (75%) of the students agreed with the idea to be involved in classroom interaction with their teachers. Students felt a need to participate and contribute to the course of English because through

this learning strategy, they may actively develop their sense of cooperation and collaboration in the group. For this reason, (70%) of the students disagreed with the idea that the teacher is the only source of knowledge; the teacher just talks and students listen. Similarly, (66.7%) of the participants reported that they disagreed that the teacher controls everything in class. Therefore, the teacher may act as a participant in the course through providing guidance and supervision when needed. One convincing interpretation to this process of collaboration is complimentary in the sense that teachers can get help from students as they might have deep knowledge of their specialty. Also, students can benefit from their teachers because they train them on how they communicate in their specialty in English.

Table 4.32

Students' Preferences of Type of Materials Included in the ESP Class

Options	Frequency	Valid	
		Percent (%)	Percent (%)
Textbooks +hand outs	5	8.7%	8.7%
Videotapes	5	8.3%	8.3%
Audiotapes	2	3.7%	3.7%
Videotapes+ Audiotapes+ Internet+ Pictures/Posters	10	16.7%	16.7%
Textbooks+ Audiotapes +Internet +The board +Pictures/Posters	7	10.3%	10.3%
Textbooks+ Videotapes+ Internet+ Pictures/Posters	8	13.7%	13.7%
Videotapes+ Audiotapes+ Pictures/Posters	13	21.7%	21.7%
All of them	10	16.7%	16.7%
Total	60	100%	100%

Students also expressed their preferences regarding some of the activities and teaching learning materials used in ESP classes. From Table 4.32, it can be noticed that audio visual materials, the internet and handouts are the most supporting materials for the students.

Digital generations are no longer in favour of traditional materials used in teaching and learning languages. Textbooks and using the board seemed not to be beneficial by over half of the participants. (10.3%) of the students referred to the board as a useful tool in the ESP course. That is why innovative teaching materials are recommended to develop students' language skills.

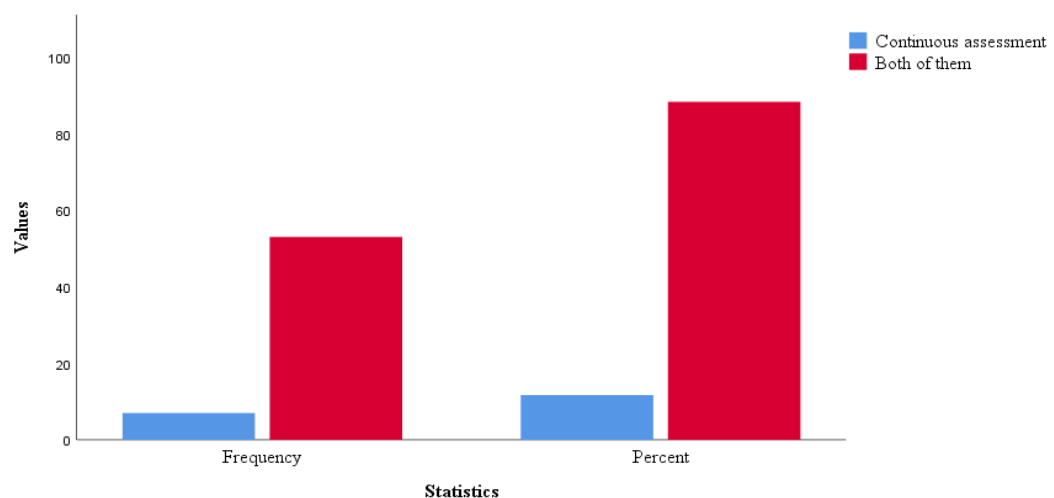
Table 4.33

Students' Preferred Types of Assessment in the ESP Course

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Continuous assessment	7	11.7%	11.7%
	Both of them	53	88.3%	88.3%
	Total	60	100%	100%

Figure 4.14

Students' Preferred Types of Assessment in the ESP Course



When students were asked about their evaluation and assessment of their performance and progress in English, surprisingly, they did not support at all end up assessment option

alone. This might be because this type of evaluation would drive their focus on grades and exams rather than their development in the language. Continuous assessment was mentioned by (11.7%) of the students. therefore, combining both types of assessment would be more beneficial for students. In this regard, (88.3%) of the students seemed to prefer both types of assessment as being adequate for their short-term objectives, which are attributed to their academic progress. Using both types may lead students to achieve long term procedural objectives which are linked to developing communicative skills through an ongoing process of evaluation.

Conclusion

To sum up, chapter four is the presentation and analysis of the student's questionnaire. The latter described the reality of teaching and learning ESP in the department of Petrochemical Studies of Skikda University from students' perspective. The findings revealed that an increasing level of awareness to the importance of ESP in academic and professional contexts was noticed. Students expressed their attitudes towards the course content delivered to them through evaluating the quality of the content in terms of language aspects and language skills. They attributed their weaknesses in the speaking skill to the absence of the authentic teaching materials that may develop their speaking competence and technical repertoire in ESP. Moreover, students also stressed their dissatisfaction with the teachers' profile and experience which do not serve their specialties. In short, students' questionnaire highlighted different teaching and learning gaps which may prevent students from developing the necessary ESP skills for their future workplace communicative needs.

CHAPTER FIVE. ANALYSIS AND INTERPRETATION OF TEACHERS QUESTIONNAIRE

Introduction

This chapter builds on the previous chapter, which laid out the quantitative analyses gathered from the students' questionnaires. In order to try to gain in-depth insights into the findings from the students' questionnaire, a questionnaire was also administered to ESP teachers in the Petrochemical Studies Department at Skikda University. Without teachers' views, a real reliable image of the reality of ESP teaching and learning in the mentioned department might not be reached. Therefore, their ESP teaching content, methods, and activities, along with suggestions to improve the ESP teacher training and environment for students were considered. Teachers' evaluation of students' lacks and needs was also of paramount importance in this chapter.

5.1 Teachers Questionnaire

Similar to students' questionnaire, quantitative data obtained from teachers' questionnaire are analysed using SPSS 26 Software. Data were manually entered in the program and results were described in terms of frequencies, percentages, tables, and figures.

Table 5.1

Case Processing Summary

		N of participants	Percent %
Cases	Valid	13	100%
	Excluded	0	.0%
	Total	13	100%

Results in Table 5.1 revealed that all the 13 participants filled in the questionnaire submitted without any missing copy. This reveals teachers' interest in the research topic, and their motivation to take part in the study through their suggestions and recommendation.

5.1.1 Reliability Analysis of Teachers Questionnaire in the Pilot Study

Table 5.2

Reliability Statistics of Teachers' Questionnaire in the Pilot Study

Reliability Statistics	
Cronbach's alpha	N of Items
0.686	21

A possible interpretation of the reason behind a low value of Cronbach's alpha is the limited number of questions. If the content of the questionnaire did not cover all the aspects that the researcher wants to uncover, this would affect negatively the reliability of the study. Another possible explanation is the impact of the way the respondents answered the questions. That is, many factors may affect answers while completing the questionnaire such as mood (tiredness, stress), interest (no motivation), and time (short time). Hence, a revision of the content of the questionnaire in terms of number of questions asked and items provided was necessary to make this instrument more accurate, appropriate and helpful to answer the research questions.

5.1.2 Reliability Analysis of Teachers Questionnaire in the Main Study

Statistical analysis of reliability of questionnaire the main study was run using SPSS 26 software. Cronbach's alpha test for the questionnaire was followed which summarises its results in the following tables.

Table 5.3

Reliability statistics of Teachers Questionnaire Main Study

Reliability Statistics	
Cronbach's alpha	N of Items
0.726	36

Based the changes applied to the questionnaire items after the pilot study, the reliability of the questionnaire increased to 0.726 which is of an adequate value if compared to the standard value 0.9. This could give more credibility to the main study and validate its results.

5.2 Analysis and Interpretation of Teachers' Questionnaire Findings

Analysis of data gathered from teachers' questionnaire was based on ESP teaching situation in Petrochemical Department of Skikda University regarding teachers' profile and qualifications in course design, ESP teaching lacks in Petrochemical specialty. Additionally, data on suggestions to improve ESP teaching in the petrochemical specialty were also gathered, analysed, and interpreted.

5.2.1 ESP Teaching Situation in the Department of Petrochemical Studies

Prior to exploring the ESP teaching situation in the respective department, participants were first asked some general questions about themselves. Teachers' professional status, academic degree, specialty, experience, and training in teaching English were highlighted.

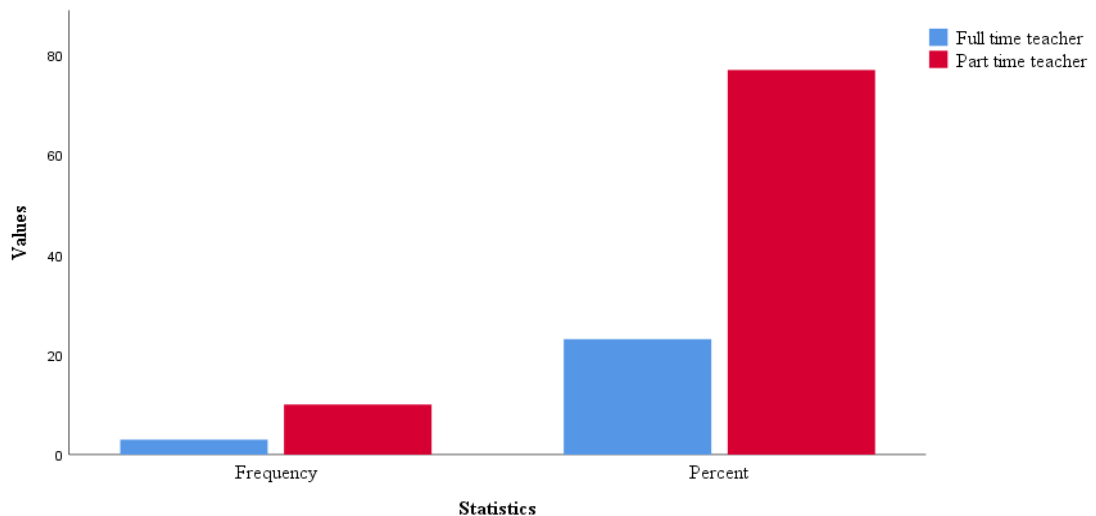
Table 5.4

Teachers' Professional Status

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Full time teacher	2	15.4%	15.4%
	Part time teacher	11	84.6%	84.6%
	Total	13	100%	100%

Figure 5.1

Teachers' Professional Status



Results presented in Table 5.4 and Figure 5.1 demonstrated that, (84.6%) of the respondents were part-time teachers of English in the department of Petrochemical studies. This finding suggests that ESP teachers' academic qualification and experience do not meet the requirements to hold a full-time job, and hence this may affect the quality and stability of teaching as part time teachers may quit their jobs at any time relevant to their personal preferences. With the shortage noticed in the number of teachers of English in the Algerian

university, it seems difficult to find new teachers who can substitute part-time teachers to cover the subject. Only two teachers are full time but they are not specialised in English. They teach other subjects of the specialty, but accepted to take in charge ESP teaching in the department as they master the English language. This might therefore suggest that not all ESP teachers in Petrochemical Department are aware of the place of ESP for students' academic and professional career.

Table 5.5

Teachers' Academic Degree

	Options	Frequency	Percent %	Valid Percent %
Valid	Master	11	84.6%	84.6%
	Doctorate	2	15.4%	15.4%
	Total	13	100%	100%

Table 5.6

Teachers' Specialty

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Literary translation English-Arabic	1	7.7%	7.7%
	Linguistics and applied languages	4	30.8%	30.8%
	Applied linguistics	1	7.7%	7.7%
	Literature and civilization	3	23.1%	23.1%
	Automatic control	2	15.4%	15.4%
	Applied linguistics and TEFL	1	7.7%	7.7%
	Didactics	1	7.7%	7.7%
	Total	13	100%	100%

Concerning teachers' profile and qualifications, Table 6.5 above showed that (84.6%) of the teachers hold a Master degree. These teachers can only hold a part-time job at university. As shown in Table 5.6, seven main specialties of teachers were identified. All of them are not ESP based. Because their degrees were obtained from different fields (linguistics and applied languages (four teachers) literature and civilisation (three teachers), translation (one teacher). This means that most of the teachers' profiles were not related to ESP specialty. As it is mentioned in chapter three in the description of the study context, the focus of the departments of English in Algeria is not on ESP as a discipline to produce graduates with qualification that would help in ESP teaching in departments of different specialties rather than English. Therefore, designing ESP teaching and testing materials seems to be challenging either in course design or in teaching technical English. For this reason, findings of students' questionnaire (Table 4.17) attributed their weakness in the speaking skill and technical vocabulary to the profile of their teachers, who most of the time ignore the nature of their specialties. (15.4%) of the teachers were doctors who hold a PhD degree in petrochemical specialties (both teachers specialised in Automatism control specialty). Being specialised and having considerable mastery of English would help ESP teachers, to certain extent, teach the specialty in English.

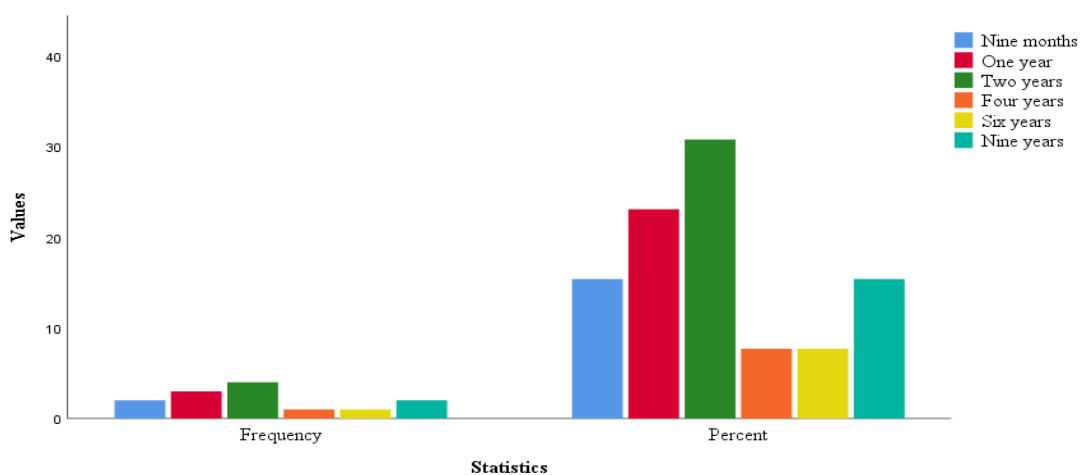
Table 5.7

Teachers' Experience in Teaching ESP

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Nine months	2	15.4%	15.4%
	One year	3	23.1%	23.1%
	Two years	4	30.8%	30.8%
	Four years	1	7.7%	7.7%
	Six years	1	7.7%	7.7%
	Nine years	2	15.4%	15.4%
	Total	13	100%	100%

Figure 5.2

Teachers' Experience in Teaching ESP



This item overlapped with the previous ones on teachers' profile and qualifications. It aimed at providing more details about teachers' experience in teaching. Data showed that most teachers were novice in teaching ESP, with their experience ranged between less than one year and nine years. Two teachers reported that they only had few months of experience in teaching ESP to Master students in the department of Petrochemical studies. Thus, ESP teaching seemed to be difficult and challenging for them. The same situation for other

teachers whose experience varied between one to six years. Only two teachers, who are full time teachers in the department, not specialised in English but rather in petrochemical subjects (Automatism) had a considerable experience of nine years teaching English. Although those teachers specialised in the field, they may still lack the pedagogical skills of teaching foreign languages.

Table 5.8

Teachers' Training in Teaching English

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	2	15.4%	15.4%
	No	11	84.6%	84.6%
	Total	13	100%	100%

Teachers' knowledge of their subject is not enough in ESP teaching if it is not supported by ongoing trainings (See chapter one). Thus, teachers' training is one important question to raise. Results shown in Table 5.8 pointed out a lack of training for the majority of ESP teachers. Only two teachers who had training in this area. (84.6%) of the teachers indicated that there was no specific training given to them for ESP. This means that teachers are expected to design their own ESP syllabus. Since most teachers may lack knowledge in material design and development, they find themselves pushed to rely on ready-made materials from different sources.

5.2.2 ESP Teaching Content and Methods in the Department of Petrochemical Studies

Drawing attention to the way ESP teaching and learning takes place in the respective department is of a great importance to have full range of recourses that may help students acquire the language effectively. Since recruited teachers of ESP in this department were

novice with short if any experience in teaching English let alone ESP, they came with the idea that the role of the teacher at university is a facilitator rather than a transmitter of knowledge. Knowing about the adequate teaching methods and preparation of suitable content resources would allow teachers to deliver good content, and students to learn in a motivating and interesting English class. Hence, teachers should emphasise the importance of developing a clear and coherent strategy with well-defined objectives in order to ensure that courses are catered to students' needs. There cannot be any successful teaching without proper teaching strategy including course plan and diversified activities.

Table 5.9

Teachers' Familiarity with ESP Teaching

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	12	92.3%	92.3%
	No	1	7.7%	7.7%
	Total	13	100%	100%

It should be emphasised that teachers' knowledge is an important factor in ESP teaching. As shown in Table 5.9, (92.3%) of the teachers were familiar with the notion of ESP, except one participant who reported that his unfamiliarity of the subject. Therefore, teachers' familiarity would help in delivering an effective ESP course, as it requires skills beyond acquiring the system only, but enhancing academic and professional skills like teaching English for petrochemical specialty and workplace communicative skills.

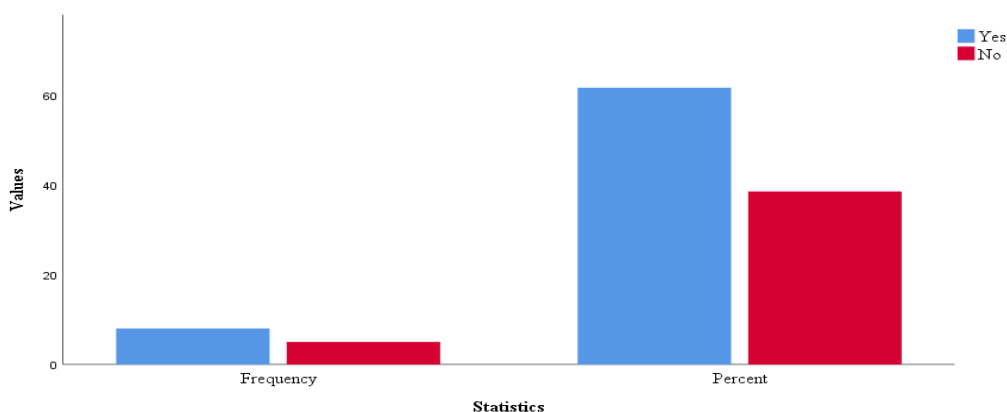
Table 5.10

Teachers' Familiarity with ESP Teaching for Petrochemical Specialty

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	8	61.5%	61.5%
	No	5	38.5%	38.5%
	Total	13	100%	100%

Figure 5.3

Teachers' Familiarity with ESP Teaching for Petrochemical Specialty



Data presented in Table 5.10 and Figure 5.3 revealed that ESP teachers in petrochemical department were aware of the importance of ESP for students. Though they mentioned previously that they did not receive any training in ESP teaching, eight teachers noted that they knew about ESP teaching for petrochemical studies. One possible interpretation is that novice teachers might be more interested and motivated to give their best and develop their own materials, and hence develop their knowledge about the specialty, its needs and requirements.

Table 5.11*Teachers' Decision about the ESP Lesson Content*

Options	Frequency	Percent (%)	Valid Percent
You read about the specialty of students	3	30.7%	30.7%
You conduct a NA of workplace needs	1	7.7%	7.7%
You assess students' level of English	1	7.7%	7.7%
You rely on ready-made content, textbooks, or course specifications from other sources	5	38.5%	38.5%
You read about the specialty of students+ You conduct a NA of workplace needs	1	7.7%	7.7%
You conduct a NA of workplace needs+ You assess students' level of English	2	7.7%	7.7%
Total	13	100%	100%

Table 5.11 illustrated that the most frequent resources relied on by most teachers were related to adopting ready-made content with a rate of (38.5%). Unfortunately, reading about students' specialty (15.4%) and developing new teaching materials using books in the specialty (%7.7) were not frequent in the respondents' answers. Teachers' reliance on ready-made resources implies that teachers are not provided with any syllabus from the part of the institution. That is why, they search for other programs to adopt them. This may not always be relevant and fit the needs of the petrochemical specialty. Consequently, in addition to the lack of experience and training in the ESP teaching, teachers may find themselves facing another challenge of developing teaching content and authentic materials which better suit the needs of petrochemical context.

Table 5.12*Examples of Teaching References Used by Teachers*

Options	Frequency	Percent (%)	Valid Percent (%)
Books related to the field	4	30.8%	30.8%
Questionnaires and interviews	2	15.4%	15.4%
ESP proposed by the British council or by Cambridge university press	2	15.4%	15.4%
Oxford grammar books+ British council learning English headway academic skills+ New interchange+ Vocabulary in use	1	7.7%	7.7%
Vocabulary in use+ Advanced grammar in use +Advanced English expressions+ Idioms and phrasal verbs books+ Advanced English conversations	2	15.4%	15.4%
All sources from the internet	1	7.7%	7.7%
I develop my own lesson	1	7.7%	7.7%
Total	13	100%	100%

As Table 5.12 indicates, most of the resources that teachers relied on in their preparation of lessons were either books in the field of ESP or ready-made courses from the internet. This reveals that teachers' knowledge in the field does not allow them to develop their own teaching materials. Only one teacher reported developing own lectures. Standard international books of English as *New Headway* and *New Interchange* were also supporting documents used by teachers; however, they might not be of effective use because each context of use has its own specificity and authenticity. The communicative purposes of these books and their target population are different from those of ESP classes in academic institutions.

Table 5.13*Teachers' Collaboration in Course Designing ESP Lessons*

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	4	30.8%	30.8%
	No	9	69.2%	69.2%
	Total	13	100%	100%

Table 5.14*Developing Authentic ESP Teaching Materials through Collaboration*

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Choose the relevant texts	7	53.8%	53.8%
	Give an idea about the major topics students discuss	6	46.2%	46.2%
	Total	13	100%	100%

The aim of these two items was to collect information about collaboration in ESP course design and lesson preparation. Collaboration among teachers of ESP in general, and with teachers from petrochemical specialty in the same department is an important step in course development. Based on data provided in Table 5.13, it seems that teachers did not collaborate. This was reported by the majority of teacher (nine teachers). A possible explanation for this might be that teachers may think that developing lectures in ESP based on the needs of the specialty is a challenging task especially for novice teachers. Collaborative work, then, would help teachers to develop authentic materials for an effective teaching and learning of ESP. As shown in Table 5.14, teachers varied between choosing

relevant texts to petrochemical specialty and deciding on the topics to be tackled in relation to the different subjects taught to Master one students.

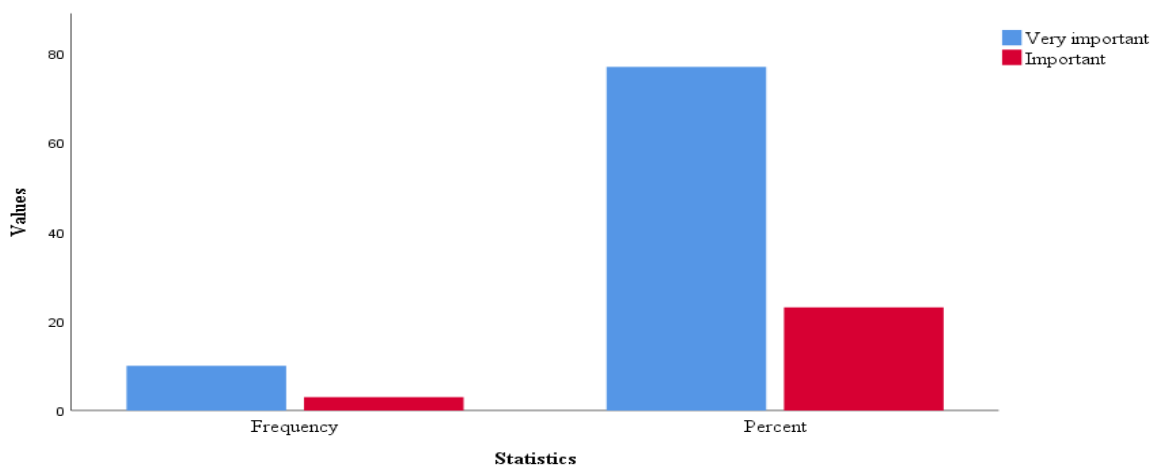
Table 5.15

Importance of Conducting Needs Analysis

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Very important	10	76.9%	76.9%
	Important	3	23.1%	23.1%
	Total	13	100%	100%

Figure 5.4

Importance of Conducting Needs Analysis



In fact, the relevance of NA in ESP teaching is very important for teachers. (76.9%) of the respondents confirmed this statement which shows clearly their awareness to the specificity of the disciplines. In this vein, teaching GE should be different from teaching ESP in terms of both method and content. A convincing reason to this difference is that neither the teaching learning goals, nor the needs and professional communication are the

same. It is worth mentioning that no none of the respondents denied the importance of NA as a strategy to help in planning for a best ESP teaching and learning.

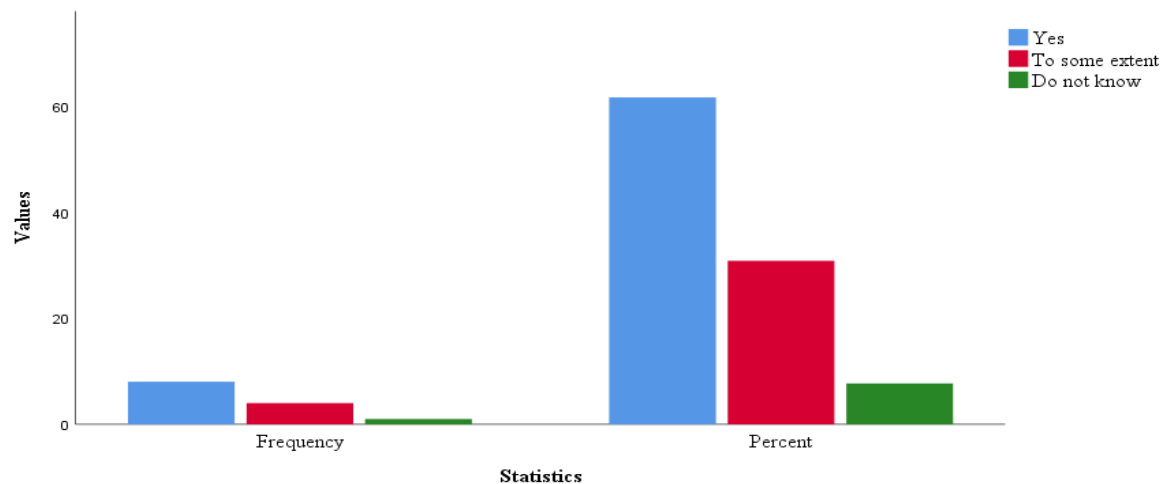
Table 5.16

Teachers' Views about the Usefulness of ESP to Meet Workplace Needs

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	8	61.5%	61.5%
	To some extent	4	30.8%	30.8%
	Do not know	1	7.7%	7.7%
	Total	13	100%	100%

Figure 5.5

Teachers' Views about the Usefulness of ESP to Meet Workplace Needs



In contrast to previous findings on teachers' use of ready-made materials from adopted sources without conducting the necessary NA to identify students' workplace need, Table 5.16 presented different findings. (61.5%) of the teachers thought that their ESP lesson content would help students to meet workplace communicative needs. However, this

finding does not support what was provided by teachers in Table 5.16. Therefore, more data were needed to support teachers' claims. The content analysis of the present course delivered to students was conducted (See qualitative data analysis in chapter six).

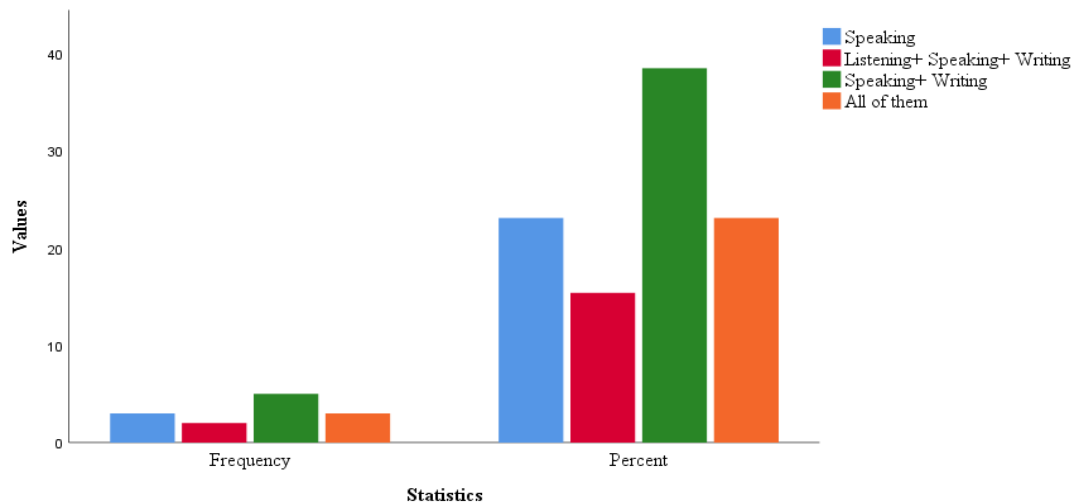
Table 5.17

Teachers' Views of their Students' Proficiency in Language Skills

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Speaking+ Reading	3	23.1%	23.1%
	Listening+ Speaking+ Writing	2	15.4%	15.4%
	Speaking+ Writing	5	38.5%	38.5%
	All of them	3	23.1%	23.1%
	Total	13	100%	100%

Figure 5.6

Teachers' Views of their Students Proficiency in Language Skills



The results of Table 5.17 and Figure 5.6 demonstrated that productive skills (speaking and writing) were the most difficult skills for students. Of the 13 teachers who completed the questionnaire, five reported that their students were of low proficiency in both speaking

and writing together. With regards to reading and listening, students' level of proficiency could not be clearly measured to their teachers, simply because they are not concretely evaluated in tests and exams. Further data collection based on workplace interviews was required to investigate students' language skills deficiencies.

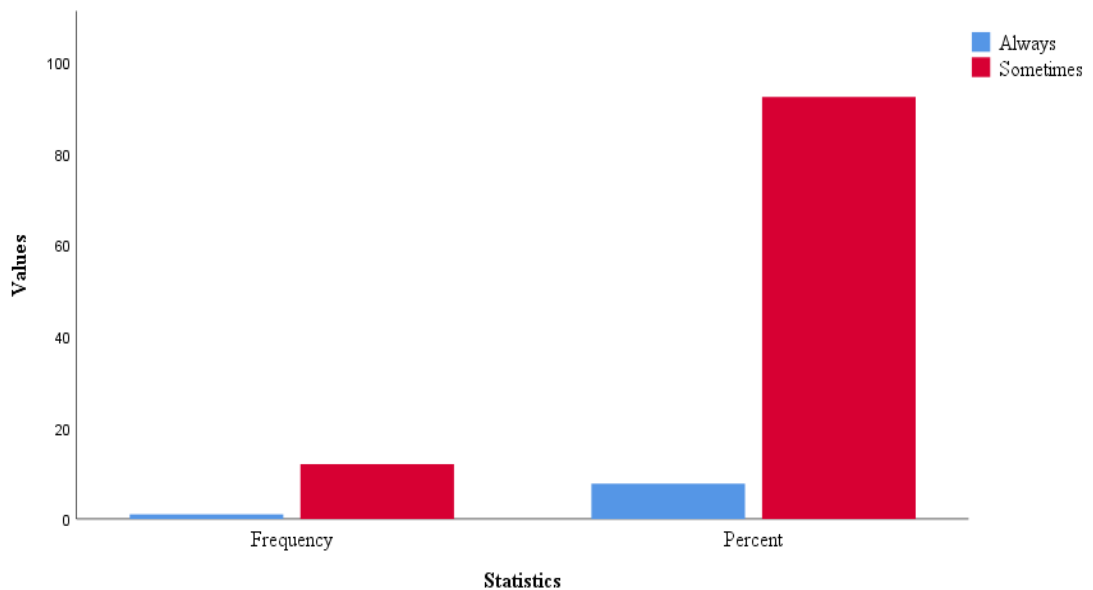
Table 5.18

Frequency of Using French and Arabic in the ESP Class by Teachers

Options		Frequency	Percent (%)	Valid Percent (%)
Valid	Always	1	7.7%	7.7%
	Sometimes	12	92.3%	92.3%
	Total	13	100%	100%

Figure 5.7

Frequency of Using French and Arabic in the ESP Class by Teachers



When the participants were asked whether they used any kind of translation into Arabic or French as an aid when teaching English, (92.3%) of the teachers replied with sometimes. There are several possible explanations for this result. First, teachers were more likely to use Arabic and French while teaching to explain words and structures, and to clarify misunderstanding and obscure points. Additionally, students in petrochemical specialty might not be skillful enough in speaking and understanding English as their specialty being taught in French, the teacher therefore might feel a need to rely on translation. It may be that students' weak level in the language presents a significant drawback in maintaining the use of only the target language in communication instruction. Therefore, students might benefit from their teachers' use of other languages rather than English in achieving comprehension.

Table 5.19*Teachers' Emphasised Objectives in ESP Teaching*

Options	Frequency	Percent (%)	Valid Percent (%)
Scientific and special vocabulary, Conversation and interaction, listening comprehension, writing composition, Reading and reading comprehension, General vocabulary, Grammar, Writing composition Dictation	1	7.7%	7.7%
Listening comprehension, Dictation, Writing composition, Grammar, Scientific and special vocabulary, General vocabulary, reading and reading comprehension, Conversation and interaction	2	15.4%	15.4%
Writing composition, General vocabulary, Conversation and interaction, Grammar, Listening comprehension, Reading and reading comprehension, Scientific and special vocabulary, Dictation	1	7.7%	7.7%
Scientific and special vocabulary, Conversation and interaction, General vocabulary, Listening comprehension, Reading and reading comprehension, Writing composition, Grammar, Dictation	1	7.7%	7.7%
Conversation and interaction, Listening comprehension, General vocabulary, Grammar, Scientific and special vocabulary, Reading and reading comprehension, Writing composition, Dictation	1	7.7%	7.7%
Grammar, Writing composition, Dictation, Reading and reading comprehension, General vocabulary, Conversation and interaction, Listening comprehension, Scientific and special vocabulary	1	7.7%	7.7%
Conversation and interaction, General vocabulary, Listening comprehension, Scientific and special vocabulary, Writing composition, Grammar, Reading and reading comprehension, Dictation	1	7.7%	7.7%
Conversation and interaction, Grammar, General vocabulary, Listening comprehension, Writing composition, Scientific and special vocabulary, Reading and reading comprehension, Dictation	1	7.7%	7.7%
Conversation and interaction, General vocabulary, Listening comprehension, Grammar, Scientific and special vocabulary, Writing composition, Reading and reading comprehension, Dictation	1	7.7%	7.7%
Grammar, Writing composition, Scientific and special vocabulary, General vocabulary, Reading and reading comprehension, Listening comprehension, Conversation and interaction, Dictation	1	7.7%	7.7%
Grammar, General vocabulary, Scientific and special vocabulary, writing composition, Reading and reading comprehension, Listening comprehension, Conversation and interaction, Dictation	1	7.7%	7.7%
Writing composition, Grammar, General vocabulary, Listening comprehension, Scientific and special vocabulary, Reading and reading comprehension, Conversation and interaction, Dictation	1	7.7%	7.7%
Total	13	100%	100%

This item sought to gather information about the objectives which best described English language teaching in the department of Petrochemical Studies. As demonstrates in

Table 5.19, teachers focused on enriching students' linguistic repertoire and grammar rules as their ultimate objective. They believed that the main role of the ESP course is to meet more structural and communicative objectives of the language teaching and learning.

Table 5.20

Objectives Described in English Teaching and Learning

Options	Strongly agree		Agree		Do not know		Disagree		Strongly disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Teaching to use English for academic needs	6	46.2%	2	15.4%	3	23.1	0	0.0%	2	15.4%
Teaching to use English for workplace communicative needs	9	69.2%	2	15.4%	1	7.7	0	0.0%	1	7.7%
Attending lectures and courses for assessment and grades	4	30.8%	4	30.8%	1	7.7	2	15.4%	0	0.0%
Studying English just as a part of the curriculum	1	7.7%	3	23.1%	1	7.7	0	0.0%	8	61.5%

As the Table 5.20 showed, (46.2%) of the participants considered teaching ESP to fulfill certain academic needs of learners. Recently, teaching English in the department of petrochemical studies is not meant to be used for its professional purposes only, but it goes beyond to cover students' academic requirements such as writing their academic products, naming dissertations and articles. However, in comparison to students' questionnaire data, academic needs were not clear to students if not to say ignore them completely.

Consequently, teachers' goals in this vein may not be achieved successfully if they do not go hand in hand with students' goals, or at least well explained to them.

As for the second objective, nine teachers emphasised teaching English for workplace communicative needs. Though the present teaching materials and methods followed by ESP teachers in petrochemical department, (as provided in the teaching content description) did not reflect the objective set. As part of the curriculum, the third objective put focus training students to use English for assessment and grades. Five teachers go with this line of thought viewing that the washback effect of the end up evaluation and assessment would orient their teaching content and method.

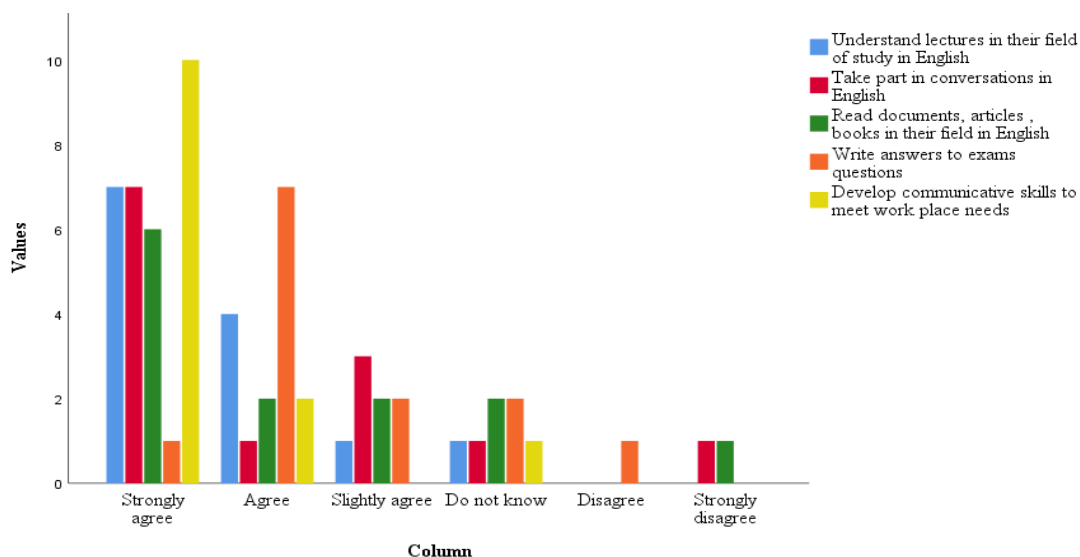
Table 6.21

Teachers' Views about Students' Needs in the ESP Course

Options	Strongly agree		Agree		Do not know		Disagree		Strongly disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Understand lectures in their field of study in English	7	53.8%	4	30.8%	1	7.7%	0	0.0%	0	0.0%
Take part in conversations in English	7	53.8%	1	7.7%	1	7.7%	0	0.0%	1	7.7%
Read documents, articles, books in their field in English	6	46.2%	2	15.4%	2	15.4%	0	0.0%	1	7.7%
Write answers to exams questions	1	7.7%	7	53.8%	2	15.4%	1	7.7%	0	0.0%
Develop communicative skills to meet workplace needs	10	76.9%	2	15.4%	1	7.7%	0	0.0%	0	0.0%

Figure 5.8

Teachers' Views about Students' Needs in the ESP Course



(76.9%) of the respondents strongly agreed with the idea of developing communicative skills to meet workplace needs. Understanding lectures in the specialty was another objective proposed by (53.8%) of the respondents. This would help in taking part in conversations in English. However, short term objectives such as performing well in exams was not significant for some teachers. (7.7%) of the teachers disagreed with focusing on grades rather communication.

5.2.3 ESP Teaching Lacks in Petrochemical Specialty

An important section in the present study is related to describing lacks ESP teaching context. The following tables and figures summarise the main results of the section.

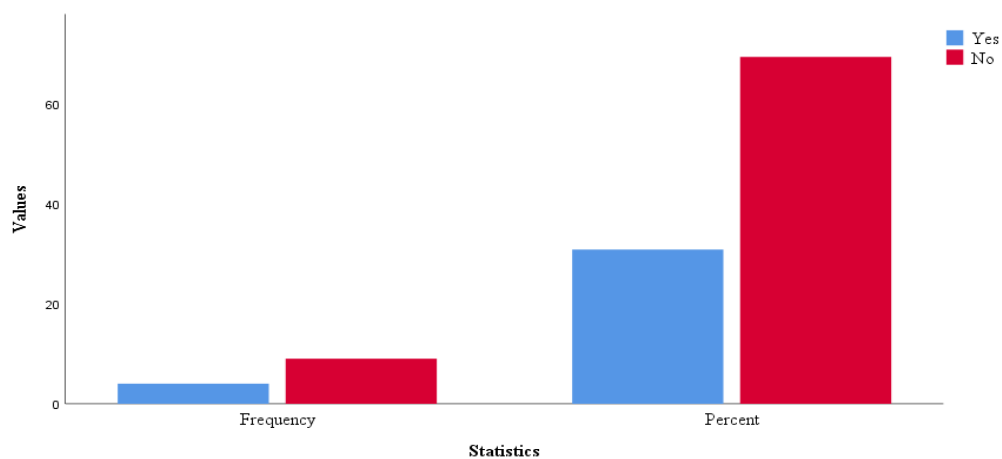
Table 5.22

Teachers' Evaluation of the ESP Course

	Options	Frequency	Percent (%)	Valid Percent (%)
	Yes	4	30.8%	30.8%
Valid	No	9	69.2%	69.2%
	Total	13	100%	100%

Figure 5.9

Teachers' Evaluation of the ESP Course



According to the results shown in Table 5.22, (30.8%) of the teachers confirmed the failure of ESP teaching in the department of Petrochemical studies. A possible interpretation for this response is the difficulty of finding the suitable teaching materials for students in this specialty. The lack of these materials naming syllabus, teaching aids, course books for English classes is a crucial handicap to a successful ESP course. As they previously commented, teachers relied very much on ready-made lectures and activities. The latter do

not reflect the local situation of the students in the sense that students' specialty, academic needs and wants are not being catered appropriately.

Table 5.23

Reasons for ESP Course Failure

Options	Frequency	Percent (%)	Valid Percent(%)
Students have weak linguistic background in English. There are inadequate teaching facilities available. Large classes. Teachers have not been trained in ESP teaching. Lack of teaching materials. Students are not motivated in learning English	4	30.8%	30.8%
There are inadequate teaching facilities available. Large classes. Lack of teaching materials	3	23.1%	23.1%
Lack of teaching materials. There are inadequate teaching facilities available. Students have weak linguistic background in English. Teachers have not been trained in ESP teaching. Students are not motivated in learning English. Large classes	2	15.4%	15.4%
Lack of teaching materials. There are inadequate teaching facilities available. Teachers have not been trained in ESP teaching. Students are not motivated in learning English. Students have weak linguistic background in English. Large classes	4	30.8%	30.8%
Total	13	100%	100%

Several causes were highlighted to explain teachers' failure in the ESP class. Some factors were related to teachers' profile, qualifications and experience. Four teachers emphasised on students' weak linguistic background in English, absence of adequate

teaching facilities available, and large classes, lack of teachers' training, teaching materials, and students' motivation. Other factors were contextual and institutional based.

Table 5.24

Teachers' Perspectives on Students' Difficulties in ESP Language Skills

	Options	Frequency	Percent (%)	Valid Percent (%)
Valid	Yes	10	76.9%	76.9%
	No	3	23.1%	23.1%
	Total	13	100%	100%

Table 5.25

Difficulties Faced by Master One Students in the ESP Course

	Options	Frequency	Percent(%)	Valid Percent(%)
Valid	Lack of communication	3	23.1%	23.1%
	Difficulty in writing composition	3	23.1%	23.1%
	Difficulty in speaking	1	7.7%	7.7%
	Understanding some scientific key words	2	15.4%	15.4%
	Lack of vocabulary	1	7.7%	7.7%
	Speaking and writing	3	23.1%	23.1%
	Total	13	100%	100%

Data in Tables 5.24, and 5.25, further illustrated teachers' responses highlighted about language skills in Table 5.17 mentioned before. (76.9%) of the teachers commented that their students faced difficulties in the English language skills in terms of skills, structure, and technical repertoire. This reflects the teaching conditions and learning practices in the respective department. Language skills in general and productive skills in particular were

serious obstacle for students. (23.7%) of the teachers stated that their students lacked communication and faced difficulty in speaking and writing. Further questioning on this point indicated that vocabulary used by teachers might not subject related as they are not specialised in the field. This can therefore affect students' speaking and writing performance and linguistic repertoire that is related to their field of study.

Table 5.26

Teacher' Strategies to Overcome Students' Language Difficulties

Options	Frequency	Percent(%)	Valid Percent(%)
You develop your own material of ESP teaching	3	23.1%	23.1%
You rely on different ESP sources	3	23.1%	23.1%
You develop your own material of ESP teaching+ You rely on different ESP sources	3	23.1%	23.1%
You rely on different ESP sources You shift to teach general English You just follow canvas of the ministry of higher education	2	15.4%	15.4%
You develop your own material of ESP teaching+ You shift to teach general English+ You just follow canvas of the ministry of higher education	1	7.7%	7.7%
All of them	1	7.7%	7.7%
Total	13	100%	100%

Though teachers lacked the profile related to the specialty, teaching materials with little experience if any, they felt responsible to train students to use English in relation to their special field of interest with an attempt to create their own means and techniques. Results summarised in Table 5.26 revealed that some teachers tended to develop their own materials of ESP teaching (23.1%), while others relied on different ESP sources related to

petrochemical specialty (23.1%), namely texts and definitions of technical words. Another group of participants decided to teach general English and ignore ESP.

5.2.4 Perspectives to Improve ESP Teaching in Petrochemical Specialty

Recommendations and suggestions were gathered from ESP teachers to develop students' communicative skills. Details are illustrated in the tables and figures below.

Table 5.27*Teachers' Recommendations to Develop Students' Communicative Skills*

Options	Frequency	Percent(%)	Valid Percent(%)
All of them	2	15.4%	15.4%
Scientific and special vocabulary, listening comprehension, Conversation, General vocabulary, Grammar, writing composition, Reading and reading comprehension	1	7.7%	7.7%
Scientific and special vocabulary, General vocabulary, Reading and reading comprehension, Listening comprehension, Grammar, Conversation, Writing composition	2	15.4%	15.4%
Writing composition, Conversation, Grammar, General vocabulary, Reading and reading comprehension, Listening comprehension, Scientific and special vocabulary, All of them	1	7.7%	7.7%
Scientific and special vocabulary, Conversation, listening comprehension, Grammar, General vocabulary, Reading and reading comprehension, Writing composition	1	7.7%	7.7%
Conversation, Reading and reading comprehension, General vocabulary, Scientific and special vocabulary, listening comprehension, Grammar, Writing composition	1	7.7%	7.7%
Grammar, writing composition, Scientific and special vocabulary, General vocabulary, Reading and reading comprehension, Conversation, Listening comprehension	1	7.7%	7.7%
Conversation, listening comprehension, Reading and reading comprehension, General vocabulary, Scientific and special vocabulary, Grammar, Writing composition	1	7.7%	7.7%
Writing composition, Scientific and special vocabulary, Reading and reading comprehension, Conversation, Listening comprehension, Grammar, General vocabulary	1	7.7%	7.7%
Scientific and special vocabulary, writing composition, Grammar, General vocabulary, Reading and reading comprehension, Listening comprehension, Conversation	1	7.7%	7.7%
Writing composition, Scientific and special vocabulary, Reading and reading comprehension, Conversation, Grammar, Listening comprehension, General vocabulary	1	7.7%	7.7%
Total	13	100%	100%

In response to question 21 where teachers were asked to rate (from most important to least important) their recommendations for students to develop their communicative skills, (15.4%) of their answers stresses the importance of all the communicative skills suggested to them. An equal number of teachers also suggested that the focus should be on the

following order: scientific and special vocabulary, general vocabulary, reading and reading comprehension, listening comprehension, grammar, conversation, and finally writing composition. This denotes that students should be taken into consideration by developing a sense of interaction and conversation in the specialty. This might help in students' developing a considerable amount of scientific and technical vocabulary mostly needed in their specialty.

Additionally, when students came to express themselves or got involved in ESP, they may rely on using their mother tongue. Therefore, in acquiring the necessary communicative skills in ESP, teachers should think of useful strategies of teaching to get students interested and motivated to learn English. Accordingly, it is recommended that teachers should change the traditional method of teaching where they are the only speaker of language to provide students with more opportunities to practise the language and hence develop their communicative skills.

Moreover, changing the way students were assessed might help to improve their level in communication. That is, varying the types of assessment between oral and written forms, and types of questions such as multiple choice, quizzes, text with associated questions, paragraph and essay writing seems to be significant for an effective evaluation of students' level and performance in the language skills. Students should not be assessed only on their use of good structure of language in written productions, but rather on other aspects of the language that would help in maintaining good communicative skills.

Table 5.28*Key Concepts of Developing an Effective ESP Teaching Situation*

Options	Frequency	Percent (%)	Valid Percent (%)
Training teachers in ESP, NA, Materials, course and learner evaluation, Procedure for course design, Familiarisation with academic genres, Familiarisation with disciplinary/professional culture	1	7.7%	7.7%
NA, Training teachers in ESP, Materials, course and learner evaluation, Procedure for course design, Familiarisation with academic genres, Familiarisation with disciplinary/professional culture,	1	7.7%	7.7%
NA, Training teachers in ESP, Familiarisation with academic genres, Familiarisation with disciplinary/professional culture, Materials, course and learner evaluation, Procedure for course design	1	7.7%	7.7%
NA, Training teachers in ESP, Familiarisation with academic genres, Procedure for course design ,Familiarisation with disciplinary/professional culture, Materials, course and learner evaluation	2	15.4%	15.4%
Training teachers in ESP, NA, Procedure for course design, Materials, course and learner evaluation, Familiarisation with academic genres, Familiarisation with disciplinary/professional culture	2	15.4%	15.4%
Training teachers in ESP, NA, Materials, course and learner evaluation, Familiarisation with disciplinary/professional culture, Procedure for course design, Familiarisation with academic genres	1	7.7%	7.7%
Training teachers in ESP, NA, Materials, course and learner evaluation, Procedure for course design, Familiarisation with disciplinary/professional culture, Familiarisation with academic genres	1	7.7%	7.7%
Familiarisation with disciplinary/professional culture, Familiarisation with academic genres, Training teachers in ESP, Materials, course and learner evaluation, NA, Procedure for course design	1	7.7%	7.7%
NA, Training teachers in ESP, Procedure for course design, Materials, course and learner evaluation, Familiarisation with academic genres, Familiarisation with disciplinary/professional culture	1	7.7%	7.7%
NA, Training teachers in ESP, Familiarisation with disciplinary/professional culture, Materials, course and learner evaluation, Procedure for course design, Familiarisation with academic genres	2	15.4%	15.4%
Total	13	100%	100%

Debate continues about most important aspects that should be considered in the ESP teaching situation. A list of aspects was suggested, and teachers were asked to rank them according to their importance in ESP teaching. Results summarised in Table 5.28 revealed

that NA and teacher training were the most frequent aspects. Being familiarised with students' specialty may help teachers to conduct NA and hence develop authentic ESP teaching materials. Besides, culture should be present to simulate local and foreign situations of communication to students.

Table 5.29

Suggestions for Bettering the ESP Course

Options	Frequency	Percent (%)	Valid Percent(%)
Make students more involved in the course	4	30.8%	30.8%
Use of appropriate materials (podcast, audiovisual aids, video and audio recordings), Training ESP teachers to teach, Provide sufficient time to the proposed ESP course, Conducting deep analysis of learners' needs	6	46.2%	46.2%
Evaluate learners' needs and patters of development to develop relevant materials and courses	3	23.1%	23.1%
Total	13	100%	100%

In an open-ended question, teachers were asked to provide suggestions for making the ESP course more effective for students. (46.2%) of the teachers commented that using appropriate material, training ESP teachers to teach, providing sufficient time to the proposed ESP course, and conducting deep analysis of learners' needs as useful practices. (30.8%) and (23.1%) respectively wrote about the importance of making students more involved in the course, and evaluate learners' needs and patterns of development to develop relevant materials and courses.

Conclusion

Taken together, results of the teachers' questionnaire provided deep insights into students' questionnaire, and depicted more the reality of ESP teaching in the department of Petrochemical studies at Skikda University. Teachers' responses helped in interpreting the difficulties and gaps students faced in the ESP classroom. That is, teachers' profile which was not related to the ESP field was a major reason that explained students' low level in language skills in their specialty and prevented them from developing the needed communicative skills. In addition, while students' needs were related to the creation of an authentic enjoyable and specialty related learning environment, teachers preferred an academic and professional training in ESP. The latter would help them to conduct NA before developing and teaching any ESP content.

CHAPTER SIX: COURSE CONTENT ANALYSIS AND INTERPRETATION OF INTERVIEWS

Introduction

This chapter presents the findings of the research gathered from analyses of the qualitative data obtained from ESP course content evaluation and workplace interviews. The ESP course content aimed at evaluating lectures delivered to Master one students enrolled in Petrochemical studies during the first semester of the academic year 2022-2023. The evaluation focused on the objectives of the course stated, the linguistic aspects included, language skills developed and discipline- based topics discussed. Workplace interviews were conducted with Algerian engineers and BP managers in BP company branch in Algeria. Both interviews aimed to shed light on the communicative difficulties that Algerian workers face in the BP workplace. The chapter ends up with the suggestions provided by Algerian workers and their managers and addressed to university to bridge the gap between ESP teaching and learning in Petrochemical specialty and workplace communicative needs.

6.1 ESP Course Content Evaluation

Content evaluation of the ESP course was conducted to provide an important opportunity to advance the understanding of the quantitative data. That is, a content description and evaluation of the lectures taught to Master one students in Petrochemical specialty to find out to what extent the ESP course content goes with the nature of the specialty and serves students' communicative needs. Even though there is no particular evaluation process which can be relied on as being the best method due to the various interpretations of the term 'evaluation'. Most evaluations practices of courses follow a cyclical process that begins with data collection, results analysis and then interpretation of

findings (Hutchinson & Waters, 1987). This process may eventually lead to further suggestions to improve the quality of the course by promoting the strengths and precluding the weaknesses. Based on the purpose of this study, emphasis was put on a set of course components including the syllabus, objectives, language aspects, and language skills in addition to the thematization of supporting materials. It is worth mentioning that teachers' names did not appear throughout the analysis and evaluation of the course content for ethical considerations.

6.1.1 ESP Course Syllabus and Objectives

ESP teachers seemed not to have a clear designed syllabus for their course. They provided only the course content in the form of lessons and in class tasks. This indicates that the absence of the syllabus in any teaching learning course implies an absence of a rational of the subject. In fact, a course without a syllabus is just like a content without a goal. Moreover, the department of Petrochemical studies at Skikda University did not provide teachers with an official syllabus of ESP teaching. Consequently, teachers were free to design their own syllabus and course content. Since teachers were not familiar with the nature of the specialty, they were obliged to adopt steering materials which most of the time related to GE to solve this issue.

Dudley-Evans and St John (1996) claim: "Evaluation in ESP is concerned with the effectiveness and efficiency of learning; with achieving objectives (assuming that the Needs Analysis has set valid objectives). Has learning been maximized? Have resources been optimally employed?" (p.129). In other words, setting up objectives for the course gives a guided vision of instruction for both the teacher and the learner to identify priorities and make relevant decisions. Projecting this principle on the present ESP course at Skikda University, it is found that it was meant to remind students of grammatical structures and

vocabulary items normally already dealt with in their pre-university levels or at least during their License cursus.

Based on the content of the course, it is deduced that it is intended to check up students' level of English with a particular reference to limited aspects of language. Also, it seems that the course objectives were not well-defined in the sense that they did not help the students to constitute a straightforward vision of learning and guide them towards their target needs. According to Graves (2008, p.79), "Stating goals helps to define priorities and to make choices. Clear goals help to make teaching purposeful". Hence, the purposeful teaching which is based on clear objectives does definitely lead to purposeful learning that fulfils the learners' needs, which is in turn essential in any ESP course. In this context, it is revealed that the objectives set for the current ESP course revolved around preparing students to have knowledge about structural basics of English such as tense, sentence structure and parts of speech with a mere reference to the field of Oil and Gas. These were introduced to help students pass exams and get grades rather than to develop specific English related to their specialty and in accordance with their expected communicative needs.

6.1.2 ESP Features in the Course Content

Components of the course represents a kind of reflection of the course rational. The good selection of materials, especially when they build a meaningful link between students' real world and the communicative purpose of the language learning, may lead to a successful teaching and learning. Regarding the suitability of the ESP teaching content to students' specialty, the evaluation of the present course in terms of ESP features covered aspects of language aspects (vocabulary and grammar spelling and pronunciation), language skills (listening, speaking, reading and writing) in addition to the authenticity and specificity of topics discussed in the lectures.

6.1.2.1 ESP Features in Language Aspects. It was reported by students in the questionnaire that there was a kind of inappropriateness of the language points materials to their specialty as they were equipped with a knowledge which is basically general and not related to the needed ones for their study purposes. Confirming their view, language points emphasised on in the lectures were described and analysed. Results are summarised in the subsequent sections.

Vocabulary. Since vocabulary is considered as one of the most important micro aspects in teaching and learning ESP, the good illustration in the ESP class is the one dealing with technical vocabulary teaching. The use of technical word items related to students' specialty helps them understand better the lecture. Students can bring their background knowledge of their specialty and use it in an English learning context. Yet, based on the vocabulary items included in the lectures content, the linguistic repertoire students were exposed to during teaching and learning instruction seemed not to reflect the nature of the specialty, which is regarded as an area with a technical jargon. Findings classified vocabulary items in the course content into two categories: general and technical vocabulary.

First, general vocabulary represented the most frequent words of English such as: *follow, write, repeat, story, prepare, common, early*. This type of vocabulary is called by Chung and Nations (2004) as 'Function words'. They do not have any relation to the specialty of students. nevertheless, they still convey meaning. In addition, some lectures on vocabulary were devoted to develop vocabulary related to different themes such as expressing impression, body language and idioms. The following table illustrates some of the examples of vocabulary items from the lectures taught to Master one students of Petrochemical specialty.

Table 6.1

Examples of Vocabulary Items Included in the Course Content

Expressing impression	Body language	Idioms
Believe, think, go ahead,	Crossing arms, staring,	✓ To cost an arm and a leg
Clumsy, Obnoxious	chewing, shrugging	✓ Get off my back
	shoulders	✓ To get cold feet
		✓ Off the top of my head
		✓ Look down your nose
		✓ To play it by ear

Very few vocabulary items which they have minimal relation to the subject seemed to be absent in the collected lectures. For example, the words superior, support, and protect were found. Second, highly specific vocabulary which were not likely to known by teachers, seemed to be very rarely used and integrated neither in the teaching nor testing instructions. Regarding the field of oil and gas production, vocabulary items, there were some technical repertoires related to oil drilling: offshore, inshore, rig, hoisting line, derrick, draw works, swivel. Dudley-Evans and St. Johns (1998) put forth that ESP teachers are more concerned with teaching technical vocabulary is generally dealt with in ‘the subject class, with the subject teacher’. It is, then, essential to teach students vocabulary which they need to develop to be used in their contexts of the specialty.

Pronunciation and Spelling. Walker and White (2013) argued that in contexts where students have to practice productive language skills (speaking and writing), oral interaction and doing written tasks are tools recommended to achieve this purpose. Practically, aspects of pronunciation and spelling are keys to ensure effective communication. Nevertheless,

through the analysis of the lectures content, less attention was paid to these two important aspects in order to improve ESP students' speaking and writing performance. Pronunciation and spelling were often neglected within ESP course content. The latter did not contain any written teaching content related to these aspects. Just very few activities were assigned to students about the pronunciation of final /ed/ past tense of English verbs.

Concerning spelling, no activity was found though in Petrochemical specialty, some technical terms have specific spellings that are different from GE context. Many verb/adverb or verb/preposition combinations are combined into one word. They should be written as two words when used as verbs. Additionally, certain compounds formed by two nouns should be written as one word when combined to form an adjective. The following table contains some examples in which spellings of certain words in the context of Oil and Gas are written differently from general context of language use.

Table 6.2

Examples of Words Spelling Differences in GE and ESP

GE Context	ESP Context
Workover	To work over the well
Buildup	Pressure can build up
Casinghead	The casing head of gas
Oilfield	An oil field

Grammar. As a significant linguistic aspect which determines students' competence in a given language, grammar is concerned with the structure of the language and contributes to producing sentences. Hence, the ability to perform grammar knowledge in the language skills, such as reading, speaking, listening and writing, is necessary in ESP teaching. It is

necessary that in order to develop a communicative competence in ESP, learning grammar should be related to students' contexts of specialties. As far as the content of the present ESP lectures is concerned, syntax shaped the big part of the majority of its lessons. In other words, grammar aspect was focused on over the other aspects of the language such as vocabulary, pronunciation and spelling. One possible interpretation of this domination is that teaching grammatical rules and preparing activities for practice seem to be the easiest way to present a lesson in English. In other words, it provides students with direct syntactic rules of English to be reproduced or practiced.

Moreover, grammar lessons included in the lectures were adopted from known sources taking the form of activities without comprehensive teaching materials and learning objectives. Besides, the content contained more than one grammatical item in the same lecture. This may make the task even more complex for students' comprehension. Such a complexity may interpret one of the results of students' questionnaire where students expressed that they faced serious difficulties in learning grammar (See Chapter four Table 4.18). The following figure elucidates an example of the grammar lessons taught to Master one students:

Figure 6.1

Example of Grammar Lecture from ESP Course Content Evaluation

Test 1

Part C

Use the comparative or superlative form of the adjectives and adverbs in brackets.

A: Do you like your new job?

B: Oh, yes, it's much ¹..... (interesting) than my old position.

Of course, I have to work ²..... (hard), too.

A: Are the working conditions ³..... (good), too?

B: My office is ⁴..... (spacious), and it's ⁵.....

(quiet). But the people in my old office were ⁶.....

(friendly). My new boss seems ⁷..... (difficult) to please, too.

A: Well, you're ⁸..... (new) person, so I guess you'll have to prove yourself.

B: I'm certainly working much ⁹..... (hard) than anyone else in the office! It's a real challenge, but every day it gets ¹⁰..... (easy).

SCORING

Score ☐

10 points. Give yourself one point for each correct answer.

Part D

Put the verbs in brackets into the correct present or past form (present; past; present perfect; past perfect). You may use both simple and continuous aspects.

A: How long ¹..... (you/work) there?

B: For three years. I ²..... (leave) last year.

A: ³..... (you/meet) Sarah?

B: Oh, yes, I ⁴..... (know) her for several months. She

⁵..... (be) in my dance class. We ⁶..... (go) to the same class every Tuesday since January.

A: ⁷..... (the phone/ring?)

B: Yes, but I ⁸..... (cook) dinner, so I ⁹..... (not/answer) it.

A: Why didn't you give him the news?

B: By the time I found out, he ¹⁰..... (already/leave).

SCORING

Score ☐

10 points. Give yourself one point for each correct answer.

It is clearly noticed from Figure 6.1 that neither the instruction nor the content of the activities were related to the specialty of students. Also giving activities on different grammatical forms such as comparative and superlative forms, tenses in the same lesson may be a daunting task for student to grasp. (See appendix five for examples of grammar lessons included in the ESP content).

In the same line of thought, one of the major findings of teachers' questionnaire in Chapter five is that ESP teachers' profile and qualifications in the department of Petrochemical Studies were basically related to general language. Yet, content evaluation of the present ESP course came with surprising results. It revealed that even principles of teaching grammar of GE were not followed let alone teaching it for ESP contexts. This implies that the problem of ESP teaching did only lie in the authentic contextualization of the teaching material but also attributed to the lack of the necessary pedagogical teaching skills. The latter need experience and specific trainings to be developed. Therefore, ESP teachers should consider the criteria of '*usefulness*' and '*learnability*' stressed by Thornbury (1999, p.10) in teaching grammar. Before designing grammar teaching materials, the introduced items should be useful and practised in simulative situations based on students' communicative needs. Besides, less complex grammatical forms usually come before the more complex ones. This accounts for the students' ease in learning the simple aspect of each grammatical form and then the more difficult aspects.

6.1.2.2 ESP Features in Language Skills. Macro skills of the language (listening, speaking, reading, and writing) portray the nature of the subject taught whether it deals with English for general or specific purposes. Accordingly, based on the goals of teaching the language, language skills determine the specificity of a given discipline such as reading texts (articles, letters...) and writing tasks (reports, emails...) to meet students' needs. In the ESP course,

therefore, teaching materials need to take a spectrum that covers both receptive skills (listening and reading) and productive skills (speaking and writing) which they comprise the structure of lessons of the course. analysis of the present ESP content, however, revealed that language skills were not given such an importance to the extent that would help students develop the needed communicative skills and hence, meet academic and future workplace needs.

Listening Skill. Although it is vital for communication in English, listening comprehension was the most neglected language skill in the content. The ESP teacher has a unique advantage in developing students' listening comprehension skills especially that they are expected to work in international companies where they communicate with people who can be natives with different accents. Every teaching material that could be related to listening can be useful in developing students' listening abilities, mainly, if it is linked to the specialty of students.

Reading Skill. Reading is the primary channel through which ESP students' progress in English after the course is over. An authentic reading material provides instruction in the skills which can only be developed through extensive and continual practice. Fluent reading depends primarily on knowledge of vocabulary and subject matter, and secondarily on knowledge of grammatical structure and familiarity with the ways that writers organise texts in English. Vocabulary development, then, is a vital aspect of reading (and listening) development. Thus, ESP students will need to develop a good vocabulary in English in order to be efficient readers and listeners. The teacher probably find that they already know quite a lot of technical vocabulary in English in their fields. Since ESP students already bring their knowledge of the subject matter to the reading task, their backgrounds in their fields help to make the reading materials more comprehensible to them. As far as the ESP content under

evaluation, the reading materials included took the form of texts with general themes. The latter had no direct relation with the subjects of oil and gas industry.

An Example of reading texts used in the ESP content is the following:

Figure 6.2

Example of a Reading Text from The ESP Course Content Evaluation

When I'm studying in a very focused way because I'm preparing hard for an exam, I don't see any point in looking up exam papers from previous years, nor is there any point in just learning things by memory. I know some people develop very clever memory tricks to help them remember the material, but there's no real substitute for rereading and going over the term's work. It's a good idea to have some sort of diagram showing different ideas to organise your thoughts, and memory-learning is useful, but in a limited way. At the end of the day, you just have to read a huge amount until you feel you know the subject 100%.



From the content of the text, it was noticed that it discusses the topic of memory, which is related to cognition and psychology rather than the specialty of students which is basically related to Oil and Gas. In this task students were required to rewrite the text by substituting the underlined expressions using their own words. Therefore, reading strategies such as scanning the text to look for a specific information, skimming the text to synthesis the whole text or provide a summary, read aloud the text to develop students' pronunciation were not emphasised.

Speaking Skill. Speaking is one type of productive skills which measures the extent to which a language user is good in listening. Though speaking is considered as an important language skill in teaching ESP and for ESP students' communicative discourses, it was neglected in the content of teachers in the department of Petrochemical studies at Skikda University. There was no teaching material meant to develop student's speaking skill unless they referred to the skill in teaching pronunciation activities.

Writing Skill. Writing skill is, also, a significant productive skill for ESP students. It is considered as a depiction of students' communicative skill by which they convey messages and involve themselves in any written discourse in the field. Based on the present course, students were not exposed to different writing tasks related to their specialty and future workplace needs. The content was limited by the lack of teaching students about written productions in their specialty, and the lack of information on structuring ideas and sections in a scientific essay such as introduction, body, and conclusion. The only teaching material found in the content dealt with academic writing. The following illustrate the content of the lecture of writing.

Figure 6.3

Example of a Writing lecture from The ESP Course Content Evaluation

ACADEMIC WRITING

composition could be just 50–100 words, often used for school work.

essay longer than a composition, more serious, hundreds or thousands of words **assignment** a long essay, often part of a course, usually thousands of words **project** like an assignment, but emphasis on student's own material and topic

portfolio a collection of individual pieces of work; may include drawings and other examples of creative work as well as writing.

dissertation a long, research-based work, perhaps 10–15,000 words, for a degree or diploma

thesis a very long, original, research-based work, perhaps 80–100,000 words, for a higher degree (e.g., PhD)

It's a good idea to start with a **mind map**¹ when preparing an essay. Always write a **first draft**² before **writing up** the final version. Your essay should be all your own work; **plagiarism**³ is a very serious offence in colleges and universities. It is an increasing problem because it is so easy to cut and paste from materials available on the internet, and students have to sign a **plagiarism form** to say that the work they are handing in is all their own and that they **acknowledge**⁴ any sources they have used.

There is usually a **deadline**⁵. After the essay is **submitted**⁶, it will be **assessed**⁷ and usually you can get **feedback**⁸.

¹ diagram that lays out ideas for a topic and how they are connected to one another ² first, rough version

³ /pleɪ dər zəm/ using other people's work as if it was yours ⁴ give details of ⁵ date by which you must hand in the work ⁶ handed in; *formal* ⁷ evaluated and given a grade ⁸ comments from the teacher/tutor

C Aspects of higher academic study

HOME FACULTY RESEARCH

University academics carry out research¹ and are expected to read academic journals², which publish papers/articles on specialised subjects. If a library does not have a copy of a book or journal, you may be able to access it online³ or you can usually get it through an inter-library loan⁴. Open educational resources⁵ are particularly convenient for many students. Academic study can be very demanding, and some students drop out⁶, but the majority survive till

¹ less formal is **do research**

² magazines with academic articles (we do not use

the word *magazine* to talk about this kind of academic publication)

³ get hold of (it) on the internet

⁴ system where libraries exchange books/journal

To sum up, analysis of the course content revealed an overall absence of teaching materials on language skills in the evaluation of the ESP course content addressed to students. Teachers' focus was on some basic language aspects mainly grammar but even an integration of language aspects and language skills was missing. Dictation, for example, is a good task which combines listening and writing practices to reinforce students' abilities in correct spelling.

6.1.2.3 Authenticity and Specificity of Topics. Based on the different topics discussed in the ESP lessons delivered to Master one students of Petrochemical specialty, it showed that the topics referred to were not related to students' specialty but rather to different general topics. Most of the topics and lessons content were adopted from internet sources. The latter might be a limitation for the course as topics taken from the internet might not always go with the context of all specialties, because, the authenticity of the topic makes students interested, involved through stimulating situations, and hence more engaged in the course.

Similarly, the specificity of topics to students' areas of interest and discipline is another condition to the success of the teaching learning process. The presence of both authenticity and specificity in the choice of topics makes sense of their learning and hence, simulate the workplace in the classroom. In this connection, Baghban and Pandian (2011, p. 61) point: "Authentic materials, being a part of the real world, can serve as excellent resources for introducing language in its real form to ESP learners whose final goal in taking ESP courses is to communicate properly in real-world contexts". Therefore, authenticity generates not only genuine communicative context but also sense of learning and engagement.

6.1.3 Evaluation of Testing Materials Included in the Course Content

Testing is one of the important data gathering devices. It measures the extent to which a given teaching material is successful or not. It assesses also learners' development in a given skill. The present study focused on the testing materials used by ESP teachers to know the type and the nature of tests given to Master students, the suitability of the content of tests with the

teaching material, and if the tests measured really what ought to be measures as far as workplace needs were concerned.

Three aspects were taken into account in the analysis of tests designed and addressed to students. Concerning the first item of knowledge-based content, it was found that grammar represented two third of its content. The test did not cover topics and aspects related to students' specialty. For technical vocabulary which refers to the type of linguistic repertoire used or tested in tests, it was ignored in the assessment and evaluation phase despite its presence in the teaching materials. This might be because teachers' attitudes towards ELT is related to GE and not scientific terminology.

In terms of target language skills, they were neglected in the tests content. Receptive skills were mostly ignored in the testing content. Questions on pronunciation and reading texts were not also covered in the tests because the majority of activities were either grammar activities or translation of vocabulary items. Productive skills were restricted to activities on pronunciation and writing sentences or paragraph completion. (See examples of tasks content in Appendix Five)

6.2 Data Analysis of the Interviews and Interpretation of Findings

This section provides an in-depth and thorough interpretation of the qualitative data obtained from Algerian engineers and BP managers interviews. The data obtained helped in gaining more insights into the BP company workplace needs to bridge the gap in the area, and hence develop a model ESP course unit for the specialty.

6.2.1 Data Collection Timeline

The participants selected were chosen based on their different criteria including their linguistic background of English and their professional workplace positions. Since English had to be practiced in their workplace, so they were eligible to participate in this study. Different questions were prepared in English and then translated into Arabic to make communication easier for participants whose level of English is weak. The interview began with open ended questions about participants professional and language background in general

and questions were tailored to each participant depending on their position and professional context. The interviews were conducted over phone only because face to face interviews were not possible because of the Covid 19 restrictions which prevented the direct access to the company.

None of the interviews were conducted without confirming the written consent form sent to the participants. After receiving written agreement on their participation, an overall number of eight interviews were conducted and audio recorded. Semi-structured interviews were conducted with Algerian engineers' workers in the BP company. While only structured interviews were conducted with three BP company managers' professionals. Each interview took place in a single interview session and lasted for 15 to 30 minutes. After completing the interviews, they were transcribed and analysed for the different themes that better suit the purpose of the study and answer the research questions. Participants' real names were avoided and pseudonyms were used instead for their privacy.

6.2.2 Transcription of the Interviews

Concerning the transcription of the interviews, the interviews were recorded in English only based on the choice of interviewees. Therefore, they were all transcribed into English. The researcher focused mainly on the communicative features of interviewees language. The main aim of the interviews was not to test the correctness of their language production but rather to obtain data necessary for the study. Therefore, some of the linguistic characteristics of their language such as pronunciation and syntactic deficiencies were ignored in the transcription of the recordings.

6.2.3 Data Analysis Procedure of the Interviews

Thematic content analysis method is considered as the most common method used in analysing semi-structured interviews, and more importantly, it is the most flexible method for novice researchers since it offers a well-structured process for getting an overview and discovering the main themes of the research. Cohen et al. (2011) suggested a process of six

steps to find or identify themes in the research interview. The steps in thematic analysis are as follows:

- ❖ Getting familiar with the data (reading and re-reading)
- ❖ Coding (labelling) the whole text.
- ❖ Searching for themes with broader patterns of meaning.
- ❖ Reviewing themes to make sure they fit the data.
- ❖ Defining and naming themes.
- ❖ The write-up (creating a coherent narrative that includes quotes from the interviewees).

Before going deep in the analysis of the data obtained from the interviews, inductive and deductive process were used. The inductive analysis was just by reading and re reading the transcripts to have an idea about the major themes. Then, data were organised by thematic codes based on participants' background of English and their language communication experiences in the workplace, the challenges they encountered while communicating in English, and suggestions for the best practices of ESP teaching and learning in the department of Petrochemical studies. Therefore, five main themes with sub-themes were generated.

6.2.4 Algerian Engineers' Interview Themes Analysis

Out of the thematic analysis of Algerian Engineers' Interview data, findings are interpreted in five main themes.

7.2.4.1 Background Knowledge and English Language Proficiency. As far as background knowledge is concerned, the six interviewees showed different specialties and options of their university cursus. Besides, the place of English during their studies also differed from one specialty to another. The following is a table that introduces the profile of each interviewee:

Table 6.3*Algerian Engineers' Specialties*

Interviewee	Specialty	University
A	Petrochemical Engineer	Boumerdes University
B	Engineer in Geology	University of Constantine
C	Diploma in HSE	Institution in Algiers
D	Electronic Engineer	Boumerdes University
E	Master in Linguistics	Skikda University
	HSE Training	
F	Diploma In HSE Supervisor	Batna University

Since Algerian workers in the BP company graduated from different universities in Algeria and different specialties; the integration English as a subject in their course was depending on the institution norms and stakeholders' decisions. According to interviewees responses, they can be classified into two categories: workers who had no background knowledge of English from their universities and others who received a course of English but still did not reach the expected level of proficiency needed.

For the former, their universities did not provide a course of English because of the lack of specialised teachers in the subject. Additionally, since they received their trainings in French, their focus was obviously on the language of study. For example, the interviewee A mentioned that he was autonomous in developing his proficiency level in English since he did not receive any course in English at university. All his studies were in French only. Interviewee B says: *"we didn't receive any course in English at university. We stopped learning English in the high school. Our education at university was only in French. There was no English during my university"*. The same story happened to interviewee D who finished his graduated in Electronics engineering without receiving any course in English during his cursus. *"I didn't get any studies in English at university, but I get it outside university and of course it is needed*

in workplace and I received nothing at university". In both cases, the background knowledge of both interviewees and their level of proficiency in English were developed by themselves and through a direct contact with speakers of English in the workplace. In this situation, an absence of the role of the university in developing students' engineers' communicative skills in English might be noted.

For the interviewees exposed to a course in English, this course was either a subordinate subject in their specialty, or they were specialised in English as a foreign language. Two interviewees (C and D) stated that they developed a background knowledge in English from the course that was delivered as a subordinate subject during their cursus at university. As an illustration, interviewee C commented that: "*we studied general English grammar and tenses only. For me, I learned English from workplace*". This means that the proficiency level of the interviews was not the same. For those with no background training in English at university before joining workplace, they only relied on their own efforts to develop their English. For this reason, it was noticed from the way they spoke and answered the questions that they did not focus on the correctness of the language produced, but rather on the appropriateness of the idea transmitted because the language skills were basically acquired and developed from a direct communicative context. Whereas the interviewees who received an academic course at university used an accurate and correct English, simply because of the impact of the academic lectures provided at university. In this vein, such a variety of interviewees background knowledge created a variety of communicative challenges and difficulties in the workplace especially when it came to Petroleum specialised context of communication.

6.2.4.2 ESP Communication Skills Challenges and Difficulties in the Workplace

Interviewees were asked about their challenges and difficulties of communicative language skills that they encountered in BP workplace. Different views were summarised below.

ESP Communicative Context in BP Workplace. Regarding BP as a workplace in Algeria, it is expected that the dominant language used in field work communication is English. Thus, Algerian workers in this context expressed a sense of difficulty in their ESP communicative skills. Interviewee B argued: *“The problem lies mostly in the listening and speaking skills especially when you communicate with native speakers. Sometimes they use informal language and not an academic one. Sometimes we don’t understand them at all. So to solve this problem, they tried to learn Arabic to communicate with us rather than English”*. This difficulty might be attributed to different reasons such as the lack of an English background knowledge from one hand, and the complexity of professional communication with native speakers from the other hand.

Algerian Engineers’ Difficulties in ESP Speaking and Writing. Among the most important notions that this present research emphasised on is the difficulties faced by Algerian workers in the use of language skills in their workplace communication. As previously mentioned, Algerian engineers had difficulties in communicating in English in general, and communicating in ESP with BP native speakers and even with other workers from different linguistic backgrounds (different nationalities).

Productive skills are important and useful skills in communication especially when there is a direct contact in any professional discourse with people from different linguistic backgrounds (who use English as their lingua franca in communication). In the case of Algerian engineers recruited in BP company, they expressed their communicative difficulties encountered at work. They considered speaking as a daunting task for them because of three main reasons: First, they had a problem with listening as they did not get used to hear different accents of English either used by native speakers or by other different nationalities such as Indians, Chinese and Australians. Interviewee C justified: *“because of the accent of native speakers, I worked with Irish managers and Irish accent is difficult in comparison to Scottish and English one”*. Second, the linguistic background of Algerian engineers is basically French, therefore they found it difficult to articulate the English sounds correctly. Interviewee B

expressed: *“I did not receive any lectures in English, that is why, when I started work even I can understand what people say when I communicate with them, I cannot reply”*. Third, constructing a spontaneous speech in English was a big challenge when Algerian workers were involved in conversations and meetings because they lacked competence in the syntactic structure of the English language. Interviewee E emphasised on this factor because: *“It creates communicative difficulties. For example, when you start working first you meet workers who speak very fast, you cannot grasp every single word he or she speaks. This is one difficulty”*. Most importantly, not just the lack of vocabulary items in English that might cause a problem of communication but also the lack of ESP linguistic repertoire related to the domain as the interviewee C confirmed: *“I lack specific terms and vocabulary related to workplace”*, which sometimes interrupted conversations and put the speaker in embarrassed situations. Therefore, when Algerian workers put in such situations, they may feel obliged to switch to French or even use dictionaries to look for the exact word or expressions to keep the run of communication.

Writing was not far from the dilemma of the same coin of speaking difficulty. Writing skill was more complex than speaking for Algerian workers in BP workplace because the focus was not only on the transmission of the idea or message to the audience, but also on the way of transmitting those messages. Unlike speaking, which is a spontaneous process, writing is a conscious task which is conventionalised by a set of norms that govern the writing genres in professional settings. Interviewees stressed the importance of this skill in BP workplace because they used it in their work such as sending emails to managers and directors, drafting reports and filling in documents. Interviewee D said: *“I told you writing, because when you write for general purpose it is ok, but when you write emails and reports in a specific domain you have to have some skills of writing in work and in this context, mistakes are not pardon and you have responsibility”*. Based on their answers, it might be explained that Algerian workers faced difficulties in writing because they were not familiar with the conventions of writing emails and reports. The latter demands the mastery of certain criteria (moves). In other

words, openings, introducing the subject and endings of the writing production in professional domain requires to know about how these steps are successfully developed. University, however, did not take into consideration such kind of courses for students' engineers. They were not exposed to such kind of writing tasks before they graduate and move to workplace. Writing activities at university were mainly restricted to filling the gaps and free writing activities on general topics. This was confirmed by interviewee D: *"Myself I worked on my own I didn't rely on the English I studied at university. The environment of the university and workplace are different. You talk about academic environment, grammar and tenses but when you go to work context, it is 100 percent different. Writing emails and reports are the focus of my work as opposed to university in which we only focused on filling the gaps or write freely on different general topics"*.

Algerian Engineers' Difficulties in ESP Listening and Reading. Receptive skills are not less important than productive skills for Algerian engineers in BP workplace. Their direct contact with speakers of English is daily and frequently. The exposure to the English language demands good listening skill to make communication takes place. Therefore, listening was linked to speaking in terms of its difficulty. This latter was attributed to the variation of pronunciation of BP workers. BP company is characterised by being a multilinguistic context in which each speaker's first language can have an impact of English use. Interviewee F said: *"I can say that we work in multinational context, we have a problem of pronunciation which I myself find difficult when I speak to native speakers or other international workers like Indians, Pakistani people... They have a problem with pronunciation. Especially in meetings where you are in need to understand every single work said by them especially managers"*.

Reading was not as difficult as the other skills for the Algerian engineers. They did not talk about reading because most communicative events did not involve reading tasks. This is explained by interviewee B: *"Reading also was good I can read docs in English because all the docs were in English"*.

Language Usage and Use Difficulties in BP Workplace Meetings. Algerian engineers mentioned various difficulties in English skills use in different communicative events and situations with BP managers such as professional meetings. Those meetings required an English needed for meetings communication at the level of language usage and use of English. In this context, language usage refers the production of language that linguistically respects the phonological, morphological and the syntactic rules of English ‘language correctness’, whereas language use respects the communicative skills in the transmissions of ideas which echoes ‘language appropriateness’.

Findings of the interviews suggested that Algerian workers faced difficulties in both language usage and language use levels. The lack of a basis in English structure would prevent them from shaping good English structure, and a poor level of linguistic and technical repertoire of vocabulary in oil and gas domains. Interviewee A commented on this: “*Look, I think you need some trainings you can’t get specific terms without trainings to get deeper in the domain*”. Interviewee C elaborated: “*I think they should go deep and specific in the field of industry in different specialties, and Petrochemical specialty itself has different specialties. I work for example in CISEMEIC it has specific linguistic repertoire that is different from forage or drillings*”.

Overall, because the large range of vocabulary related to petroleum field that Algerian workers had is in French, therefore, they might lack specific English needed for their work, which might result in a failure in the production of correct English. Interviewee B said: “*Most of our training was about the fieldwork, technical terms and developing our speaking and writing skills in Petrochemical domain*”.

Regarding language use, English is characterised of being a language of appropriateness, a language which gives importance to the transmission of the message. Thus, communicative competence is mandatory to the success of communication. In this vein, though Algerian engineers did not lack this competence, they were not able to express themselves without a linguistic competence. Interviewee B commented: “*Each specialty has its own communication*

skills and technical terms and there are so many domains in petroleum specialty. In each domain, there is a specific English needed. There is geological domain and there is drilling, HSE, and forage... But you are working in the field, you need much more English to communicate because you have a direct contact with workers. But in office, you need just general English to communicate and write”.

Algerian Engineers’ Difficulties with British Managers’ Accents. Another daunting issue which prevented Algerian workers from reaching effective and successful communicative purposes with native speakers was the accent. For them, it was their first time communicating with British native speakers with a speed and a difficult accent to detect and understand. Native speakers, according to them, did not rely only on standard language accent but their dialect accent controlled unconsciously their speech. In this regard, interviewee C stated: *“The accent of native speakers is difficult, I worked with Irish managers and Irish accent is difficult in comparison to Scottish and English one”.*

However, the findings of the Algerian workers do not support the previous data obtained from students in terms of their needs. Put it clearly, students claimed that they were aware of the workplace communicative needs. Therefore, they attributed their lacks and wants to the speaking skill and technical vocabulary (See Chapter four). Yet, what was stated by interviewees in the workplace was not compatible. Algerian engineers faced serious difficulties in listening rather than speaking because they were not familiar with native speakers’ British accents mainly Irish and Scottish. So, students were not even aware of the real needs of the workplace.

Code Switching between English and French in BP Workplace. Code switching is one of the strategies that speakers use in order solve their communicative deficiencies and overcome their weaknesses in the use of a foreign language. Algerian engineers in BP workplace leaned to use this strategy consciously or unconsciously when faced with obstacles in English use in professional communication. Based on their answers to the semi-structured interview questions, Algerian workers switched to French whenever encountering difficulties in the use

of the appropriate and professional linguistic repertoire in communicative situations. When asked about language transfer, interviewee A mentioned: “*Sometimes when I speak with native speakers in workplace, I cannot carry on my speech because I do not find the word or the expression that fit the context. therefore, I switch to French, or I try to convey the message using gestures*”. That is to say, Algerian engineers use different ways to ESP communication problem solving through switching to another language or using paralinguistic techniques.

6.2.4.3 Algerian Engineers’ Cultural Awareness in the Workplace. Language and culture are two faces of the same coin. Yet, when we discuss both concepts from a multilingual and cultural context, interpretation may be different. Communication in a given language implies the use of its culture unconsciously. That is, there is no need for speaker to learn about the culture of their native language because they can show and express about their culture spontaneously. However, in the foreign language context, the case is different. As Algerian engineers might find the foreign language difficult to communicate with, the culture of that language in turn might be difficult to understand. Therefore, failure in communicative situation may take place because of the lack of knowledge not just in the foreign language but also in the foreign culture.

Understanding Cultural and Linguistic Diversity in BP Workplace. Most interviewees acknowledge the significance of culture in communication especially when working with foreigners. Yet, they did not see the domain of culture as a challenge in communication because their focus was on the linguistic side of communication rather than the cultural one. Put it another way, in ESP context, it might be rare that culture is integrated implicitly or explicitly in the professional discourse between Algerian engineers and international managers. Therefore, even there was a variety of multinational and multilingual backgrounds among BP workers in Algeria including native speakers, their cultural diversity did not appear in their discourse. However, in some of the communicative events, culture may stand as an obstacle in their professional communication as demonstrated by interviewee C: “*it depends*

on the person with whom you talk”, and the cultural background knowledge native or even international workers and managers have.

Multicultural Obstacles in Professional Communication in BP Workplace. In the context of Algeria, BP company is a fresh context of multiculturalism. The latter may create linguistic barriers in professional communication especially for Algerian workers who lack knowledge about the English language and culture. The BP company as a multicultural and multilingual setting in Algeria work with different nationalities across the globe, namely UK, China, India, Italy, Pakistan. Algerian workers who joined this company found themselves within a community communicating in English and culturally behaving differently. Based on their experience in workplace, interviewees admitted that it is language rather than culture that stood as a challenge for Algerian engineers. In this sense interviewee F commented: *“I can say that we work in multinational and multicultural context, we have a problem of pronunciation which I myself find difficult when I speak to native speakers or other international workers like Indians, Pakistani people... They have a problem with pronunciation of English. Especially in meetings where you are in need to understand every single word said by them especially managers. At the technical level, there is always there is something new to learn”*.

Such views go against what scholars view in the literature of language and culture. To name few, Jordan (1997), Byram and Grady (2003) who emphasised on the idea that culture has a great impact on the learning and use of the language, and ESP is no exception. In this regard, other interviewees went to believe that culture is a real challenge for them in their use of ESP in BP company. Culture affected the communication between international workers; they believed that the role of culture in professional context is decisive in mediating the international workers in the use of English. The interviewees also expressed that there was an implicit conflict between local and foreign cultures in the workplace, as interviewee B confirmed: *“Yes, there is a conflict because they bring workers from different linguistic background that is why it was difficult, culture was not a problem for me”*.

Algerian Engineers' Cultural Awareness in Professional Communication. In professional context, culture plays a significant parameter in the success or failure of communication between interlocutors from different cultural backgrounds. Understanding cultural diversity is a need in multicultural professional contexts. Commenting on cultural variation in professional communication, one of the Algerian engineers said: *“For me, cultural awareness is important. So, I accept their culture and they do so for me”*.

6.2.4.4 Improving Algerian Engineers' ESP Skills in BP Workplace. Once Algerian engineers are recruited in BP company, they find themselves in front of serious communicative challenge to cope with the new communicative context they are. Therefore, interviewees are asked about what kind of strategies and ways that they have followed to overcome such challenges. Answers are provided and interpreted in the following sub-themes:

Practice of oral and Written Forms in Workplace Communication. One possible way to improve Algerian workers' ESP skills in BP workplace is that of practising English in the workplace. Since most Algerian workers who joined the BP company had a low level in some of the ESP skills, they found themselves obliged to develop those skills in the workplace. Interviewee A who did not receive any training in English during university training emphasised the role of the context of work in developing his ESP terminology: *“Of course the practice of English in context is helpful because specification words you learn them in fieldwork that facilitates work with workers and co-workers”*.

Interviewees added that knowledge in ESP repertoire and skills may not be enough in the workplace. Algerian workers therefore need to develop specific knowledge of English used in context which is not possible to get at university. In this sense, interviewee B mentioned: *“With time and through experience you could develop this baggage in ESP”*. Interviewee C added: *“because what they get at university is not enough and the Algerian worker need to develop their communicative skills in speaking and writing and they have to have minimum level in English. They need also technical training”*.

ESP Trainings in the BP Workplace. In order to develop its workers' ESP communicative needs, the BP company in Algeria should provide trainings by ESP professionals. This need was claimed by some of the interviews. Interviewee C stated: *"Look I think we need some trainings you can't get specific terms without trainings to get deeper in the domain..... Actually, there is a program of training addressed to engineers and other trainings in Petrochemical specialty addressed to workers. English trainings depend on the position of the worker and the need of the worker in a given position."* However, based on interviewees answers, not all workers had the chance to benefit from these trainings. Interviewee E mentioned: *"I didn't receive any training in English except HSE training which was organise by the company"*.

Few categories of workers who hold specific professions in the company got the training before or while work. Interviewee B was one of the Algerian workers who received ESP training before joining work in BP. He asserted: *"Yes, we had a training that lasted for one year. We study English three sessions a week and each session take about one hour and Half"*. Besides, the content taught to them is condensed and of high quality. The interviewee B judged the course: *"Most of our training was about the field work, technical terms and developing our speaking and writing skills in Petrochemical domain and every three months we pass a test"*.

6.2.4.5 Algerian Engineers' Recommendations for ESP Teaching and BP Workplace Training. An important part of the interview conducted with Algerian engineers their suggestions and recommendations to reconsider ESP teaching at university based on their difficulties in the workplace. Interviewees were asked to provide some suggestions to best improve the teaching of ESP and meet the professional communicative needs in BP company. Interviewee F suggested: *"English now is a global language, and it is the language of work, maybe they have engineering diploma in specific field but they need English as a tool of communication. It opens for them so many doors of work and opportunities in multinational companies like BP"*.

Recommendations for ESP Teachers in the Department of Petrochemical Studies. One of the most significant aspect that Algerian engineers highlighted was to give English its status and position at university as a specialty, as a subject taught, and as a language to teach other subjects. Since English is a global language, it should be taught in different subjects and specialties including Petrochemical specialty. Interviewee A reported: *“They need to start learning English at university because everything in worldwide is in English even communication is in English and people in Petrochemical domain is in English so English should be taught at university and studies in Petrochemical domain should be in English not any other language”*.

Moreover, the teaching of ESP should not take its traditional form which is basically based on GE and grammatical rules. There must be a pedagogical and professional goal behind. Because each specialty has its own nature and communicative context, therefore, if the same content is taught to all specialties at university, students cannot benefit from their English in workplace. Interviewee F said: *“Yes, each specialty has its own communication and skills and technical terms and there are so many domains in petroleum specialty and in each domain, there is a specific English needed. There is geological domain and there is drilling, HSE, and forage... But you are working in the field, you need much more English to communicate because you have a direct contact with workers. But in office, you need just general English to communicate and writing”*.

Reconsideration of ESP Content in the Department of Petrochemical Studies. Reconsidering programs, syllabi and contents taught was another suggestion proposed by the Algerian engineers, in the sense that the present contents taught to students did not meet the requirements of workplace needs. Interviewee C commented: *“I think they should go deep and specific in the field of industry in different specialties. And petrochemical specialty itself has different specialties, I work for example in CISEMEIC it has specific linguistic repertoire that is different from forage or drillings”*.

As far as language skills are concerned, productive skills were urged to be emphasised. Interviewee E added: *“I think ESP programs should focus on listening and speaking and writing also. If you are a manager, you need to be fluent in listening and speaking”*. Therefore, focus should no longer be restricted to language as a system but rather on language skills which applies that system. Technical English was also another parameter in the effective use of ESP. Interviewee E said: *“It is needed to focus on all the language skills and content words”*. Interviewee D explained the idea and the purpose behind: *“I can suggest including courses about developing competences in the use of technical words in the field and write reports emails and marketing. I’m not a specialty in the university but I can say that the university should focus on the psychological preparation of the worker. Body language is important and communicative skills are important and dealing with workers and native”*.

Recommendations for ESP Workplace Training. Workplace trainings were needed to develop specific communicative skills and terminology. The latter cannot be reached via university trainings only. In BP company, not all workers can benefit from trainings because the company do not provide ESP trainings to its recruited staff. Specific sectors are concerned with the trainings based on the need of English. In this regard, Interviewee A explained: *“Look there are different sectors in petrochemical field work, and in any sector, there is specification words related to this sector. And you get this repertoire only in workplace through trainings”*. Interviewee F supported the idea in his words: *“Technical trainings and language trainings are important in workplace because there are different sections in the field. Each section has a specific linguistic repertoire”*.

6.2.5 British Managers’ Interview Analysis

The interview conducted with managers was not processed in the same way as the one with Algerian engineers for two reasons. First, the context was different in terms of the position of participants in the company, it was quite difficult to have access to the company. Consequently, the interview was conducted via phone rather than face to face. Second, their linguistic and cultural background were not the same as the researcher himself, thus the

researcher should be careful in interpreting the findings to reach the objectives set for the study research objectives. The following sections highlight the major themes developed from the analysis of data obtained.

6.2.5.1 British Managers' Overall View on Algerian Engineers' Level in English. Having an accepted level in English is a requirement in BP company. However, the overall level of Algerian engineers in English in the company was described as weak at the start of their work. Yet, with experience and trainings, they can develop their English especially in the aspect of technical terminology. The three managers in the BP company who head different departments and take different responsibilities in the company, shared the same point of view about Algerian workers' level of English. Mark said: *"I think that the overall level is acceptable in general English especially with the new generations younger workers but still they are weak in technical English of fieldwork"*. Going in the same line of thought, Steven added: *"Well if I understand the question correctly, I find Algerian engineers willingness to learn English embarrassing, they master two languages and some of them three languages including English. their level in English is average and very few Algerian who I work with have a poor English"*. Interviewee John commented: *"In Algeria, English is still the main Language of Choice for International Companies Beside French, but as I learned here according to HSE every Company is supposed to have a general Language defined to be their main Communication of Choice. I would say the level of English for Algerian workers is quite acceptable."* One possible interpretation to the situation is that Algerian engineers graduate from university with a low level of English. Consequently, they encounter communicative difficulties when they start work in international companies.

6.2.5.2 British Managers' Communicative Difficulties with Algerian Engineers. Because of the diverse linguistic background of workers in BP company, managers faced communicative difficulties with their recruited staff including Algerian engineers who belong to a linguistic and culture backgrounds including Arabic and French. This was one of the crucial points that the interviewees discussed deeply with the researcher. Managers though did

not perspective the linguistic diversity of workers in BP negatively, they even encouraged it for its importance in the development of their company bringing different minds with innovative ideas, visions, experiences, and perspectives. They even went further, professionally, to believe that: *“Diversity also encourages professionals to develop each other communicative skills and knowledge”* (Mark). Nevertheless, despite the benefits of diversity in global workplaces, working with people from different cultural, national, ethnic, racial, and linguistic backgrounds also may create complications and misunderstandings, especially in terms of professional communication. When communicating in intercultural contexts, professionals need to be aware of the linguistic and cultural differences and how those differences shape language usage. In this regards, Mark stated that: *“I think, it is a critical and an important question in the sense that even you find Algerian engineers mastering the English language still we find difficulties with them in fieldwork professionally, sometimes they don’t understand us when we go deep in a given professional discourse”*.

6.2.5.3 British Managers’ Explanation of the Algerian Engineers Communicative Difficulties. The crux of the problem for BP managers in the workplace context of Algeria was that of language communication, concretely demonstrated in the mastery of the four skills. *Skills Communicative Difficulties*. The qualitative data obtained from the British managers showed that Algerian workers challenges centred around the use of English language skills with a particular focus on listening in the workplace. That is, a mix of different dialects and accents of English characterised the oral language among BP professionals. Mark explained: *“To communicate a language, it generally takes between 2000 and 3000 words to know I guess, it might be more or less. All persons I met tried very hard to understand what I was saying and if they did not understand, which you can see in their eyes they went to somebody who did and translated for them”*.

BP managers confessed that they tend to speak the English language so fast and even use unfamiliar jargon in professional communication without considering nonnative speakers understanding of what they say. Steven said that: *“I try to simplify my oral language and avoid*

to use my jargon or accent or unfamiliar words but sometimes unconsciously, I cannot control myself". John also passed through the same situation and he tried to use some strategies to bridge the gap of proficiency in communication. He stated: *"I try to make communication easy with our employees, I use body language, sometimes simple words to avoid vocabulary that might be complicated for them"*. Because of the different accents of managers and even other international workers in the company, Algerian engineers found themselves in a critical situation. They encountered difficulties in understanding accent variation of not only other foreign workers but also their BP professionals. Often BP managers may not take their workers' unfamiliarity with their accents using rapid pacing slang English which could hinder their understanding.

Concerning reading, as interviewees described, this skill did not create serious problems in communication. Mark argued: *"Well I don't know about reading part but may be listening is difficult for them because they are not familiar with our accent as native speakers. And for those who do not speak English, it is very difficult to communicate with them."* Steven went in the same line of thought and compared reading and listening skills in terms of their difficulty: *"I would say listening is more difficult because reading you can time to read a text but listening you don't have time because some people like me who speak too fast so again a native speaker supervisor or manager who speak to an Algerian worker should slow down to confirm every listener could understand."*

Productive Skills Communicative Difficulties. In comparison to receptive skills, productive skills hold the big part of communication. Most of the communicative events take spoken or written forms. Thus, mastering both skills might strengthen successful communication. Most BP managers claimed that they faced no difficulties in either speaking or writing as English is their native language. The only problem they faced is in the way their recruited staff produced the language. John, asserted: *"I would say the problem of communication appear clearly in these two skills but you can see frustration in some people because they are afraid from not saying or writing it correctly"*.

As far as writing is concerned, it is the most difficult skills in professional communication. Since it is a codified and conventionalised skill, mistakes might not be related to the appropriateness of the message only but also to the correctness of the structure in written productions. Steven said: *“First and least important coming to mind is Grammar but the context is right on the Mark. Many reports I have seen might not be grammatically correct, but the message got communicated and acted upon”*. Mark commented on difficulty of the skill: *“I think writing is much more difficult than speaking because when you come to write your speech so many things must be changed. I would say that their writing is worse but still they can use technology and automatic translators”*. Accordingly, speaking and writing caused a communicative problem between BP managers and Algerian engineers at different levels:

ESP Workplace Terminology. Professional Jargon when used effectively by members of a given discourse community works well for boosting effective communication, enabling terms and phrases and acronyms to stand in for complex knowledge. However, in intercultural and multilingualistic communication, jargon often obscures the intended message to be conveyed. Based on their answers, BP managers argued that Algerian engineers’ essential terminologies in English was limited, impacted as well by rhetorically ineffective style of delivery as described by Mark: *“Some people have a problem in delivering or describing something, specifically when delivering accurate information related to financial matters or information requires providing directions, suggestions or explanation”*. One aim of the present study was to learn to more about how Algerian engineers as non-native English speakers and BP managers as native speakers used ESP interactively and successfully in professional context. Therefore, self-awareness in using ESP appropriately for the intended audience was necessary to smooth professional communication.

Bilingualism and Multilingualism. Switching to languages that Algerian Engineers master is one of the strategies used by British managers to facilitate communication. This would clarify some kind of miscommunication that may occur in communicative situations. Mark explained: *“In the workplace, we speak both languages English and French because some of my*

employees do not speak fluent English. But when we communicate with Algerians, the main language that we use to communicate to get things done is English” So, oral translation between English and French occurred to facilitate communication with Algerian engineers. When communicating with Algerian workers, managers tended to switch to French to maintain an acceptable level of understanding.

6.2.5.4 Cultural Communication in the BP Workplace. Since English is the dominate language in the BP company, British managers seem not to encounter cultural problems. Yet, they were asked about their considerations of Algerian engineers’ local culture. The aim of this question was to find out the influence of Algerian engineers’ local culture on their way of communication.

Cultural Awareness for British Managers. Since English is considered as the lingua Franca of the world, British managers are generally monolingual who may not in need of other languages. This might make them unaware of the difficulties that workers face when communicating in English. They might not also be able to recognise the cultural contexts shaping language usage. In the BP company context, managers cannot always detect their workers’ understanding if they do not ask for clarification, which was the case for some Algerian workers. Those workers may feel embarrassed to ask for clarification, and this would negatively impact their successful communication. Therefore, British managers should take into consideration by changing their discourse patters in cases when needed. Managers attributed this issue to their lack of cultural awareness of the new workplace environment, which is a key factor that complicates their communication in international context as Steven reported: *“I sometimes assume that the engineers can easily get what I’m saying to latter find that they did not indeed as they feel uncomfortable to ask for more clarification. Because I sometimes forget that I’m dealing with human entities who are culturally different from me. The context I work in is international I then need to change the way I’m dealing with people who come from different background, both linguistic and cultural”*.

Multiculturalism in Professional Communication. Speakers have a strong sense of belonging to native culture. They consider their languages as transmitters of their identity and culture. The latter appears unconsciously or intentionally in their communication. When communicating internationally, professionals may have a negative attitude towards other cultures and foreign languages. This sometimes complicates professional communication. BP engineering managers in Algeria described their attitudes towards the Algerian context. They encourage variation of languages and cultures for more integration and exchange. Based on their declarations, they did not consider culture variation as a barrier in their professional communication with Algerian engineers because, the Algerian worker showed a kind of acceptance of other cultures and languages. Mark in this regard reported: *“Indians and Chinese believe their languages are their main tongues and part of their Identities. They rarely try to learn English in a very professional manner. I have been in some countries to work. We faced major difficulties especially with Chinese, or Asians because their cultures are closed. They deal with English language purely for business needs”*. John, who had long experience with Algerian workers, supported the idea: *“Yes and No. I think your country provides already such a diversity on the engineering level in languages and cultures. It may be necessary for some levels out of my expertise but for the drilling part all essential personnel spoke good enough English and French for starters”*.

6.2.5.5 British Managers’ Recommendations for University and Workplace ESP Training. Some recommendations were provided by BP manager for a more effective ESP communication in BP multilingual environment in Algeria. Both university and workplace context might reconsider their practices for bettering Algerian engineers’ communicative skills.

Recommendations for University Context. Managers first addressed suggestions for the Algerian university for a better ESP training of students before joining work in multinational companies. This would save time and efforts for these companies to organise trainings in the workplace. Therefore, BP managers emphasised that the design of curriculum and pedagogy

for teaching professional English to prepare Algerian students for working in global, multilingual environments is more than a necessity. Mark suggested: *“they just provide students with the training they in need in ESP. BP company should also help to develop its workers level and skills in ESP. It should provide trainings to develop good attitude and work together regarding their differences, language and cultural backgrounds”*.

Additionally, managers suggested that what university should emphasise goal-oriented subjects to be taught for students. John mentioned: *“...yes if we can take up modules of ESP within the curriculum would be fantastic”*. This is to equip workplace with university graduates with reliable certs.

Recommendations for BP Workplace Training. Workers in multinational companies need to recognise that many words in English as a lingua franca carry different meanings based the discourse community and the cultural background in which they are used. Those meanings are constructed and shaped based on the specialty and the sector of the work. Thus, in communication, workers need to consider different possible meanings of language production. Additionally, such meanings may not be developed through university programs and courses only. Experience, personal efforts and workplace trainings are more important sources to develop professional repertoire related to the workplace. Steven recommended that foreign companies in Algeria: *“should have the time and facilities for training to learn English.”* because not all companies provide ESP training to their new workers. John argues: *“Learn and provide the means to enhance ESP communication. BP has done that with success of more than 30% of our workers took the chance of training in the company and did the course though it took an extra hour out of their 12-hour workday, but I was amazed by the results”*. Therefore, workers may rely on their own efforts to develop their ESP skills by themselves through autonomous learning and workplace communication. Steven added: *“I adore the willing of the Algerians to learn on their own terms, once you give them the opportunity and then adopt. I had the privilege to work with some great engineers and some who probably just develop their English skills by themselves”*.

Conclusion

In this chapter, a thematic analysis and discussion of qualitative data were proceeded. Data was elicited from course content evaluation conducted on the lectures delivered by ESP teachers to Master one students enrolled in the department of Petrochemical studies at Skikda university. Workplace data were drawn from interviews conducted with Algerian engineers and British managers in BP company. Results of both tools were discussed based on ESP course lacks to find convincing interpretations to the questionnaires' findings about teachers and students' teaching and learning problems. Through cross checking of results, ESP communicative difficulties expressed by Algerian workers especially in listening skill and specific vocabulary were not considered as important aspects neither in students' questionnaire nor in the course content designed by ESP teachers.

CHAPTER SEVEN. AN ESP COURSE UNIT MODEL FOR THE SPECIALTY OF PETROCHEMICAL STUDIES

Introduction

No one ignores the immense role of the ESP teacher in class. Learners would be affected positively or negatively by their teachers; the way they teach, the teaching materials they use, and even by their interaction and behaviour in class. Yet, talking about effective ESP teaching and learning in the department of Petrochemical studies seems to be worthless without putting focus on the quality of the course content which is considered as a backbone of any successful teaching activity. Thus, effective teaching of ESP is not only a matter of training teachers, but it is rather related to how to develop a course which balances between developing students' knowledge in language points, structures, and specific terminology from one hand, and language skills, culture and translation from the other hand. Based on these features, an ESP course unit model was suggested in an attempt to cover the shortcomings of the actual course taking into account Master students in Petrochemical specialty, ESP teachers, Algerian engineers and BP managers recommendations.

7.1 Pre course Unit Procedure

Though developing an effective ESP course for any discipline requires collaboration of many contributors namely: curriculum designers, administrators, teachers, learners and workplace institutions. All should work together and discuss the components of the ESP course content based on learners' needs. The following sections present a model of the major components of the ESP course addressed to Master students. The model, in hand, represented just a sample of a unit of tasks which might be an interesting guide and source of knowledge for ESP teachers in the department of Petrochemical studies. The development of teaching materials should be based on strategies that may stimulate students and motivate them to meet the learning objectives set. These strategies are summarised in the following:

- ❖ Get help from professionals in the specialties of ESP and oil and gas because any kind of assistance may be offered from them contributes.

- ❖ Ongoing self-assessment of the strengths and weaknesses of their teaching methods and course content taught.
- ❖ Observe other teachers to know about how to teach and accept also to be observed by them.

Also, successful learning cannot be achieved without the role played by the students in the ESP teaching and learning context. Thus, different learning roles are attributed to students and the following are of importance:

- ❖ Collaborative learning makes learners work together as a team to prepare projects, discuss question, accomplish learning tasks, and develops their language skills.
- ❖ Take responsibility for their own learning, by preparing lessons for more involvement.

It is worth mentioning that during the process of adapting, and designing the linguistic aspects and language skills tasks, the research tried to follow Communicative Language Teaching Approach with a particular focus on its two main paradigms of Target Situation and language skills analysis (Hutchinson and Waters (1987)).

7.2 Communicative Objectives of the Course Unit

The intended course unit model was based on the communicative language teaching where the four skills were emphasized. In this respect, translation was another important parameter for the designed unit in which the following objectives were set:

- ❖ Promoting students' communicative competence in both receptive and productive skills especially, listening and speaking.
- ❖ Developing students' repertoire with the needed vocabulary in the academic and professional context.
- ❖ Developing students' knowledge in language points, structures, and pronunciation.
- ❖ Enriching students' knowledge with the cultural and intercultural communicative differences.

- ❖ Enabling students to understand written documents in the specialty and write reports, emails and CVs in the specialty.
- ❖ Developing students' abilities in translation.

7.3 Content of the Course Unit

Course Unit Major Theme. Oil and Gas industry

Figure 7.1

The Content of the Course Unit Model

Communicative themes	Language knowledge			Language skills				Cultural issues	Translation Skills
	Pronunciation	Technical vocabulary & spelling	Grammar points	Listening	Speaking	Reading	Writing		
Oil and gas fields in my country	Final /s/ Final /ed/	Oil word family	Present / Past /	The history of oil	Making presentation on offshore safety needs	Oil industry process (hydrocarbon)	Writing professional emails	Oil producing countries	Translation of technical terms
International industry	Silent r	Compound nouns and adjectives	Active / Passive	Oil refinery	Problem solving in refinery process	Refinery risks	Writing a report on risks	International business etiquettes	Translation of emails and reports between local and foreigners in the workplace
What makes a good worker	Word stress	Interview skills	Future / Phrasal verbs	Gas distribution	Talking about your future	Jobs in oil and gas	Writing CV to international oil companies	International delegation in workplace	Translation of abbreviations

7.4 ESP Language Knowledge in the Course Unit Content

Concerning this issue, certain language aspects are focused on in designing the course unit tasks.

7.4.1 Model Tasks on Teaching Mechanics

Teaching ESP for Master students in Petrochemical specialty requires familiarizing students with the different mechanical components of the English language. These are considered as the skeleton of any text of language written or spoken. So, it is necessary to focus on some of the components such as technical spelling, punctuation, capitalization, and pronunciation.

Spelling

In terms of spelling, one of the problems that face students to write on topics related to their specialty is how do they spell English words. The latter seems to be a daunting task for its irregular nature; the same sounds can be spelt differently as in the words: *sea* and *see*. Sometimes, the same spelling can be pronounced differently as in the words *threw* and *sew*. However, the complexity of the English spelling and the existence of some conceptions do not mean at any rate the absence of certain clear spelling rules which facilitate memorizing words correctly. In this case, it is the role of the teacher to carefully know to teach spelling relying on efficient strategies to enable learners to acquire new vocabulary items.

In this vein, the spelling of the vocabulary of petroleum communicative context is different from GE. Many verb/adverb or verb/preposition combinations are combined into one word. They should be written as two words when used as verbs. For example:

- ✓ *Workover* well vs. *to work over* the well
- ✓ *Breakthrough* vs. *water will break through*
- ✓ *Buildup* pressure vs. *pressure can build up*.

Additionally, certain compounds formed by two nouns should be written as one word when combined to form an adjective for instance:

- ✓ *Casinghead* gas vs. *the casing head*,
- ✓ *Oilfield* problems vs. *an oil field*,

✓ *Oilwell* tools vs. the *oil well*.

Therefore, teaching spelling starts by motivating learners to read extensively and listen to native speakers. The former helps learners to remember English spelling rules and their exceptions. In this respect, it should be noted that ESP teachers have to encourage their students to read more scientific texts that belong to Petrochemical specialty. The latter can also contribute so much to making students more self-confident in writing correct English. Thus, listening to native speakers may be also useful to let learners identify how certain sounds are pronounced. Most importantly, encouraging students to use dictionaries to check the spelling of words and devoting some dictating sessions are considered as excellent techniques for spelling practice. Therefore, ESP teachers are required to try those spelling techniques with their students for better spelling attainments.

Punctuation, Capitalization and Pronunciation

The findings of the present work indicated that punctuation and capitalization were absent in the course content addressed to students.

- ❖ Writing whole texts on the board without punctuation and capitalization, and then asking learners to punctuate and capitalize.
- ❖ Teaching punctuation and capitalization through preparing a rules chart.
- ❖ Dictating unpunctuated passages.
- ❖ Allowing peer correction before correcting students' products.

Moreover, teaching pronunciation is crucial for students for the fact that it may misinterpret ideas and information if they do not pronounce words correctly. Practically, teachers are required to train their students to pronounce words correctly each time they come across new terms in vocabulary practice, reading phase or any other teaching sessions. For example, teachers may ask their learners to read or define some technical repertoire in Petrochemical domain and at the same time may give the opportunity to let them practice pronunciation of the same terms. Another efficient strategy of teaching pronunciation can be done through encouraging students

to listen to native speakers talking about oil and gas issues or making oral presentations in the field.

Task One: Circle all the words that have capitalization errors.

Megan gazed out the window of Salem hotel. Since she had broken her leg, nothing cheered her up. Friends from Hillside elementary School and Milford Middle school had signed her cast. Her mother's boss at General Electric Company sent flowers. Nothing helped. Then, Uncle Bert called. As a boy, Uncle Bert had fixed lamps at Ed's Electric shop. Later, he worked his way through Amherst college by fixing computers for Davis Electronics service. Now he was president of American robot Company. "Tomorrow," he said, "prepare to meet your weirdest friend ever."

*Suddenly, a robot strolled into her room. It demanded a slice of pizza. "Don't feed him," warned Uncle Bert. "When we visited Miller High school, he wanted pie. He likes McDonald's, too." "Yes, when I get a stomachache I go to Westview hospital," said the robot. (adopted from *English Grammar and Vocabulary Macmillan Series*, 2003, p. 53)*

Task Two: Write in the correct punctuation marks in the following statements.

- The data were time volume and depth.
- Drilling to such depths is rare much of the technology is experimental and changing rapidly.
- Section officers are Jim Black Chair Susan Hall Program Chair and Bill Williams Secretary.
- The first test failed consequently we ran another.
- When identifying members of a particular discipline eg reservoir management geology completions.
- Water and gas are consumed forming a crystalline cage resembling ice in which gas molecules become trapped.
- In several areas especially where access to well disposal is controlled water reuse is considered to have several advantages.

7.4.2 Model Tasks on Teaching Vocabulary

Teaching vocabulary is an important parameter in second or foreign language teaching and learning. Thus, it is crucial to help students develop a scientific and technical linguistic repertoire through memorizing as many vocabulary items as possible to engage successfully in communicative situations and discourses. Yet, teaching vocabulary should not be understood as a matter of providing students with long lists of scientific terms in the discipline as grammar translation method perceives. It is rather a matter of involving students in authentic speaking and writing communicative situations where they can function the linguistic repertoire learnt. In practice, one possible way to solve students' problem of lack of vocabulary is to use certain techniques of simulation such as: pictures, videos, scientific experiments, writing reports and emails. Besides, ESP teachers can select a number of tasks and activities such as filling the gaps, matching, dialogues, conversations, and text completion to reinforce and enrich students' vocabulary stocks.

Abbreviations

Abbreviate units of measurement in the specialty of oil and gas are used with numerical values (unless the abbreviation replaces a very long phrase, such as “several scf/D” for “several standard cubic feet per day”). For units of time in combined units, there is a use of the customary abbreviations “sec” (second); “min” (minute); “hr” (hour); “D” (day); and “yr” (year) or the metric abbreviations “s” (second); “min” (minute); “h” (hour); “d” (day); and “a” (year). Use abbreviations MM for million and M for thousand ONLY with cubic feet to express gas volumes.

Task One: Complete the table below by writing the correct branch of petroleum in each space.

coiled tubing – gas flood - electrical submersible pump - oil rig - pore-water fluid – pipeline – refining
--

Branch of petroleum	What it deals with
	Deliver energy from where it is produced to where it is turned into useful fuels and products and on to our local communities.
	Conversion of crude oil into useful products
	It is used for <u>interventions</u> in <u>oil and gas wells</u> and sometimes as production tubing in depleted gas wells
	Pushes water to the surface by converting rotary energy into kinetic energy into pressure energy
	The pressure of groundwater held within a soil or rock, in gaps between particles
	An electronic detection system covering the protected area
	Any kind of apparatus constructed for oil drilling

(Adapted from *Oil and Gas: Student's Book*, 2011)

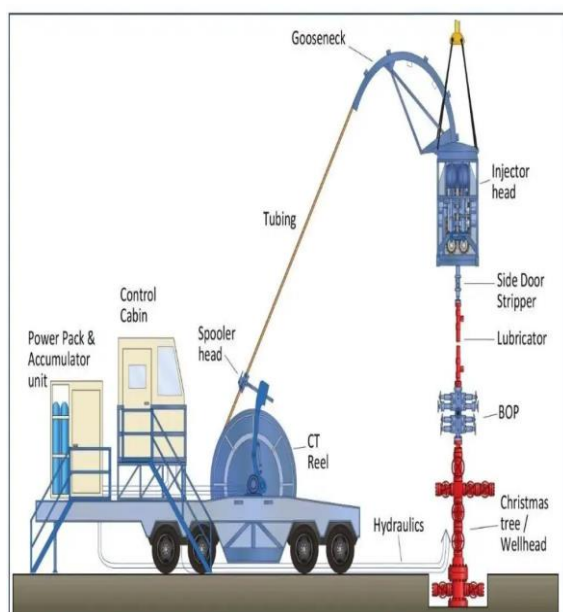
Task Two: Point out a wrong word or a group of words in the following sentences.

- ❖ Gasoline , diesel fuel, asphalt base, fuel oils, heating oil, water liquid, kerosene, boiled water, liquefied petroleum gas and petroleum naphtha are transformation products of crude oil after petroleum refinery process.
- ❖ In petrochemistry, petroleum geology, organic chemistry, and biology cracking is the process whereby complex organic molecules such as kerogens or long-chain hydrocarbons are broken down into simpler molecules such as light hydrocarbons, by the breaking of carbon-carbon bonds in the precursors.

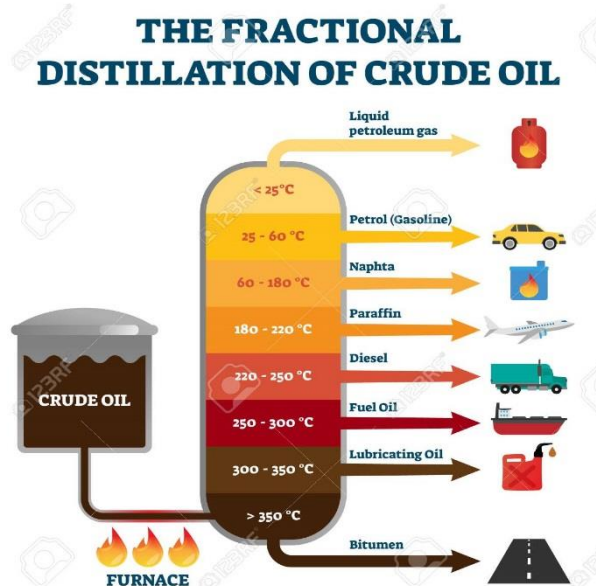
- ❖ Crude gas stabilisation is a partial distillation process that renders crude oil suitable for storage in atmospheric tanks, or of a quality suitable for sales or pipeline transportation.
- ❖ Hydrogen sulfide is a chemical compound with the formula H_2S . It is a colorless chalcogen-hydride crude, and is poisonous, corrosive, and flammable, with trace amounts in ambient atmosphere having a characteristic foul odor of rotten eggs.

(Adapted from *Oil and Gas: Student's book*, 2011)

Task Three: Work in pairs to name and discuss the process of these operations in work field.

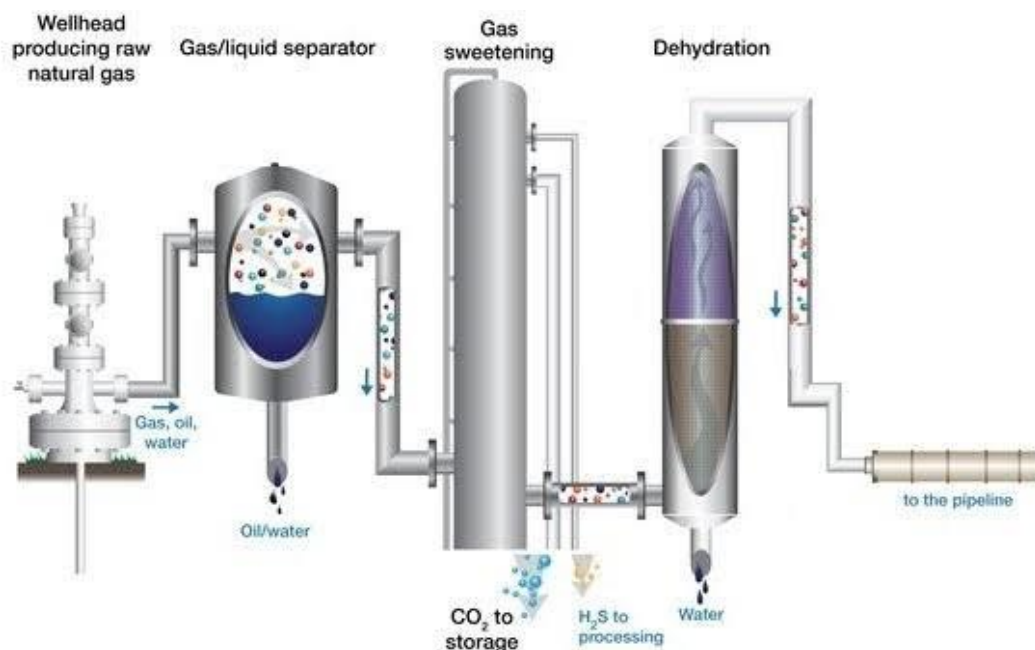


Picture 1.



Picture 2.

(Adopted from *Oil and Gas: Student's Book*, 2011, p 8)



Picture 3.

(Adapted from *Oil and Gas: Student's Book*, 2011, p.10)

7.4.3 Model Tasks on Teaching Grammar

No one denies the fact that grammar is a key condition of a good language structure. Correct arrangement of sentences and utterances in their syntagmatic and paradigmatic relationships construct well build texts. A successful student is the one who chooses appropriate vocabulary items and arrange them into sentences and texts to express appropriate relationships between ideas in a purposeful communicative event.

Thornbury (1999) suggested three main aspects (economy, ease and efficacy) that should be considered when assigning tasks of grammar. With regard to economy, teachers have to be concise and economical in presenting grammar inputs in order to ensure motivation among learners because the shorter grammar is presented the better is grasped. Concerning the second aspect, teachers should prepare easy examples to explain the grammatical points and avoid complicated activities to practise the rules of the input. As far as efficacy is concerned, teachers can measure any progress of their students' learning through tests and exams which can provide feedback to teachers on the efficacy of learning teaching process. The efficacy of grammar activities can be, in turn, measured by the degree of the learners' attention which means nothing

if there is no understanding. So, students should pay attention, understand and memorize grammatical rules in order to use them in their writing attempts. Another crucial point emphasised by Thornbury (1999) that should not be neglected in teaching grammar is appropriateness because learners are different in needs, interests, attitudes, proficiency level, and even beliefs and values.

With respect to context of oil and gas, teachers should bear in mind that teaching efficient grammar should be based on applying a given model. Task-based model seems to be more adequate to achieve the objectives of ESP teaching where language is learnt through communicative tasks and accuracy develops after fluency. Here, grammar is acquired through interaction and the course objectives are expressed in relation with the real language use. Therefore, it is the role of ESP teachers to apply the model to teach the different grammatical points taking into consideration the aforementioned aspects.

Task One: put the verbs between brackets in the correct tense.

As an oil rig worker, your responsibilities (to involve) supporting oil and gas drilling and extraction operations on an offshore oil platform. You (may to perform) a specific job on the rig, or your duties (may to focus) on general labor tasks. Oil rig positions such as a derrickman and driller (to work) directly with the equipment needed to drill and extract the oil. You (may also to perform) other tasks such as catering, cleaning, or providing medical services.



Picture 4.

(Adapted from *Oil and Gas: Student's Book*, 2011, p.15)

Task Two: Put the verbs in the right tense, use the following terms to construct steps of the industry of natural gas processing

Purifying the raw material, to produce, to prepare, underground, to start, alongside with oil crude, reservoir, dissolved gas, contaminants, solids, to remove, Carbone dioxides, to have, some substances, mercury, to deliver, fuel, economic, commercial, social benefits, to be.

(Adapted from *Oil and Gas: Student's book*, 2011)

Task Three: read the following passages and identify which sentences contain the passive form:

- ❖ Photographs are taken from planes or satellites, then they are examined. They look for special rocks formations where oil is often found. After that, geologists on the ground collect rock samples and analyse them.
- ❖ When possible future oil field is identified, the next step is to drill an exploratory well. Each time a new well is drilled, a well log should be created. The well log is a record of the rocks and depths at which they are found.
- ❖ Samples for analysis could be kept by geologists. They can use the information from different well logs to construct a map of the area between the wells. This process is called geological reasoning.

(Adapted from *Oil and Gas: Student's Book*, 2011)

Task Four: Answer the questions with the ideas in brackets.

Example:

Q. Will the company find new oil fields? (In the extreme south, Algeria)

A. I am not sure; they might find new oil field in the extreme south of Algeria.

- ❖ when are you taking the exam (next week, next month)?
- ❖ How will we make electricity in the future (from water, from sun)?
- ❖ what kind of job will you look for (in exploration, in refining)?
- ❖ How long will the project of BP company last in Algeria (10 year)?

In pairs, practice by asking and answering the questions.

(Adapted from *Oil and Gas: Student's Book*, 2011)

7.4.4 Model Tasks on Pronunciation

Task One: Listen to the verbs and complete the table.

collected – invented – produced – seeped – stored – used – burned – wanted – distilled – drilled
– visited – drained – analysed – worked – invested

/t/	/d/	/id/
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Task Two: a) Listen to these words, can you hear the /r/ sound? Underline the sound /r/ if you hear it.

roughneck – dirty – senior – older – crew – operate – control – heavier

b) Which of these words have a silent /r/

longer – problem – important – drill – shorter – worker – stronger – deeper

Task Three: a) Listen to the words that describe different professions does each word have

Geologist – geophysicist – geochemist

b) Identify the stress on each syllabus.

c) Find three words from your specialty with different positions of stress.

7.5 ESP Language Skills in Course Unit Content

Findings of the present study indicated that students need English to fulfill a wide range of objectives such as reading and writing reports in the field, taking part in conversations, communicating in oral and written forms with foreign workers. To achieve these objectives, students are required to develop their competence in the four language skills altogether. In this respect, some suggestions were offered so as to put the use of English into practice during the ESP course in order to motivate students to participate in class and to do a number of activities to develop the four skills.

7.5.1 Model Tasks on Listening

To develop students' listening skill, they should first start by listening to themselves reading out loud. This would make them feel familiar with many English items, and be able to overcome some pronunciation deficiencies. It is through reading loud that students could rehearse their works and realise self-evaluation. The aim of teaching listening to students in petrochemical specialty is to enable them cope with listening in real life situations including participating in face-to-face conversations with native speakers, participating in meetings, seminars, or discussions.

In practice, teachers are required to follow a given methodology when setting listening tasks for their learners. It is advisable, throughout the present study, to rely on a pattern of teaching listening composed of three stages: Pre-listening, listening and post- listening. To apply this methodology on the ground, teachers have to select the convenient activities and tasks depending on the purpose and the goals from teaching listening skill. Thus, it is very crucial to develop students' interest and raise their motivation when designing activities. Because it is through developing students' listening skill that they would become able to speak English fluently as it is generally known that a good listener is a good speaker.

Task One: before you listen to the passage, discuss with your mate possible answers to the following questions

- ✓ In ancient time, what did people use oil for?
- ✓ When did oil first become an important product?
- ✓ How did people first use petrol?
- ✓ What do we use petrol for today?

After you listen to Sergie, an oil field specialist, check your answers to the questions above.

(Adapted from *Oil and Gas: Student's Book*, 2011)

Task Two: Listen to the record and complete the information below

- ✓ Number of tankers per day.....
- ✓ Number of storage tanks.....

- ✓ Barrels of crude processed in the refinery each day.....
- ✓ Percentage of UK's petroleum needs.....

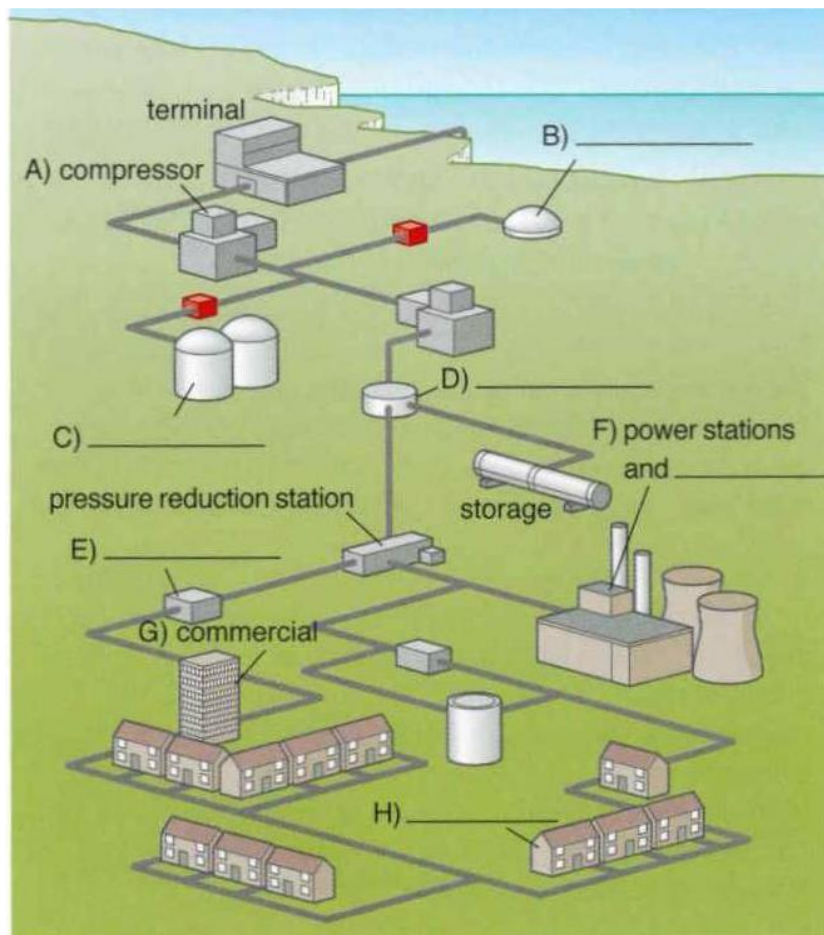
When you finish, try to discuss with your mate the same data about Algerian refinery production and share the statistics in class.

(Adapted from *Oil and Gas: Student's Book*, 2011)

Task Three: first, listen to Mark talking about gas distribution and complete the names in the diagram with these words:

Offtake- domestic customer- LNG storage- underground storage – governor- industry

Then, when you finish, make notes about what happens at each stage.



Picture 5.

(Adapted from *Oil and Gas: Student's Book*, 2011, p.12)

A	
B	
C	
D	
E	
F	
G	
H	

7.5.2 Model Tasks on Speaking

As shown in the quantitative data analysis of students' questionnaire, the majority of students contributed to the present study agreed on putting much focus on reinforcing speaking skill activities and motivating learners who most of them spent years studying English but still feel unable to express themselves. They strongly believed that the need to express their opinions and particularly scientific thoughts in a correct and consistent manner made the fact of speaking English whenever they want and wherever they go is an obligation added to their technical discourse.

To enable students to interact and speak English fluently, ESP teachers have to involve them and raise their motivation to discuss technical subjects in relation to their field of study or interest. To achieve that goal, they are first required to specify what students can do at certain levels of English learning competencies. ESP teachers also should bear in mind when teaching speaking skill that their students live in a social, cultural, and linguistic context where the English language is not often the medium of interaction in their daily life. In other words, they do not have the most convenient conditions to develop the desired or required level. The reason why teachers should make their students explore the characteristics of the speaking skills, and propose some ways of making them practise speaking, with providing feedback when needed. As regards

the activities and tasks that seem appropriate to develop students' speaking abilities, an ESP teacher may rely on discussions, free speeches and role-play tasks.

Task One: Think of yourself as a petroleum chemist and your company asked you to prepare a visual presentation on offshore safety needs. Follow these instructions in your presentation

- ✓ Support your presentation with diagrams and pictures.
- ✓ Do not write everything you want to say.
- ✓ Remember to use simple and technical language.



Aadapted from *Society of Petroleum Engineering, Style Guide*, 2019)

When you finish your presentation, perform it and students are asked to provide feedback on what was good and bad in it. In addition, they will suggest how could the speaker do better.

Task Two: a) Mohamed is maintenance technician. He is talking to Samir, the head of the refinery maintenance. Listen to the conversation and answer the question:

- ❖ What kind of problem has Mohamed identified?
- ❖ What were the causes of the problem?
- ❖ When can the problem be repaired?
- ❖ What are the materials needed to repair it?
- ❖ What are the suggestions provided by the manager?
- ❖ What Mohamed and Samir should do next?

b) Suppose that you are an engineer working for BP company and you have faced a problem in drilling. You want to inform and discuss the problem with your manager. Develop a conversation and play roles with your mate.

(Adapted from *Oil and Gas: Student's Book*, 2011)

Task Three: There are many ways to talk about your future, read about Andy's experience at work then speak about it to your mates about your future job plans.

Andy Dupont



I started work for a Scottish oil and gas company as a technical assistant. That was two years ago. Then I was promoted to junior explorationist. My company spends a lot of time searching for oil and gas. My job is to analyse data that we collect from seismic studies and I now have to manage my own projects. At university, I studied geology and physical geography. After I graduated I had a gap year. I have always enjoyed travelling so I spent the year travelling around the world. It was a great experience. I learned a lot about different cultures and about myself too.

I love my job because there is a wide variety of different tasks. I travel to the places where we are carrying out seismic surveys. I have to organize tests and collect and analyse data. I speak English and French equally well and that can be very helpful. I've already been to some of the hottest and coldest parts of the world. Working in extreme conditions at onshore sites can be tough. We spend long days in our truck in the heat or cold in places where very few people live. In the office I analyse the data we have collected so we can build a subsurface map. I have a lot of responsibility. It's really exciting when my manager makes the decision to drill.

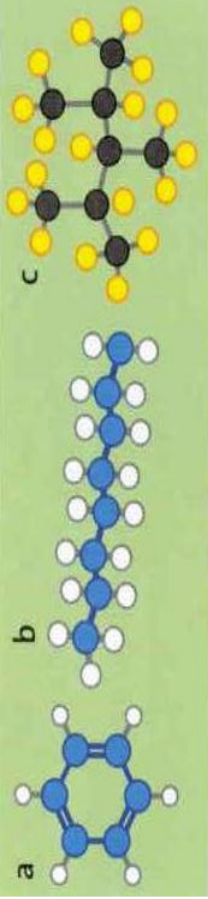
Jobs in the oil and gas industry are well-paid. I get a good salary. I also have the opportunity to do further study as well as travel. I'd definitely recommend the job to others but it's not the easiest job for people with a family. I'm often away from home for long periods of time and I may have to live abroad in the future.

(Adapted from *Oil and Gas: Student's Book*, 2011, p.15)

7.5.3 Model Tasks on Reading

Reading is a highly strategic process through which readers use a variety of strategies and follow several techniques to construct meaning. Among which, students, for instance, are required to activate their background knowledge, make predictions, ask questions, draw inferences, make connections, analyse structures, and summarize ideas. These individual comprehension strategies and techniques are acquired through practice under problem solving tasks where students must think, adjust, modify, and shift tactics to achieve successful reading comprehension. The role of the teacher is very crucial to involve students in active reading which takes place when learners are proactively involved in the reading of a text. They are not only supposed to read words or sentences and answer questions, but better understand the meaning within the text.

Task One: a) Read the text then name the three hydrocarbon molecules.



The image shows three molecular models of hydrocarbons. Model 'c' is a branched alkane with 10 carbon atoms (decane). Model 'b' is a straight-chain alkane with 10 carbon atoms (decane). Model 'a' is a cyclohexane ring with 6 carbon atoms.

Hydrocarbons

Crude oil and natural gas are often found together. They are both made up of hydrocarbons, which are molecules that contain only carbon and hydrogen atoms. Hydrocarbons contain a lot of energy. When we burn them, we get this energy. We use hydrocarbons for fuel for heating, cooking, and transportation. There are also many products that we can make from hydrocarbons. We use chemical processes to change the hydrocarbon chains to make nylon, medicines, and lots of different plastics.

Hydrocarbons have different lengths and structures. Some are straight chains, some are branching chains and some are rings. The smallest hydrocarbons are colourless gases under normal temperature and pressure. These are small molecules with one, two, three, or four carbon atoms. The smallest is methane (CH_4). It has one carbon atom surrounded by four hydrogen atoms. Natural gas is a mixture of small hydrocarbons – methane (CH_4), ethane (C_2H_6), propane (C_3H_8), and butane (C_4H_{10}). They are used as fuels.

Hydrocarbons with more than four carbon atoms in each molecule are liquid. Crude oil is a liquid under normal temperature and pressure. It is a mixture of more than 100 different hydrocarbon molecules. As hydrocarbon molecules get bigger they have a higher boiling point, so it is possible to separate the hydrocarbons. This happens at a refinery.

Gasoline is a mixture of hydrocarbons with between five and eleven carbon atoms. It burns easily and is an important fuel. It is colourless but we add colour for safety. Naphthas are hydrocarbons with between seven and thirteen carbon atoms. They are clear liquids. We do not use them directly as fuels, but we can change their molecular structure at the refinery to make different fuels. They are important for paints and products that dry quickly. Kerosene, diesel, and fuel oils are mixtures of larger molecules with higher boiling points. The largest hydrocarbons in crude oil are solid. They have more than 50 carbon atoms in long chains. Bitumen (Am E = asphalt) is an example. We use bitumen for building roads.

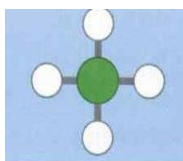
(Adapted from *Oil and Gas: Student's Book*, 2011, p.17)

b) Answer these question from the text:

- ❖ How many atoms in hydrocarbon?
- ❖ What does hydrocarbons used for?

c) Say true or false and correct false ones:

- ❖ This is methane



- ❖ Natural gas is a mixture of hydrocarbon gases.
- ❖ Hydrocarbon with five carbon atoms are gases.

- ❖ Diesel boils at a higher temperature than gasoline.
- ❖ Naphthas are good fuels.
- ❖ Bitumen is solid.

Task Two: Read the text about BP refinery disaster in Texas then, write true or false to the following statements:

1. The splitter was operating for long time.
2. There was a warning on the instrument panel.
3. An alarm was not working
4. An operator opened the valves.
5. The blow-down drum was supposed to deal with excess liquid.
6. The gas and liquid escaped through a broken pipe.
7. There was a flare system to burn off gas.
8. It was OK for the vehicle to be in the area.

(Adapted from *Oil and Gas: Student's Book*, 2011, p.17)

The BP Texas City refinery accident

Accidents don't happen very often, but when they do, they can have terrible results. On 23 March 2005, an explosion at BP's Texas City Refinery killed fifteen workers and injured more than 170 others.

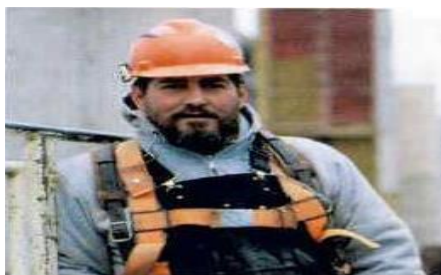
A splitter that separates light and heavy gasoline was started up after a two-week shutdown. Operators didn't follow orders on the **instrument panel**. As a result, the splitter filled up with too much liquid that then became too hot. Someone had turned off the alarm that warned about over-filling. So much pressure built up in the production tower that three **valves** opened automatically. Liquid flowed into the blow-down drum: a container that was supposed to deal with this. Unfortunately there was too much fuel in the drum so that liquid and vapour went up the 113-foot **vent** into the open air. Although experts had recommended a flare system to burn off dangerous gas, BP said it didn't need one. So the mixture of gas and liquid fell to the ground. There, a **spark** from

a vehicle set off an enormous explosion. The vehicle should not have been in the area. The explosion blew up a large part of the area and could be heard many miles away. Eleven of the people who were killed were having a meeting in a trailer in the danger zone. The trailer should have been further away. Other victims were carrying out maintenance work nearby. An enquiry into the accident indicated the basic causes were equipment failure, risk management, staff management, and working culture.



(Adapted from *Oil and Gas: Student's Book*, 2011, p.25)

Task Three: a) Look at the pictures and guess what kind of jobs they have?



(Adapted from *Oil and Gas: Student's Book*, 2011, p.29)

Choose a job that you would like to do and explain your choice to your mates in class.

b) Read the text then say:

A WORLD OF OPPORTUNITIES

There are many different jobs within the oil and gas industry, each requiring different skills and qualifications and sometimes travel.

Working as a labourer is physically hard. You have to be strong and willing to work very hard. You work outdoors on site, perhaps for a drilling or pipeline company. You only need qualifications from school and, of course, health and safety qualifications. You get the chance to travel and often get paid **overtime** so you can earn good **wages**.

An apprentice begins work after leaving school, working together with a qualified person such as a technician, electrician, or welder to learn the job. At the same time, an apprentice spends time at college to get a recognized **certificate** or diploma. It can take three or four years but there is the chance to travel and get paid for overtime too.

Technologists usually study at college for two or three years and have a qualification before they begin work in specialized fields. Their job is to decide which equipment to use on site, know how to install it, and use it. Some technologists have an **office job**, but some work in the field and have to travel.

Engineers have a university **degree** and are often expected to do more study while working. They earn a good **salary** but have a lot of responsibility and have to know and follow regulations. There are usually good chances of **promotion** and many engineers work their way up to jobs as managers. Engineers work in the office and also travel to work sites.

Of course not all the jobs in oil and gas are technical jobs. There are many people who work in transportation, health and safety, or customer relations. There are also people who have to negotiate with land owners and draw up contracts. It's an amazing industry! There are millions of people working in almost every country in the world so there are lots of opportunities.

(Adapted from *Oil and Gas: Student's book*, 2011, p.37)

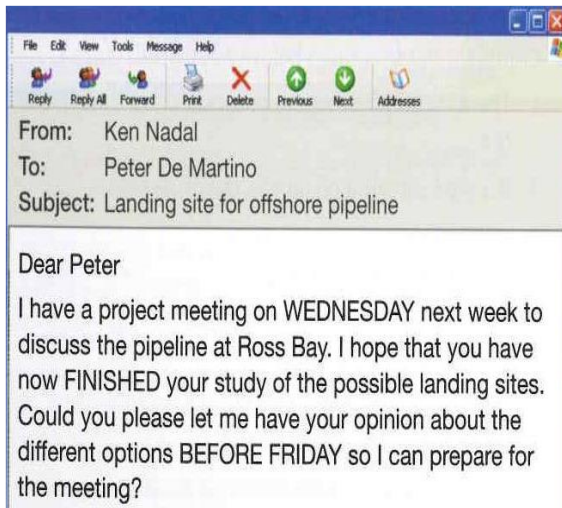
- ✓ What does the title mean to you?
- ✓ What kind of opportunities are available in oil and gas industry?
- ✓ Scan the text to find out four categories of jobs.
- ✓ Use the words in bold to write well-constructed sentences.

7.5.4 Model Tasks on Writing

Among the unsatisfactory results obtained throughout this research was the students' negative perceptions of the writing skills. Students expressed that they feel anxieties about their ability to construct sentences and paragraphs in well-structured essays. They did not only fear the fact of dealing with scientific topics in writing, but they also feared the act of writing on the whole. Nevertheless, students in petrochemical specialty need more assistance from their teachers to practise writing on scientific topics appropriately. Their need in writing skill does not only concern the scientific way of writing but it also touches the general writing exercises. This means that students feel the need for more practice of the different mechanics of language such as grammar, spelling, vocabulary.

Regarding students, they expect assistance and feedback from their teachers to see how well they progress in their writing attempts. It is through feedback that teachers make evaluations and give comments on their learners' written products. However, the kind of feedback provided by teachers may affect either positively or negatively students' attitude towards the act of writing. In practice, the teacher's feedback starts with students' first draft in response to their way of organizing information and the general features of writing (grammar, spelling, vocabulary, coherence). It should be noted that the teacher's feedback should not only concern students as individual writers, but it may also touch those working in pairs or groups. At the same time, teachers must decide which feedback they have to give to their learners' writings, whether it is instructional or evaluative feedback.

Task One: Read the features of writing good emails then use the format to write an email to a foreign company manager trying to convince him of your project of possible landing sites for offshore pipeline In SKIKDA. Follow the model provided.



Writing good emails

- 1 Be polite, never rude. Show respect in your writing.
- 2 Greet people with Dear Mr / Mrs / Dr. Only use first names if the other person has agreed.
- 3 Be concise. Don't write more than you need to, but don't leave out important information.
- 4 You can use common abbreviations, e.g. *inc.*, *etc.*, but don't use abbreviations such as *Can u pls send info on ...* that are normally used in text messages.
- 5 Don't use emoticons (☺) in business communication.
- 6 Use correct spelling and grammar.
- 7 Don't use CAPITAL LETTERS to shout your message and don't write everything in small letters.
- 8 Reply to an email quickly. If you need to do some work before sending the information, tell the other person. *Thank you for your email. I'll get back to you as soon as I have the information you need.*
- 9 Never write something you don't want others to see.
- 10 Don't try to be funny.
- 11 Remember your writing says a lot about you.

(Adapted from *Society of Petroleum Engineering, Style Guide*, 2019, p.44)

Task Two: a) Read the report below then put these words in the correct place to complete it.

Recommendations – attachments -

results – objectives – subject

b) Read the report again and discuss

these questions in pairs

❖ What he found in the oil that

he did not expect

❖ What does he want to happen

next? And why?

c) In an oil analysis, you have found

that the oil contains high level of

Sulphur and polymers. Write a

short report to your manager

about the issue.

To: Distribution (Restricted)

Date: 16 November 20—

From: Barry Saunders

Dept: Petroleum Engineering

_____:¹ Analysis Report – Well head Samples, Excelsior Project.

Please find attached the analysis on the oil samples sent to Petrolink Laboratories.

_____:² Initial analysis to provide information for conceptual design team.

Summary: The results show that the level of mercury is higher than expected. We recommend that further tests are carried out using the sampling techniques that Petrolink suggested.

I have arranged a meeting with the project design team to discuss equipment design, material selection, and waste disposal issues.

Background: High levels of mercury can cause damage to piping and equipment if materials are not chosen correctly. It can also be hazardous to health and the environment.

_____:³ The results show expected levels of CO₂ and sulphur but the Hg content is higher than expected at 300 ppb.

Conclusions: In order to confirm the results of this initial analysis, we need to run further tests to eliminate contamination or measurement errors, to provide additional gas and condensate samples, and to determine the species of mercury present.

_____:⁴ We recommend further discussions with Petrolink to decide on the procedure for sampling and further testing, costs, etc. We also recommend a meeting with the conceptual design team to discuss which materials and equipment to use, waste disposal and methods of removing mercury. Action BS.

_____:⁵ Petrolink Analysis Data

(Adapted from *Oil and Gas: Student's Book*, 2011,P.21)

Task Three: Read the CV of Jerry and

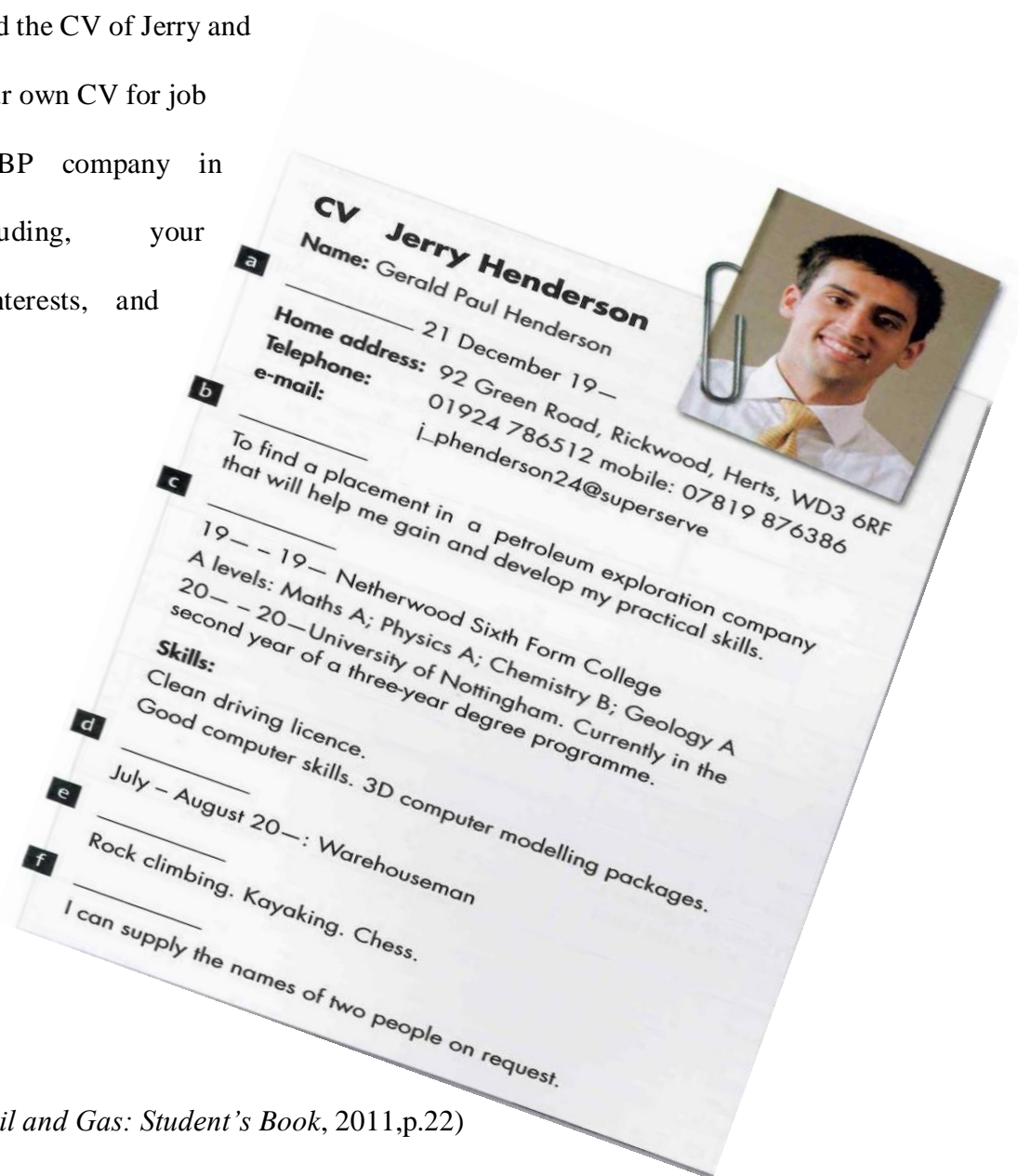
try to develop your own CV for job

application in BP company in

Algeria including, your

qualifications, interests, and

motivation



(Adapted from *Oil and Gas: Student's Book*, 2011,p.22)

7.6 Model Tasks on Integrating Culture through Simulation

Topic One: Oil industry in the world

Task: Use the link bellow to watch the video about modern history of oil in the world then speak about the place of Algerian petroleum industry in the world oil production.

Petroleum - Modern history of oil on a Map - YouTube

Topic Two: International Communication Etiquettes

Task: watch the video on YouTube using this link

www.youtube.com/watch?v=yV_XMCFPOjQ

then discuss in small groups:

❖ Cultural differences in international workplace contexts

- ❖ The importance of intercultural competence in international work settings

Topic Three: Job Interview

Task: Watch the video on YouTube using this link

www.youtube.com/watch?v=J2VnJOw5Cd0

Then, try to record your own job interview with your mate and play roles in class.

7.7 Model Tasks on Teaching Translation

In the present work, translation is designed during the session of teaching vocabulary. Students are supposed to learn about the techniques of successful translation and are asked to do some practice on the subject matter through translating technical terms, full sentences, phrases, or even whole passages. Thus, it is very crucial to teach students translation for they need it not only to translate documents in the subject, but to contribute to technical knowledge and share their experiences without being hindered with language barrier. However, translators bear a heavy responsibility when translating issues such as research reports and formulations.

Task One: Translate the following definitions into Arabic

Hydrocarbons: It means oil and natural gas where oil refers to all hydrocarbons which are in a liquid state at standard atmospheric pressure (1.01325 BAR) and temperature of 15°. natural gas refers to all hydrocarbons which are in a gaseous phase at a standard atmospheric pressure (1.01325 BAR) and temperature of 15°.

Natural gasoline: The pentane and heavier part of natural gas liquids with a vapor pressure intermediate between condensate and LPG; having a boiling point within the range of gasoline. It is liquid at atmospheric pressure and temperature but volatile and unstable. It can be blended with other hydrocarbons to produce commercial gasoline.

Natural gas liquids: The propane and heavier components of natural gas that can be classified according to their vapor pressure, as low vapor pressure (condensate), intermediate vapor pressure (natural gasoline) and high vapor pressure (LPG).

Task Two: Match the technical terms in the list with their equivalent in Arabic

English	Arabic
Chain reaction	حقل بحري للنفط
Giant hydrogen cloud orbit	وحدة تكرير
Triode	مصنع مزج الزيوت
Offshore oil field	صمام ثلاثي الكثروني
Blending plant	سلسلة تفاعلات
Well	مدار غيمة هيدروجينية عملاقة
Distillation unit	تكرير النفط
Oil refinery	وحدة حفر
Rig	بئر

(Adapted from *Society of Petroleum Engineering, Style Guide*, 2019)

Task Three: Find the equivalent of the following abbreviations then put each term in a coherent sentence.

AC alternating current

BOE barrel of oil equivalent

BOP blowout preventer

HSSE health, safety, security, and Environment

HCPV hydrocarbon pore volume

LPG liquefied petroleum gas

LNG liquefied natural gas

NOC national oil company

XRD X-ray diffraction

Conclusion

There is no denying that ESP course design is the outcome of the contribution of many participants including teachers, learners, experts in the specialty, documents in the subject and even workplace agents. These resources would have a direct impact on the success or failure of the teaching and learning of the course. As far as the present study is concerned, the course unit which was suggested for Master one students was just an attempt to raise ESP teachers' attention and awareness to the idea that designing ESP course in Petrochemical specialty needs pedagogical tools and human resources. Books in the specialty and results of data drawn from the research instruments used were very useful to design the present proposal course unit.

GENERAL CONCLUSION

This study set out to explore the reality of ESP teaching/ learning in the department of Petrochemical studies at Skikda University. A particular focus was put on students' attitudes of the present ESP course delivered to them. Teachers' views about their ESP teaching environment were, also, crystalised in terms of challenges faced in course content development, and specific teaching methods used. Additionally, the present study investigated the contribution of the workplace as a real-life communicative context. Algerian engineers and British managers in BP company were interviewed about the communicative needs in the workplace. Hence, reconsidering the shortcomings of the way ESP is taught and learnt in the respective department would be workable.

The study showed the tight cause-effect relationship between ESP teaching / learning in the department of Petrochemical Studies at Skikda University, and BP company as an international multilinguistic/multicultural communicative workplace context. It is necessary, then, to prepare Students for both ESP academic and professional contexts. The study sought mainly to answer the following questions:

1. To what extent does ESP teaching and learning in Petrochemical department at Skikda University reflect the workplace communicative expectations?
 - a) What is the reality of ESP teaching and learning in the respective department in terms of teaching methods used, content taught, communicative skills developed and?
 - b) What are the BP company workplace needs for ESP Petrochemical graduates?
2. What should be done to ensure the ESP teaching and learning in Petrochemical department meet the workplace needs and expectations?

Based on the above questions, the following hypothesis was put forward:

The profile of ESP teachers and course content taught to Master one students in Petrochemical specialty at Skikda University do not help students to develop the needed ESP communicative skills in international companies' workplace.

Summary and Correlation of Findings

Overall findings of this study revealed that ESP teaching for Master one students enrolled in Petrochemical studies at Skikda University did not reflect the communicative practices in the workplace. A correlation of results obtained from the research tools used in the study was followed. This process was mostly used in mixed methods research, seeking to deduce the common findings shared, complemented, and/or contradicted through adopting a quantitative and qualitative research design. Both university context participants (students and teachers, course evaluation) and BP workplace interviewees (Algerian engineers, British managers) generally shared common results. Participants valued the place English has in building the profile of the Petrochemical graduates for communication in international professional milieu. As discussed in chapter four and five, the speaking skill and technical vocabulary repertoire emerged as major gaps for students. Algerian engineers, however, did not support this view proving that major communicative difficulties and challenges in the workplace were mostly related to the listening skill, pronunciation and conventions of writing official documents in the specialty. These different views provided profound insights into the reality of ESP teaching/ learning in the Algerian tertiary level with its weaknesses and strengths. Therefore, discussion of the results sorted out with a set of common themes: teacher training, course content, linguistic aspects, language skills and culture.

First, teachers in charge of teaching ESP to Master students did not owe the required teaching qualification in the sense that their course content consisted of only mere morphological and syntactic tasks related to GE. Lack of appropriate ESP teaching training might be the reason that prevented them from developing more authentic and specific teaching and testing materials resources that could help students to be communicatively competent.

Second, reconsidering ESP course content for Petrochemical specialty, both quantitative and qualitative findings stressed the importance of NA in ESP teaching/learning by linking both university curriculum and workplace communicative requirements. Adapting an ESP course appropriately for students' diverse academic and professional needs determines its success or

failure. In this study, results depicted the reality of ESP teaching/ learning which was described as a weakness for students and a challenges for teachers. BP workplace interviews also confirmed university ESP teaching problems in terms of the lack of communicative skills and specialised linguistic repertoire, with a particular reference to listening. Both contexts' findings guided to the fact that objectives of ESP teaching at university, are still far from what should be produced for the international communication.

Third, as regard linguistic aspects, the main weakness of the ESP content evaluated in the present study was that it did not adequately prepare students linguistically to undertake an English course related to petrochemical specialty, or to be integrated easily in professional communicative events. Data collected from both quantitative and qualitative tools agreed on the point that there was a lack of an appropriate teaching of ESP linguistic aspects mainly phonology, morphology, and syntax related to students' specialty. Phonology, for instance, was considered as an important aspect in ESP use in the workplace but, unfortunately, it was totally neglected in the ESP teaching/learning content. At the level of morphology, specialised terminology needed for academic and professional communicative purposes was rarely stressed. Syntax, also, as an important parameter in the production of correct English was ignored. This was clearly noticed in the poorly structured utterances produced by the Algerian interviewees, which were not all grammatically correct. One possible interpretation for these linguistic deficiencies might be the fact that the ESP course designed and taught in Petrochemical departments did not help Algerian Master students develop the linguistic competence needed for ESP workplace requirements.

Fourth, when results from both university and BP company contexts were cross-checked, neither the ESP course objectives nor the teachers' rational focused on developing students' language skills. This could be attributed to the lack of basing ESP content delivered to Master students on the different ESP teaching approaches discussed in the first chapter. This was confirmed through students and teachers' questionnaires' results and ESP course content evaluation. Teachers seemed to introduce the ESP content simply by selecting materials from different areas of English for general use. With respect to language skills, both university and

workplace Algerian participants showed different views about the importance of language skills to them. While students were interested mostly in developing their oral and written skills, NA in workplace considered listening and reading as the most needed skills. Ability to use the four skills in an integrated meaningful and appropriate communicative context within a correct linguistic structure would be the ultimate aim to meet ESP communicative skills.

Last but not least, it is necessary for ESP teachers to keep in mind the impact of culture in classifying workforces in international companies to local and foreign cultural backgrounds which could impact workplace communication and professionalism. Thus, intercultural awareness is mandatory in multicultural workplaces to maintain mutual understanding and intercultural acceptance regardless of its diversity. Teaching intercultural communicative competence to students, who are expected to work in multicultural workplaces, demands continuing efforts from teachers to bring ESP used in workplaces to the classroom environment through tasks of simulation. ESP teachers, then, need to be flexible in applying their teaching methods frequently to complete students' necessities for their future career.

Going beyond, French remained, traditionally, the dominating medium of instruction in teaching scientific and technical disciplines in Algeria. English is, only, considered as a subordinate subject with little importance. This view is changing recently by adopting a new vision of using English as a language of instruction in teaching technical and scientific subjects rather than the subject of ESP itself. Nevertheless, this policy would not be realised unless its conventions are translated into true practices in designing ESP courses and training teachers based on NA approaches.

Recommendations and Pedagogical Implications

Findings of this study have a number of noteworthy recommendations and implications to bridge the gap between university curriculum and workplace communicative needs.

Recommendations for University Context

Several recommendations for an effective ESP teaching and learning were suggested. The following are the major recommendations for students and teachers.

- ❖ No course of whatever nature stands without already planned and designed lessons and activities that serve the requirements of students' study or job areas. For that reason, the design of lessons and activities demands an entire process that begins with NA and ends with students' feedback, which in turn, would give insights into content adjustment and improvement.
- ❖ Students' needs should be translated into pedagogic tasks. In other words, when designing an English language course, ESP teachers should take into consideration learners' needs which they appear in authentic and specific teaching materials, tasks and activities.
- ❖ It is suggested that English language should be used extensively in Petrochemical specialties as the main tool of communication to carry out a variety of activities. However, this was found to be less important in the field. Because it is not enough to design only one generic ESP course for all subjects' diverse purposes. They, rather, should be designed specifically for each prospective field. They should also match what the students learn with what they will face in their academic and professional domains.
- ❖ Both receptive and productive skills are needed and should be treated equally as the differences in percentages were not too wide in the present study. Therefore, language skills in particular should be based on activities driven by the actual communicative situation demanded by their professions.
- ❖ Most importantly, students need to enhance their performance and communication skills in English so that they can get a chance to practise the language professionally in situations they might be engaged in. Therefore, the course should target a variety of creative activities to practise and develop the four skills (reading, writing, listening, and speaking) in their specific fields.
- ❖ Teacher can introduce topics similar to the expected workplace. Giving case studies of companies' models as real situation examples. Likewise, some cases are based on real-world issues to give students an opportunity to deal with typical intercultural contexts. This would enhance their skills and attitudes towards the knowledge of different business

etiquette, and various management styles used in companies from other cultures. The objective behind is to encourage students to understand cultural diversities in their professional relations whether with friends at work, co-workers, managers, or other employees.

- ❖ Finally, class size as a widespread problem in the Algerian university might impact on language teaching/ learning. Without reducing the number of students in language classes, teachers and students time and efforts would not significantly be impaired.

Recommendations for Workplace Context

Results of this study indicated that BP company in Algeria is contributing a lot in ESP effective communication. It provides, frequently, trainings in ESP for Algerian engineers to boast their linguistic and communicative competences. Yet, these initiations seem not to be enough to cover all the communicative difficulties that Algerian engineers face in their workplace. Therefore, the following recommendations are proposed for workplace context:

- ❖ Careful selection of word choice, language structure, and good pronunciation are highly required in the workplace to maintain an understandable level of communication in English. One of Algerian engineers said, *“BP managers should not think that everyone at the same educational level in English as they are. Try to simplify words to communicate easily with others.”*
- ❖ Algerian engineers should be familiar with the Jargon or the very specific terminologies used in conversation. Simplifying terminologies and avoiding slang and colloquial words would increase mutual understanding.
- ❖ BP managers should pay more attention to the impact of modifying their English using slangs and accents in countries in which English is, only, spoken as a standard language like in Algeria.
- ❖ BP professionals should seek to show awareness and acknowledgment of local cultures and language. Engaging in local cultures may help in understanding how people think, behave, and communicate with each other. If Algerian professionals are working in a context which

is not of their home culture, developing some basic, essential words and phrases in the foreign language helps for socialization.

- ❖ British managers need to consider Algerian workers' body language and tone, thinking about their linguistic and communicative level which is not basically native. It is recommending from them not to speak fast, because as a workplace professional, style of communication should be understandable.
- ❖ Moving across languages through translation in a formal discussion can be helpful, so all communications might not be always in English.
- ❖ BP manager recommended corporations with Algerian universities to provide pre-service trainings for Petrochemical students to develop ESP communicative competences which they go hand in hand with the English skills needed in the workplace.

Pedagogical Implications of ESP Teaching

Since the use of English language is growing rapidly in Algeria as lingua franca in many aspects, including studies, scientific research and economics, university then, needs to consider such increasing demands from the context.

ESP teachers are still lacking the ESP teaching skills required to best teach the subject as it should be and achieve its communicative purposes. Based on the study findings, the department of Petrochemical Studies should reconsider the place of ESP subject with a particular focus on course contents. They should find ways to develop them in the light of recent ESP applications. Aspects of teaching methods, and course design should be revised according to the ESP teaching and learning features (Basturkmen ,2010; Bhatia et .al, 2011; Dudley-Evans & St John1997; Jordan 1997; Hutchinson & Waters, 1987; Hyland, 2006).

Each discipline has its ESP skills that are appropriate to the field because each community has specific communicative events that are different from others. A student, for example, does not need to know how biology laboratories' reports are written in English. Through the ESP approach, the development of English may be seen as having a direct relevance to the students' specialty and may result in their interest and motivation to learn it. Moreover, courses should be

subdivided into different tasks and skills which may be emphasised according to students' learning academic or professional objectives. This may enhance their involvement and integration in the course.

Most importantly, the methodology used in teaching ESP has not been updated. It is still conventional to teacher-centered approach, which is not suitable for an ESP teaching context. It is understood that students' lack of English skills is more related to the adoption of traditional methods. Moreover, some language teachers ignore the new communicative teaching approaches such as Task-Based Instruction and Content- Based Teaching, and Genre-Based Approach. Nevertheless, the ignorance of these useful ESP teaching approaches could result in the arbitrary use of methods which are not effective in ESP teaching/learning. These approaches emphasise communication and encourage independency. Subsequently, actual methods used to teach ESP mainly grammar translation should be replaced by more communicative methods mentioned above to involve a variety of communicative tasks and cooperative learning techniques in the target language.

Findings of this study also demonstrated implications for ESP materials that can be very useful for course design. New materials must be designed for Master students that should consider the role that NA plays in ESP materials. These materials must be as communicative as possible, authentic and up to date, as they can create an authentic English learning environment so that students will be immersed in the use of English. The selection of these materials should above all depend on the needs of the students in relation to their future professional career. That is, materials should focus on the appropriate "tasks and activities that practise the target skills areas" (Ellis & Johnson 1994, p.115) as the purpose of ESP courses is to enable learners to function adequately in a target situation in which they will use the language they are learning (Hutchinson & Waters, 2001).

Additionally, the study also provided some support for the idea that a more adequate teaching environment can have powerful effects on learning under certain circumstances. Therefore, teachers should consider facts such as time, class arrangement and visual aids. They

should include specialised topics, specific repertoire and/or videos that meet the preferences of visual students, sound recordings to meet the preferences of auditory learners, and textual information to meet the preferences of verbal learners.

Limitations of the Study

Findings of this study provided important views on the ESP use in the BP multilingual, multicultural workplace context in Algeria. However, a number of limitations needs to be acknowledged. First, although the study covered the Algerian context, a large portion of participants could be addressed including participants from other companies: Anadarko, Sonatrach, Naftal, Hyproc, and Sonelgas to name few. Second, the study did not include any participant from students who received or receiving training in BP or any other foreign company to have authentic data on true immediate challenges and ESP communicative problems encountered. This would raise their educational institutions' attention to the differences in the specialties' ESP contents because what works for petrochemical specialty does not necessarily work in other educational contexts. Third, despite that the study included few numbers of English native speakers' managers in BP company, it did not survey and ask all or at least a large number of them for the purpose of generalisation of results. Another limitation of the study was that Algerian workers interviewed in the BP workplace context got their academic degrees from different universities in Algeria, this could result in some differences in the answers provided based on their educational background of English. In order to better understand the use of ESP in multilingual and multicultural contexts, more studies are needed to address participants with a particular reference to their academic career.

Suggestions for Further Research

Data gained from the present study have thrown up many questions in need of further relevant investigation in the ESP research area. Therefore, it would be interesting to replicate the instruments employed in the present study in similar ESP teaching and learning contexts. Such focus would not only encourage, but also push students' researchers to investigate on English

language needs since it is still a fresh area in the Algerian university settings and Skikda is no exception.

Regarding the specific situation of English language in the faculty of technologies at different universities in Algeria, findings of the present work could be a starting point for reconsidering ESP curriculum and course design in other specialties and hence other universities.

The results also suggest that research should concentrate on collaboration between English and other technical/ scientific departments as it provides a more complete picture of what should be kind of graduates should be produced to fit the English needed in such contexts. Since this study focused on professional domain, which was petroleum industry, further research could be conducted in other professional domains such as ESP in tourism, ESP in electronic business companies, economics and marketing. Those specialties are in need of serious steps forward to renovate ESP teaching and learning, so that to meet its communicative requirements in the world markets.

A final suggestion is that if the study findings of this study were used as an input for the design of a model course unit for Petrochemical Master students, an experimental evaluative study would be recommended to teach and test the content to measure the extent to which course unit objectives are achieved.

Conclusion of the Study

The aim of this study was to gain deep knowledge about ESP teaching/ learning in the department of Petrochemical Studies at Skikda University. As soon as the process of data collection and analysis is completed, the richness of such work especially when it combined the two contexts academic and professional one was noticed. This research offered some important insights into the nature of ESP in Petrochemical specialty, which in turn developed a deep understanding of the way it should be taught and learnt.

The research questions raised in this study were answered and the hypothesis was confirmed, through picturing the reflection of ESP teaching /learning in Algeria on its use for professional communication in the workplace. Educational institutions, then, need to tailor their

ESP courses' contents and pedagogy so as to consider the actual types of oral, written and cultural communication being practised in the multilingual, multicultural workplace. Training teachers to adapt an ESP approach in designing and teaching ESP content for different specialties would be helpful in bridging the gap between educational ESP courses and workplace communicative needs, and fostering the connections that form the foundation of success for individuals and institutions. The world is more networked and more connected; therefore, professional ESP communication need to be prepared for multilingual and multicultural settings.

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APPENDICES

Appendix One. Students Questionnaire in the Pilot Study

Dear Students,

You are kindly invited to fill in the following questionnaire as part of our Doctorat ès Science research entitled by: 'ESP Teaching and Learning in the Algerian University: Bridging the Gap between ESP Teaching and Workplace Communicative Skills. The Case of Petrochemical Students at Skikda University and British Petroleum Company'

This questionnaire aims at exploring the place of ESP teaching at the department of petrochemical studies at Algerian universities. As teachers' of English, your attitudes, opinions, experiences and even suggestions are of a great help for us to spot light on the Deficiencies, challenges and perspectives of ESP teaching at the Algerian university and by which we develop a course that helps our students meet the work place communicative needs. Thank you

Mr. Farouk BOUAFIA
Post-graduate doctorate student
University of Constantine 1
Department of English

Supervisor
Dr. Madjda CHELLI

Section One: General Background Knowledge

What is your specialty in the department?

How many years have you been studying English?

Section Two: Attitudes towards learning English

1. Do you consider English important for your studies?
2. What is (are) the skill (s) you have most concentrated on? Please classify in order of importance giving one for the most important to four for the least important
Listening
Speaking
Reading
Writing
3. What is (are) the skill(s) you feel more confident to use now? Please classify in order of importance giving one for the most important to four for the least important
Listening
Speaking
Reading
Writing
4. Would you say that at the present time, your level in English is
Very low
Low
Good
Very good
5. If you find difficulties in English, what are the aspects of English you find most difficult?

Please specify by order of difficulties giving one to the most difficult and down to five for the least difficult

Grammatical structures related to general English

Lexical items related to general English

Grammatical structures related to scientific and technical English

Scientific words and expressions in English

Lexical items related to petrochemical domain

Section Three: Study Skills of English

How would you describe your experience as a language learner?

17. How would you describe the methods and techniques that your teachers used in teaching the language?

18. Could you describe the type of language learner you were?

19. Do you recall a teaching experience that had any effect on your practice? what do

you think language students need to become successful ESP learners?

Section Four: Suggestions

Appendix Two. Students Questionnaire in the Main Study

Dear Student,

This questionnaire aims to shed light on the reality of English for Specific Purposes (ESP) teaching and learning at the department of petrochemical studies at Skikda university as part of my “Doctorat es science” research which is entitled: ‘ESP Teaching and Learning in the Algerian University: Bridging the Gap between ESP Teaching and Workplace Communicative Skills. The Case of Petrochemical Students at Skikda University and British Petroleum Company’

To match your ESP communicative skills and the learning outcomes with workplace needs. Your learning experiences, attitudes of ESP content and method(s) of teaching it, your suggestions of your needs will help us in recommending ways of best teaching and learning ESP to meet workplace needs.

Please answer all the questions as frankly and accurately as you can. Thank you for your cooperation.

Mr. Farouk BOUAFIA
Post-graduate doctorate student
University of Constantine 1
Department of English

Supervisor
Dr. Madjda CHELLI

I. General Information

1. What is your specialty:

.....

2. How long have you been studying English?

10 to 12 years ☐

Over 13 years ☐

Other, please specify.....

3. What is your profession?

Student only ☐

Student and worker ☐

4. Is English important for you?

Yes ☐

No ☐

I don't know ☐

If yes, why English is important for you?

➤ To understand lectures of petrochemical specialty in English?

➤ To read and translate documents in petrochemical specialty in English ☐

➤ To pass exams ☐

➤ To find a job when you graduate ☐

➤ Others, please specify.....

II. Present situation of English learning at the department of petrochemical studies

5. Do you use English in your studies?

Yes ☐

No ☐

If yes, is it mainly:

Spoken ☐

Written ☐

Both ☐

6. How do you describe your level in English?

☐

☐

☐

☐

- Weak Average Good Very good
7. How do you describe your interest in the present English course?
 Not interested ☐ Somehow interested ☐ Interested ☐ Very interested ☐
7. The present English course mainly focuses on improving:
 Listening and speaking skills ☐ Reading and writing skills ☐
 Grammar and vocabulary ☐ Terminology and translation ☐
 Others, please specify.....
8. Does the present English course content have a relation with the nature of your specialty (Petrochemical)
 Yes ☐ No ☐ Some of it ☐
9. How do you find the present English course?
 Interesting ☐ Boring ☐ Don't know ☐
10. Describe your current English proficiency level in the following language areas by putting a tick (✓) in the appropriate box:

Language areas	Level				
	Very weak	Weak	Acceptable	Good	Very good
Speaking					
Writing					
Reading					
Listening					
Grammar					
Pronunciation					
General vocabulary					
Specific vocabulary					

11. Rate the following skills according to their difficulty in your specialty:

Language areas	Level			
	Very difficult	Difficult	of some difficulty	Not difficult
Speaking				
Writing				
Reading				
Listening				
Grammar				
Pronunciation				
General vocabulary				
Specific vocabulary				

12. Describe your satisfaction towards the following course components (tick (✓) where appropriate):

Course components	Very satisfied	Satisfied	Fairly satisfied	Not Satisfied
1. I am satisfied with the current ESP course. The course reflects my workplace needs expectations				
2. The number of presented ESP lectures is sufficient.				
3. Level of lectures/lessons (quality)				
4. Students' participation and interaction in the classroom				
5. Number and level of activities. The activities are discipline related to Petrochemical specialty				
6. The ESP course timing fits learners' schedule appropriately.				
7. Productive skills (Speaking and writing) are stressed in this course				

8. Receptive skills (listening and reading) are stressed in this course				
9. Learning materials used are discipline related to Petrochemical specialty				
10. The teachers' methodology of teaching is effective.				
11. Simulation of communicative situations to workplace are created in classroom.				

II. Students' ESP needs for target communicative situations (Workplace)

13. Are you interested in taking an English course designed according to your needs to improve your proficiency level?

Very interested ☐ Interested ☐ Fairly interested ☐ Not interested at all ☐

14. Why do you need English for?

- Post-graduate Academic Studies ☐
- Communication in daily life ☐
- Communication in future profession ☐

15. What type of English course do you need?

- English for General Purposes ☐
- English for Academic Purposes ☐
- English for workplace Purposes ☐

16. Rate the following skills according to their importance (which one you need most?).

Language areas	Not important	Fairly Important	Important	Very important
Speaking skill				
Writing skill				
Listening skill				
Reading skill				
Grammar				
Pronunciation				
General vocabulary				
Technical vocabulary				

17. What language competences you need ESP course for?

	Strongly Agree	Agree	Disagree	Strongly Disagree
To use correct grammar				
To expand my vocabulary				
To improve my pronunciation				
To improve my reading skill				
To improve my writing skill				
To become a fluent speaker				
To improve my listening skill				
To communicate effectively in future workplace				

18. Which aspect(s) of the course you want the teacher to focus on more:

Language skills	Not important	Fairly important	Important	Very important
a- Reading				
Reading printed documents related to your discipline (books, magazines, articles, texts etc.)				
Reading extra references from the internet				

Understanding meaning from the context				
Others,specify				
b- Speaking				
Asking and answering questions				
Speaking to native speakers in the same specialty				
Speaking on the phone/ chatting online in the same specialty				
Speaking in conferences and seminars in petrochemical specialty				
Giving presentations and research projects about petrochemical descipline				
Others, specify				
c- Listening				
Lectures/lessons (in class and online)				
Online presentations and reports				
Listening to conversations on general and/or specific topics				
TV and radio shows				
Others, specify				
d- Writing				
Writing well-structured paragraphs				
Writing summary and paraphrasing				
Developing ideas Using correct punctuation and spelling				
Writing research reports in specialty				
Letters and CVs				

III. Learning situation needs analysis

19. as a petrochemical student, do you prefer the ESP class to be in:

- Traditional classroom ☐
- audio-visual classroom ☐
- Combination ☐

20. How many hours you think are sufficient to study English?

- 2 hours per week ☐
- 4 hours per week ☐
- More than 4 hours ☐

21. Which topics do you like to cover?

Oil drilling ☐ Refinery ☐ Offshore drilling ☐ Gas drilling ☐

22. Which type of activities do you prefer to practise?

	Strongly Agree	Agree	Disagree	Strongly Disagree
Role-plays				
Simulations				
Discussions				
Matching				
Gap filling				
Open ended reading comprehension questions.				
Multiple-choice questions. / false questions				
Writing paragraphs				
Writing essays				

Writing summary and paraphrasing				
Translation of texts into English.				
Translation of texts into Arabic.				

23. What type of class work you prefer?

Individual work

☐

In pairs

☐

small-size group (less than 10 students)

☐

As a class

☐

Others specify

24. What is your appropriate strategy of learning?

	Strongly Agree	Agree	Disagree	Strongly Disagree
Memorizing				
Problem solving				
Getting information on my own resources				
Copying from the board				
Audio-visual aids				
ICT				
Project works				

25. How do you prefer the classroom interaction?

	Strongly Agree	Agree	Disagree	Strongly Disagree
The teacher just talks and students listen				
Students actively participate and involved in activities in specialty				
The teacher controls everything.				
The teacher does not control everything, but helps and guides students to learn				

26. What types of materials do you prefer the course should include?

Textbooks

☐

Videotapes

☐

Audiotapes

☐

Hand-outs

☐

Internet

☐

The board

☐

Pictures/posters

☐

Other (specify).....

27. What type of assessment do you find adequate to evaluate your progress in English?

Continuous assessment

☐

End of term assessment

☐

Both of them

☐

28. Suggestions

If there any other information you think help the enhancement of communicative skills, please add it below:

.....

Thank you for your collaboration

Appendix Three: Teachers Questionnaire in the Pilot Study

You are kindly invited to fill in the following questionnaire as part of our Doctorat ès Science research entitled by: 'ESP Teaching and Learning in the Algerian University: Bridging the Gap between ESP Teaching and Workplace Communicative Skills. The Case of Petrochemical Students at Skikda University and British Petroleum Company'.

This questionnaire aims at exploring the place of ESP teaching at the department of petrochemical studies at Algerian universities. As ESP teachers, your attitudes, opinions, experiences and even suggestions are of a great help for us to spot light on the Deficiencies, challenges and perspectives of ESP teaching at the Algerian university and by which we develop a course that helps our students meet the communicative needs of work place.

Thank you

Mr. Farouk BOUAFIA
Post -graduate doctorate student
University of Constantine 1
Department of English

Supervisor
Dr. Madjda CHELLI

I. Background and Profile

1. Your qualification

- a) Licence ☐
- b) Magister ☐
- c) Master ☐
- d) PhD ☐

2. Which specialty do you belong to:

- a. General English language ☐
- b. Applied linguistics ☐
- c. Didactics ☐
- d. ESP ☐
- e. Other, please specify

.....

3. How long have you been teaching ESP? Number of years

4. What Type of ESP do you teach?

- a. English for academic purposes (EAP)
- b. English for occupational purposes (EOP)
- c. English for science and technology (EST)

5. Do you have specialist knowledge in it?

- a. Yes ☐
- b. No ☐

6. If yes, is it?

- a. Satisfactory ☐
- b. Good ☐
- c. Very good ☐
- d. excellent ☐

7. How did you come to acquire it?

- a. Own experience and efforts ☐

- b. Academic training course ☐
- c. Formal Professional training ☐
- d. Other, please specify

.....

8. If your answer to question five is 'no', how do you deal with the lack of ESP knowledge?

- a. You develop your own material of ESP teaching ☐
- b. You rely on different ESP sources ☐
- c. You shift to teach general English ☐
- d. You work with the adopt the Canva as it is given ☐

Other, please specify

.....

9. If yes, how much do you believe the specialist knowledge is essential for ESP teachers?

- a. Satisfactory ☐ b. Very good ☐ c. Excellent ☐

II. ESP Teaching at Petrochemical Departments

10. How Can you describe the status of ESP teaching in Algeria?

.....

11. How Can you describe the status of ESP teaching at the department of Petrochemical studies?

.....

12. Out of your experience, do you think that the ESP teacher in petrochemical domain should have special language training?

- a. Yes ☐
- b. No ☐

13. Do you follow given Canvas of ESP?

- a. Yes ☐
- b. No ☐

14. Do you think that ESP teaching calls for a different methodology from EGP classes?

- a. Yes ☐
- b. No ☐

15. If yes, what makes it different?

- a. The learners' specialism ☐
- b. The subject itself ☐

Other reasons please specify

.....

16. Which one specific methodology is preferable to follow in teaching ESP?

- a. Grammar translation ☐
- b. Learner centered approach ☐
- c. Teacher centered approach ☐
- d. Communicative approach ☐
- e. Genre based approach ☐
- f. Other please specify ☐

.....

III. Petrochemical ESP syllabus Development

17. Do you receive any syllabus of ESP from the department you belong to?

- a. Yes ☐
- b. No ☐
18. If yes, how can you evaluate it communicatively?
- a. Effective ☐
- b. Needs to be adapted ☐
- Doesn't fit the context of ES ☐
19. Is there any collaboration between ESP teachers and petrochemical subject specialist?
- a. Yes ☐
- b. No ☐
20. If yes, how does collaboration between ESP teachers and subject specialist take place?
-
21. How would you describe an effective ESP teacher?
-
22. What are the most important key concepts ESP practitioners should consider when involved in an ESP teaching situation?
-
23. Can an EFL teacher teach ESP?
- a. Yes ☐
- b. No ☐
- Justify your answer in either case
-
24. Which would you say are unique for ESP teachers? Indicate letter (s)?
- a. To select material ☐
- b. To evaluate material ☐
- c. To prepare lessons ☐
- d. To assess achievement of objectives ☐
- e. To supplement the textbook ☐
- f. To analyse specialist language ☐
- g. To conduct a lesson ☐
- h. To evaluate learner attainment ☐
- i. To set / mark exercises / texts / exams ☐
- j. To devise teaching / learning strategies ☐
25. Which of the following methods of needs analysis do you employ?
- a. Questionnaires ☐
- b. Interviews ☐
- c. Surveys ☐
- d. Learners needs analysis ☐
- e. Satisfactory learners' needs ☐
- f. Learners attitudes ☐
- g. Don't employ any method ☐
26. Which of the following areas would you like to receive training on in ESP?
- a. ESP theory ☐
- b. Needs analysis ☐
- c. Familiarization with genre ☐
- d. Familiarization with disciplinary / professional culture ☐
- e. Procedure for course design ☐

- f. Materials, course and learner evaluation
- g. Specialized terminology
- h. Other please specify

IV. Communicative Dimension of ESP teaching in a petrochemical Classroom

27. Are you familiar with the disciplinary culture of your specialism (conventions and expectations of the department of petrochemical studies)?

a. Yes

--

b. No

--

28. Are you familiar with the academic genre of your specialism?

29. What is the level of your students in English?

a. Weak

--

b. Average

--

c. Good

--

d. Excellent

--

30. Which language do you use in classroom?

a. English

--

b. English and French

--

c. English and Arabic

--

31. What are your skills you focus on in Your ESP?

a. Listening

--

b. Speaking

--

c. Reading

--

d. Writing

--

32. Which competence you aim to develop?

a. Communicative competence

--

b. Linguistic competence

--

V. Difficulties and challenges of ESP teaching for petrochemical studies

33. What are the difficulties do your students encounter which undertaking an English course?

a. Lack of petrochemical genre vocabulary

b. Lack of grammar competence in English

c. Difficulty in communicative integration in different situations

Other, please specify

34. How do you help them overcome these obstacles?

VI. Suggestions and recommendations

Appendix Four. Teachers Questionnaire in the Main Study

Dear teachers,

You are kindly invited to fill in the following questionnaire as part of our Doctorat es Science research entitle: ‘ESP Teaching and Learning in the Algerian University: Bridging the Gap between ESP Teaching and Workplace Communicative Skills. The Case of Petrochemical Students at Skikda University and British Petroleum Company’

This questionnaire aims to explore ESP teaching at the department of petrochemical studies at Skikda University. As a teacher of ESP in the respective department, your experiences and suggestions are of a great help to know ESP teaching difficulties and challenges and examine the opportunities for enhancing ESP teaching and learning in the Algerian university.

Mr. Farouk BOUAFIA
doctorat student
University of Constantine 1
Department of English

Supervisor
Dr. Madjda CHELLI

I. ESP Teacher Profile and Experience

1. What is your professional status at Skikda university?

a) Full time teacher ☐

b) Part time teacher ☐

2. What is your academic degree (s)?

a) Licence ☐

b) Master ☐

c) Magister ☐

d) doctorate ☐

3. What is your specialty (s)?

.....

4. How long have you been teaching English?

.....

5. Have you had any English teacher training?

Yes ☐ No ☐

If yes, to what extent was it useful for you in teaching English?

II. ESP teaching situation at petrochemical department of Skikda University

06. Are you familiar with the English for Specific Purposes (ESP) teaching?

a) Yes ☐

b) No ☐

07. Are you familiar with ESP teaching for petrochemical specialty in terms of academic needs and workplace communicative expectations?

a) Yes ☐

b) No ☐

08. How do you decide on the ESP lesson content that you want to deliver to students in petrochemical specialty?

a) You read about the specialty of students ☐

☐

- b) you conduct a needs analysis of workplace needs
- c) you assess students' level of English ☐
- d) You rely on ready -made content, textbooks, or course specifications from other source ☐
- e) You conduct a diagnostic test before you develop your cour ☐

In either answer, please can you provide us with examples of references used for:

.....
09 Do you collaborate in course design with the other teachers in petrochemical specialty at the respective department?

- a) Yes ☐
- b) No ☐

If yes, how does it help you in developing authentic ESP teaching materials?

.....
10. As a teacher of ESP, do you think that conducting needs analysis in petrochemical studies is:

- a) Very Important ☐
- b) important ☐
- c) Not important ☐

11. Considering workplace communicative skills expectations, do you think that your ESP lesson is helpful to meet workplace needs?

- a) Yes ☐
- b) No ☐
- c) To some extent ☐
- d) Do not know ☐

12. Which aspect (s) of English do you think students are usually of low proficiency?

- a) Listening ☐
- b) Speaking ☐
- c) Reading ☐
- d) Writing ☐

13. By means of numbers 1 (most) to 4 (least) indicate the relative importance of the time devoted to Language skills.

- a) Listening ☐
- b) Speaking ☐
- c) Reading ☐
- d) Writing ☐

14. How often do you use other languages (French and/or Arabic) in ESP course?

- a) Always ☐
- b) Sometimes ☐
- c) Never ☐

15. By means of numbers (1: most) and (8: the least) important objective, state which aspect is emphasized most when you teach English for petrochemical specialty:

- a) Listening comprehension ☐
- b) Conversation and interaction ☐
- c) Reading and reading comprehension ☐
- d) General vocabulary ☐
- e) Scientific and special vocabulary ☐
- f) Grammar ☐
- g) Writing composition ☐
- h) Dictation ☐

16. Do the following objectives describe teaching and learning English in the department of petrochemical studies? Please circle the appropriate number.

	Strongly agree					Strongly disagree
Teaching to use English for academic needs.	1	2	3	4	5	6
Teaching to use English for workplace communicative needs	1	2	3	4	5	6
Attending lectures and courses for assessment	1	2	3	4	5	6
Studying English just as a part of the curriculum.	1	2	3	4	5	6

17. Based on the ESP course objectives, petrochemical students require English to: (1: most) to (6: least): circle the appropriate number

	Strongly agree					Strongly disagree
Understand lectures in their field of study in English	1	2	3	4	5	6
Take part in conversations in petrochemical specialty in English at university	1	2	3	4	5	6
Read documents, articles, books, in their field of study written in English.	1	2	3	4	5	6
Write answers to exams' questions	1	2	3	4	5	6
Develop communicative skills to meet workplace needs in multinational companies	1	2	3	4	5	6

III. ESP Teaching Lacks in Petrochemical Specialty

18. Do you think that the teaching of ESP in petrochemical department a failure?

- a) Yes ☐
- b) No ☐

if yes, what are the main reasons to this failure? Put them in order of importance (1: most) to (6: least)

- a) large classes ☐
- b) There are inadequate teaching facilities available ☐
- c) Students have weak linguistic background in English ☐
- d) Teachers have not been trained in ESP teaching ☐
- e) Students are not motivated in learning English ☐
- f) Lack of teaching materials ☐
- g) Other, specify.....

19. Do your students have difficulties in language skills in ESP class?

- c) ☐ yes
- d) ☐ No

If yes, cite the biggest difficulty they face and what do you do to overcome such difficulty:

.....

20. Do you have a lack of ESP teaching knowledge and skills in Petrochemical subjects?

- a) ☐ yes
- b) ☐ No

If yes, how do you deal with it:

- a) You develop your own material of ESP teaching ☐
- b) You rely on different ESP sources ☐
- c) You shift to teach general English ☐
- d) You just follow canvas of ministry of higher education ☐

Other, specify

.....
IV. Perspectives to Improve ESP Teaching in Petrochemical Specialty

21. What of the following do you recommend your students do to develop communicative skills in the English language? (1: most) to (8: least):

- | | |
|--------------------------------------|--------------------------|
| a) Reading and reading comprehension | <input type="checkbox"/> |
| b) General vocabulary | <input type="checkbox"/> |
| c) Scientific or special vocabulary | <input type="checkbox"/> |
| d) Listening comprehension | <input type="checkbox"/> |
| e) Grammar | <input type="checkbox"/> |
| f) Conversation | <input type="checkbox"/> |
| g) Writing composition | <input type="checkbox"/> |
| h) All of them | <input type="checkbox"/> |

22. What are the most important key concepts ESP practitioners should we consider when involved in

an ESP teaching situation? (1: most) to (6: least):

- | | |
|---|--------------------------|
| a) Needs analysis | <input type="checkbox"/> |
| b) Familiarization with academic genres | <input type="checkbox"/> |
| c) Familiarization with disciplinary / professional culture | <input type="checkbox"/> |
| d) Procedure for course design | <input type="checkbox"/> |
| e) Materials, course and learner evaluation | <input type="checkbox"/> |
| f) Training teachers in ESP | <input type="checkbox"/> |

23. If you have any suggestions for making the ESP course more effective and more relevant to the students' needs in their field of study, add them here please

.....

Thank you!

Appendix Five. Sample of ESP Lectures Delivered to Petrochemical Master one students at Skikda University

Level: Master one Petrochemical Specialty

Groups: 1 / 2

Lesson: 03 Should You Trust Your First Impression?

Based on Ted talk by Peter Mende-Siedlecki, should you trust your first impression?

1. Warm-up

Do you trust first impressions?

Do you have any tricks to make a good impression?

Watch the clip twice, first time for general understanding and second time to define the vocabulary below.

2. Vocabulary in the clip:

Match these words with their meaning after watching the clip and find the examples in the video:

- | | |
|-----------------|---|
| To spill (verb) | a) To fall rapidly, to make smthg flow |
| To pour (verb) | b) To deduce, to conclude something from evidence |
| To infer (verb) | c) To cause liquid to flow unintentionally |
| To flip (verb) | d) Cruel, severe or rough |
| Harsh (adj) | e) Awkward in movement |
| Clumsy (adj) | f) Very unpleasant, rude |
| Obnoxious (adj) | g) To turn over, to change |

I can't believe his _____ comment about my dress!

Could you please _____ me some wine?

Go ahead and _____ to the last page.

I think you were quite _____ with your sister, she didn't deserve it.

I _____ from her expression that she was uncomfortable with us.

Sam is so _____, he broke another glass while washing the dishes!

Oh no, I've just _____ coffee all over my pants!

Explain the following expressions with your own words based on their use in the video.

Write someone/ something off

In light of

Down the road

Use these expressions to create your own sentences.

4. Expressions to talk about body language

Which of these gestures communicate positive or negative message to you and why? What could they tell about a person?

Staring /Shrugging shoulders /Chewing with an open mouth

Crossing arms/ Snapping fingers /Burping

Fidgeting /Rolling eyes/ Touching others a lot

Slouching/ Clenching fists /Yawning

5. Idioms related to body

Explain these idioms in your own words and make a sentence for each one.

To cost an arm and a leg

Get off my back

To get cold feet

Verbs

- 6 They have cancelled the meeting.
.....
- 7 We opened the factory at nine o'clock.
.....
- 8 They send two million books to America every year.
.....
.....
- 9 We have invited all the students in the school.
.....
- 10 We have told him not to be late again.
.....
- 11 They posted all the letters yesterday.
.....
- 12 The machine wraps the bread automatically.
.....
- 13 They paid me a lot of money to do the job.
.....
- 14 Fortunately, they didn't damage the machinery.
.....
- 15 We send the newspapers to Scotland by train.
.....

32 The passive: all tenses, simple and continuous

FORM

<i>Present</i>	<i>Simple:</i> is/are + <i>past participle</i> The letters are delivered here. <i>Continuous:</i> is/are being + <i>past participle</i> He's being interviewed at the moment.
<i>Past</i>	<i>Simple:</i> was/were + <i>past participle</i> They were sent by train. <i>Continuous:</i> was/were being + <i>past participle</i> My suit was being cleaned at the time.

TEST

16 Phrasal verbs I

16.1 With many phrasal verbs, the particle emphasises the meaning of the verb or gives the idea of completing the action. Complete these phrasal verbs.
12 marks

- 1 I *woke* at 7.30, but I then went back to sleep.
- 2 I'd better *hurry* and *send* that letter of application.
- 3 Is she still *saving* for that CD player?
- 4 I'll never *find* the name of that hotel we stayed in.
- 5 I'm not feeling very well. I think I'd better *lie* on the bed.
- 6 Shall we *eat* this rice we didn't finish last night?
- 7 She *fell* and hurt her leg but I don't know exactly how it happened.
- 8 Come on, *drink*, and then we can see the rest of the exhibition.
- 9 We can *finish* this exercise tomorrow.
- 10 I've been *standing* all day; I really must *sit* for ten minutes.

16.2 Choose the correct phrasal verb to complete each sentence.
5 marks

- 1 I promised to her daughter next week when she's at work.
a) take off b) look for c) look after d) take after
- 2 It took them ages to the fire.
a) put off b) take off c) put out d) put away
- 3 It was quite a serious illness, so she took a while to it.
a) get over b) go over c) take over d) get through
- 4 Don't leave that meat there too long – it'll
a) take off b) go over c) pass away d) go off
- 5 With inflation at 10%, the price could again quite soon.
a) rise up b) get up c) go up d) put up

16.3 Complete these sentences using a suitable phrasal verb.
8 marks

- 1 I don't know this word. I'll have to it in the dictionary.
- 2 A: Do you want us to stop now?
B: No, you can for another ten minutes if you like.
- 3 I used to smoke, but I it last year.
- 4 A: Can we leave this rubbish here?
B: No, I think we should it and put it in the bin over there.
- 5 A: When will you finish typing those letters?
B: *Oh, I should* *most of them by the end of the morning.*
- 6 Hurry up! Your plane in about 40 minutes.
- 7 A: Do you have a good relationship with your parents?
B: *Not when I was younger, but I* *very well* *them now.*
- 8 A: Shall we have another sandwich?
B: *We can't, I'm afraid. I've* *bread.*

16.4 Replace the underlined words with a phrasal verb with the same meaning.
5 marks

- 1 What time shall I collect your suit from the dry cleaner's?
- 2 There was a warning at three o'clock and then the bomb exploded five minutes later.
- 3 I was so nervous I didn't think I would pass the exam.
- 4 Do you mind if I remove my jacket and tie?
- 5 The alarm didn't ring this morning – there must be something wrong with it.

score
/30

Appendix Six. Algerian Engineers' Semi-Structured Interview

Dear engineer,

The study in hand investigates the English for Specific Purposes (ESP) teaching and learning at the department of petrochemical studies at Skikda university as part of my "Doctorat es science" research which is entitled: 'ESP Teaching and Learning in the Algerian University: Bridging the Gap between ESP Teaching and Workplace Communicative Skills. The Case of Petrochemical Students at Skikda University and British Petroleum Company'

This interview aims spotlight on the reality of English for Specific Purposes (ESP) use in BP company by Algerian workers. Your communicative difficulties, weaknesses and your perspectives are important to recommend strategies of best ESP teaching in order to meet the communicative skills for workplace expectations.

Thank you for your cooperation.

Mr. Farouk BOUAFIA
Post-graduate doctorate student
University of Constantine 1
Department of English

Supervisor
Dr. MaDjda CHELLI

Introduction

The interviewer opens the talk by introducing the topic of research to the interviewees and ask them if they need to clarify anything for them before starting the interview. The interviewer also gives them the allocated time devoted to the interview and sections of the questions. He also gives them an informed consent about recording the interview and use the data for research purposes.

I. Algerian Workers profile and English background

1. Is English a condition in recruitment in British Petroleum Company?
2. Which level of English is needed in your work?

II. Algerian workers' English communication skills difficulties in BP workplace

3. Was your training in English at university helpful in workplace? If yes, in what way?
4. Have you received a training by the respective company to enhance your English skills in petrochemical domain?
5. What are the communicative skills difficulties in English in your work? and at which language skill listening, speaking, reading, writing?
6. Could training in English for Specific Purposes (ESP) in petrochemical specialty be an advantage for you in the workplace?
7. Is work in a foreign company with Foreign context, language and culture difficult for you?

III. Algerian workers' Perspectives to meet Workplace ESP skills needs

8. Do you think that ongoing training in the workplace if provided by BP would help you develop your language skills?
9. Do you think that reconsidering teaching and learning ESP in petrochemical department would meet workplace communicative needs? If yes, what do you suggest as content and skills to focus on most?
10. Do you have any comments to enrich the research topic?

Developing questions:

Background Questions

1. And How long have you been working in this position/company?

Content questions

2. What kind of format/genres and style of writing do you use like emails, memos, letters, reports, proposals...etc.? Do you use Arabic/English in writing? Do you adopt translation between Arabic and English languages in your work?
3. Have you attended any business meetings in English with people from different cultures? If so, how do you find professional communication in English with English-speaking professionals in meeting? Are there any kind of challenges emerge in such kind of communication? Could you provide examples...Like understanding main purposes of meetings in English, being able to communicate effectively in English, doing professional presentation in English, enhancing cultural awareness and understanding...
4. What about virtual communication, have you had any virtual meetings before like using Skype, Webinar for virtual meetings, and how do you find professional meetings using technology?
5. When working in team projects, do you and team members use English, Arabic or French? In which kind of communication (oral, written) do you use each language?

Appendix Seven. British Managers Structured Interview

Dear Manager,

You are kindly invited to answer the following questions as part in my Doctorate research which is entitled: 'ESP Teaching and Learning in the Algerian University: Bridging the Gap between ESP Teaching and Workplace Communicative Skills. The Case of Petrochemical Students at Skikda University and British Petroleum Company'. Your contribution is of a great help for us to spotlight on Algerian workers' ESP communicative skills needs in multinational companies such as BP. Thank you.

Mr. Farouk BOUAFIA
Post-graduate doctorate student
University of Constantine 1
Department of English

Supervisor
Dr. Madjda CHELLI

Introduction

The interviewer opens the talk by introducing the topic of research to the interviewees and ask them if they need to clarify anything for them before starting the interview. The interviewer also gives them the allocated time devoted to the interview and sections of the questions. He also gives them an informed consent about recording the interview and use the data for research purposes. Interviewees names will not be mentioned and the researcher will use just pseudo-names to refer to them.

General Information Questions

1. Would you please tell us about your position and responsibilities in your company?
2. How long have you been working in an international workplaces/overseas?
3. Is English an important condition in recruiting Algerian workers in this BP Company?
4. What is your overall view on Algerian engineers' English language competence in fieldwork?

Section One: Description of Algerian workers' ESP communicative lacks in BP

5. How do you find professional communication in (ESP) in the field work with Algerian workers in BP company as a multilingual/ multicultural business context?
6. How do you find Algerian workers English professional terminology in petrochemical domain?
7. Have you faced any misunderstanding/confusion while processing workplace oral and written communication in BP workplace? Could you give us any example of challenging ESP communication in meetings?
8. Based on your experience in the Algerian context, what are the language difficulties that Algerian workers have in English language receptive skills (listening, reading)?
9. Based on your experience in the Algerian context, what are the language difficulties that Algerian workers have in English language productive skills (speaking, writing)?
10. Do you provide English language trainings in petrochemical domain at the level of your company for Algerian recruited engineers to foster their English communication skills? If yes, what language skills do you focus on in such trainings?

Section Two: BP company wants of ESP communicative skills Algerian workers need to develop

11. Do you think that Algerian petrochemical students need an English for Specific Purpose program at university before graduation and joining work in such multicultural/ multilingual companies?
12. What are the language skills and communicative competences needed in BP work place?
13. What do you think of cooperation trainings between Algerian higher education institutions and BP company to bridge the gap between ESP teaching at university and workplace communicative needs?
14. Do you think that adopting translation between Arabic/French and English languages in your workplace is a good strategy to facilitate communication?
15. Do you think that using digital technology (online communication), virtual teamwork facilitates your communication with Algerian workers?

Section Three: Concluding questions

16. What are your recommendations for educational institutions in Algeria to develop ESP communication for workplace communicative needs?
17. What are your recommendations for BP company as an important business company/partner in Algeria to develop its workers' communicative skills?
18. Would you like to share any additional information from your experience that we have not discussed yet?

Thank you!

Appendix Eight. Transcription of Algerian Engineers Semi-structured Interview

Interviewee A

Interviewer: good evening sir, how are you doing?

Interviewee: Hmd, I'm good

Interviewer: first of all, thank you for accepting to take part in this interview

Interviewee: you are welcome

Interviewer: would you please tell us about your academic qualifications

Interviewee: I am a petrochemical engineer; I get it from Boumerdes university and then I went to do some trainings in drilling flued in USA.

Interviewer: Perfect, what was your position in your company

Interviewee: I started work as a drilling flued engineer and then as a senior drilling flued and then a coordinator

Interviewer: was English an important parameter in recruitment in BP company?

Interviewee: For sure it is important especially speak and write in English

Interviewer: did you pass a test in English before you join work in BP?

Interviewee: yes, but not a test of English but a test using English

Interviewer: How was it, difficult for you?

Interviewee: not difficult, in the work we use specification words explain what you want to do

Interviewer: is the English needed to fulfill your work requirements general or specific i.e. technical English?

Interviewee: technical and general also, both of them

Interviewer: the specific English, is it related to petrochemical domain?

Interviewee: Yes, it is related to drilling and petrochemical domain

Interviewer: is the English background knowledge you got at university satisfactory to meet your workplace communicative needs?

Interviewee: For that, I didn't get any studies in English at university but I get it outside university and of course it is needed in workplace and I received nothing at university

Interviewer: does work in BP as a foreign context of language and culture create communicative difficulties with native speakers?

Interviewee: no, no problem for me

Interviewer: which language skill was difficult for you in workplace?

Interviewee: I think, it is listening, because there are too many accents in workplace?

Interviewer: in what ways was technical English helpful for you in workplace?

Interviewee: Of course it is helpful because look you need specification words that facilitates work with workers and coworkers

Interviewer: do you need just specific terminology or you need also skills of communication?

Interviewee: you need also skills; look I think you need some trainings you can't get specific terms without trainings to get deeper in the domain.

Interviewer: Have you received any training in English by your company to enhance your English communicative skills?

Interviewee: yes of course,

Interviewer: was it helpful for you?

Interviewee: Yes, it facilitates communication with others in the work between workers and managers.

Interviewer: at which level it facilitates communication?

Interviewee: at the level of written and spoken forms i.e. emails reports and face to face communication.

Interviewer: Do they give you docs to improve your English?

Interviewee: no just trainings

Interviewer: what are the shortcomings of Algerian workers in the use of English in work place?

Interviewee: There too many people who do not understand technical English and you waist too many time to make them understand what to do, that's the most difficult thing.

Interviewer: So what do you suggest to reconsider ESP teaching in terms of content?

Interviewee: They need to start learning English at university because everything in worldwide is in English even communication is in English and people in petrochemical domain is in English so English should be taught at university and studies in petrochemical domain should be in English not any other language.

Interviewer: So what kind of English language skills and aspects should be focused on for an effective teaching of English at university?

Interviewee: I Think university should focus on listening and speaking and writing also. If you are a manager, you need to be fluent in listening and speaking.

Interviewer: what do you think of an ongoing training in the workplace to develop your English skills?

Interviewee: Look there are different sectors in petrochemical field work, and in any sector there is specification words related to this sector. And you get this repertoire only in workplace through trainings.

Interviewer: Thank you for collaboration.

Interviewee B

Interviewer: would please tell us about your academic qualification?

Interviewee: I am an engineer in geology I got it from the university of Constantine in 1995,

Interviewer: good, and what is your position in BP company?

Interviewee: I am a senior supervisor in fieldwork.

Interviewer: Is English an important parameter in recruitment in BP company?

Interviewee: Yes, it was required to be hired in the company.

Interviewer: Did you pass any test of English before you start work?

Interviewee: Yes, I passed a text in English before I joined the company.

Interviewer: Could you please tell us about this test in terms of content and structure?

Interviewee: The test was in the speaking and the writing skill.

Interviewer: Which level is needed to join work in BP?

Interviewee: I did level 5 after that they charge a teacher university to give us a training in ESP.

Interviewer: Is the English that is required to fulfill your workplace communicative needs general or specific?

Interviewee: in fact, both of them are needed in communication depending on the section where you work. For me, I need technical English more than general English because I work in field.

Interviewer: Is the English background knowledge that you got at university satisfactory to meet your workplace communicative requirements?

Interviewee: it was not satisfactory at all because we didn't receive any course in English at university. We stopped learning English in the high school. Our education at university was only in French. There was no English during my university.

Interviewer: since you didn't receive any course in English at university, how could you manage then to develop your communicative skills in English?

Interviewee: I have a background in English from the high school and I studied it by myself.

Interviewer: Have you received any training from BP company to enhance your English skills in your domain?

Interviewee: Yes, we had a training that lasts for one year. We study English three sessions a week and each session takes about one hour and Half.

Interviewer: And what was the content of the course about?

Interviewee: Most of our training was about the field work, technical terms and developing our speaking and writing skills in petrochemical domain and every three months we pass a test.

Interviewer: what are the skills that you found most difficult in your work?

Interviewee: The problem lies mostly in the listening and speaking skills especially when you communicate native speakers. Sometimes they use informal language not academic one. Sometimes we don't understand them at all. So to solve this problem, they tried to learn Arabic to communicate with us rather than English.

Interviewer: what about reading and writing?

Interviewee: writing we were good, I can write reports, send emails and messages. Reading also was good I can read docs in English because all the docs were in English.

Interviewer: What about the technical terms? How could you develop a linguistic repertoire in English?

Interviewee: With time and through experience you could develop this baggage.

Interviewer: Is work in BP as a foreign language and culture difficult for you?

Interviewee: Yes, it was because they bring workers from different linguistic background that is why it was difficult, culture was not a problem for me.

Interviewer: Do you think that ongoing training in workplace are needed to foster Algerian workers in English?

Interviewee: Of course because you have a background in English from university in communication still there are so many things you need to develop them in workplace, for example technical terms and communicative skills.

Interviewer: Do you think that revising teaching ESP at university is needed, if so what do you suggest to revise ESP teaching at university?

Interviewee: Yes, each specialty has its own communication and skills and technical terms and there are so many domains in petroleum specialty and in each domain there is a specific English needed. There is geological domain and there is drilling, HSE, and forage... But you are working in the field, you need much more English to communicate because you have a direct contact with workers. But in office, you need just general English to communicate and writing.

Interviewer: What are the aspects and skills you recommend to focus on?

Interviewee: Communication and technical terms and all the language skills are needed especially speaking and writing.

Interviewer: Do you have any comments to add to enrich the topic?

Interviewee: No thank you.

Interviewer: Thank you for your collaboration.

Interviewee C

Interviewer: can you please tell us about your qualification?

Interviewee: I have a Bachelor of arts degree in maths and computer science from the university of Skikda. I have also a diploma in HSE from an institution in Algiers.

Interviewer: What is your position in BP?

Interviewee: I worked as a radio operator in communication room between the field and the camp. Then I worked a data analyst in petroleum department.

Interviewer: Is communication in this context taking a written form or oral form?

Interviewee: It is oral sure vocal.

Interviewer: Is English an important parameter in recruitment in BP?

Interviewee: Yes of course it is important.

Interviewer: is the English needed general or specific?

Interviewee: It depends on the workplace, sometimes general is enough and sometimes you need specific English related to the field.

Interviewer: is the English background knowledge that you got at university satisfactory to meet your workplace needs?

Interviewee: I don't think so, in university you, we study general English grammar and tenses only for me I learned English from workplace.

Interviewer: does the context of BP in terms language and culture create communicative difficulties for you?

Interviewee: Sometimes it depends on the person with whom you talk?

Interviewer: which language skill the most difficult for you when you communicate?

Interviewee: listening because of the accent of native speakers, I worked with Irish managers and Irish accent is difficult in comparison to Scottish and English one.

Interviewer: what about other Algerian workers?

Interviewee: Some of them they don't understand anything at all?

Interviewer: In what ways can technical English help you in workplace?

Interviewee: you have to have a kind of terms which you can use in the field. I got them from workplace?

Interviewer: Have you received any trainings in ESP from BP company?

Interviewee: not yet but may be in the future. All the technical English that I have is learned from workplace.

Interviewer: What do you think of the shortcomings, lacks in using English for petrochemical specialty by Algerian workers?

Interviewee: they lack specific terms and vocabulary related to workplace?

Interviewer: what do you suggest to university to reconsider ESP teaching?

Interviewee: I think they should go deep and specific in the field of industry in different specialties. And petrochemical specialty itself has different specialties, I work for example in CISEMEIC it has specific linguistic repertoire that is different from forage or drillings.

Interviewer: based on experience, what are the language skills should be developed?

Interviewee: Listening and speaking more than reading and writing.

Interviewer: Do workers need ongoing trainings to develop their skills of communication?

Interviewee: Yes, I think so.

Interviewer: Ok, thank you for your collaboration.

Interviewee D

Interviewer: first of all, would you please tell us about your academic qualifications?

Interviewee: Yes, I'm an electronic engineer graduated from Boumerdes university.

Interviewer: What is your position in BP company?

Interviewee: Actually I occupied different positions in BP, first I worked HSE engineer in the field. Then I had other trainings to work as a coordinator

Interviewer: is English an important condition in recruitment in BP company?

Interviewee: Actually it depends on the job you hold. It depends on your section where you work. But if you speak English it is an addition. But there are sections where English is a requirement, such as an engineer coordinator, travel officer, field worker. Sometimes they need to have a good person in English as a requirement.

Interviewer: which English is needed to fulfil workplace requirements in BP?

Interviewee: Yeah it depends on the position of the worker, if you are an engineer, you need basic technical English because you are in the technical field.

Interviewer: Is your English background that you got at university satisfactory to meet workplace needs?

Interviewee: Myself I worked on my own I didn't rely on the English I studied at university. The environment of the university and workplace are different. You talk about academic environment, grammar and tenses but when you go to work context, it is 100 percent different.

Interviewer: In which sense both contexts are different?

Interviewee: they are different in the sense that university provides a content that is basically related to general English grammar rules and structures. But in the work place companies for example they need to communicate using emails because writing email is different from writing an SMS right. There are norms to write an email. Because using English especially in social media is strongly recommended from the university to the effective use of English in the commercial side.

Interviewer: Have you received any training in English from BP company?

Interviewee: actually there is a program of training addressed to engineers and other trainings in petrochemical specialty addressed to workers. English trainings depend on the position of the worker and the need of the worker in a given position.

Interviewer: Did you have a look at the program of trainings of English addressed to workers?

Interviewee: no I didn't.

Interviewer: Ok, generally speaking the context of BP company as a different culture, language and foreign context of work was it difficult for you?

Interviewee: At the very beginning, the context was fuzzy, because it was the first time to work with foreign people and bit by bit I started to get acquainted with the situation

Interviewer: which language skill you found difficult listening speaking reading and writing?

Interviewee: I told you at the beginning writing, because when you write for general purpose it is ok, but when you write emails and reports in a specific domain you have to have some skills of writing in work and in this context mistakes are not pardon and you have responsibility. I myself can write but the most important point is the way you

write. Speaking and listening are important also and this is another story if you are in a meeting and in front of you native speakers you have to be good speaker and you know what you are talking about as well.

Interviewer: Based on these communicative difficulties that Algerian workers face in BP workplace, do you think that ongoing trainings in BP are effective to foster their communicative skills?

Interviewee: Absolutely 100 percent, because what they get at university is not enough and the Algerian worker need to develop their communicative skills in speaking and writing and they have to have minimum level in English. They need also technical training.

Interviewer: in order to revise the teaching content at university, what do you suggest?

Interviewee: I can suggest to include courses about developing competences in the use of technical words in the field and write reports emails and marketing. I'm not a specialty in the university but I can say that the university should focus on the psychological preparation of the worker. Body language is important and communicative skills are important and dealing with workers and native.

Interviewer: Do you have something to add the end?

Interviewee: No I don't thank you.

Interviewer: Thank you for your collaboration.

Interviewee E

Interviewer: Good morning sir, how are you doing?

Interviewee: Good and you?

Interviewer: Elhamdoulileh, ok, first of all thank you very much accepting to take part in this research. So, my study investigates the English for specific purposes teaching and learning at the department of petrochemical studies Skikda university. As part of my Doctorat es science research entitled: ESP Teaching and Learning in the Algerian University: Bridging the Gap between ESP Teaching and Workplace Communicative Skills. The Case of Petrochemical Students at Skikda University and British Petroleum Company

So, this interview aims to shed light on ESP communicative challenges you encounter in BP company workplace in Algeria. Hence, of course your experience would help us know about the role of the Algerian university in meeting the expected BP workplace communicative skills. So, this is about my topic. If you need to ask any question before we start the interview, your questions are welcome; if not, let's start please,

The interview will take about 25 to 30 minutes and all the data will be recorded and used for only research purposes; of course your name is anonymous.

Interviewee: ok, perfect

Interviewer: first question is about your profile and qualifications; could you please tell us about them?

Interviewee: ok, so my academic qualifications you know I came from a literary stream and I got my Baccalaureat in literature and foreign languages and then I moved to university in which I did English I got my license degree and then my master degree and my specialty was linguistics. And when I start working I did some HSE training

such as firefighting, and eem first aid eeeeh what else ok HSS I don't know how do we call it in English

Interviewer: ok you can express it even in French or in Arabic;

Interviewee: you know all the things that are related to HSE? How to you know how to be safe at work and you don't expose yourself to danger ad that's all. Next question please?

Interviewer: nice, so what is your position in your company?

Interviewee: Well, I work for BP Company that deals with oil and gas and drilling particularly. I worked as a radio man so I receive reports and I send reports via email, telephone and radio I'm in charge of personal on board dealing with administrative documents taking care of personnel like time shift and everything.

Interviewer: ok, so is English an important parameter in recruitment in BP company?

Interviewee: yes, of course it is very important; as you work in a foreign company you need English so that you work with it and you communicate meet people sometimes you need to translate documents especially when you work with Algerian workers who do not speak English and they want to express themselves to native speakers' managers.

Interviewer: have you submitted any document or certificates to BP which proves your mastery of English language

Interviewee: Of course, I submitted my diploma and then I had an interview with BP mangers we had a talk about five minutes

Interviewer: what about the topic of the interview?

Interviewee: The topic is about my work experience and studies. The mangers want to test my speaking skill.

Interviewer: is the English needed to fulfill your work place requirements general English or technical related to petrochemical domain?

Interviewee: I think you need both as you gonna work with native speakers in the filed

Interviewer: Is the English background you got from university satisfactory to meet your work place needs.

Interviewee: I think it was not satisfactory because you need highly specialised terms words and expressions which are unfamiliar for me and I had to learn them in work place.

Interviewer: can you give us examples about these terms?

Interviewee: for example, what is a reg, it is a big machine that is used for drilling.

Interviewer: Ok, is the difficulty just related to terms only or structures you use in speaking skill.

Interviewee: Terms and structure and sometimes using acronyms such as OBM that stands for oil based made and WOB that stands foe wait on bitt. The bitt is the device that is connect first to the pipe of drilling.

Interviewer: based on your answers, I would like to ask you some questions related to English for specific purposes? what are the communicative difficulties you encounter in your work place as an Algerian worker in BP? Does the context of work in BP create communicative difficulties with BP managers?

Interviewee: yes, it does. It creates communicative difficulties. For example, when you start working first you meet workers who speak very fast, you cannot grasp every single word he or she speaks. This is one difficulty.

Interviewer: ok, this is in terms of language skills, what about culture?

Interviewee: Of course we have our culture and they have their own culture but it doesn't create a difficulty of communication in work place. What really matters is language.

Interviewer: What do you think of the most difficulty in your workplace in terms of languages skills?

Interviewee: The listening skill is the most difficult skill. Sometimes they come up with new technical words that you have never heard before. So for me is a problem.

Interviewer: are these words related to technical domain or their jargon?

Interviewee: Actually they are related to petrochemical domain.

Interviewer: what about other language skills reading writing?

Interviewee: I dint have any problem with them.

Interviewer: In what ways mastering the technical English help you in workplace?

Interviewee: It does because sometimes with one word or two words, you can pass the message.

Interviewer: have you received and training in the use of ESP for petrochemical domain by PB company?

Interviewee: I didn't receive any training in English except HSE training which was organize by the company.

Interviewer: what are your ESP use shortcomings in workplace?

Interviewee: Just highly technical words.

Interviewer: What do you suggest to reconsider ESP content and teaching for petrochemical domain?

Interviewee: I suggest teaching ESP in different domains not deeply but at least superficially.

Interviewer: Based on your experience, what are the language skills and aspects should be focused on at university regarding petrochemical specialty?

Interviewee: It is needed to focus on all the language skills and content words.

Interviewer: What do you think of an ongoing training of ESP in work place, is it needed for Algerian petrochemical engineers to foster their ESP skills use?

Interviewee: absolutely they help a lot, if they do them in workplace to update their English knowledge according to workplace sections.

Interviewer: Do you have any addition to enrich the research topic to finish with?

Interviewee: No, I don't have any suggestion,

Interviewer: thank you for your collaboration.

Interviewee F

Interviewer: first of all, would you please tell us about your academic qualifications?

Interviewee: I have a bac in science and I chose English at university. I studied English for 4 years and I have a diploma of BA in English. I have also a diploma in HSE supervisor from a private institution in Batna.

Interviewer: What is your position in your company?

Interviewee: actually I am an operator in field work.

Interviewer: was English an important condition in recruitment in BP?

Interviewee: Sure, I think that 90 percent to be hired in BP is you need to master English especially in speaking skill.

Interviewer: Is the English needed to fulfill your workplace requirements general or specific related to your workplace specialty.

Interviewee: Some is related to the specialty but mostly we speak general English. you know it depends on the section where you work each section requires a specific skill of communication.

Interviewer: Is the English background knowledge that you got at university satisfactory to meet your workplace communicative needs?

Interviewee: Not really satisfactory, because I field work you learn more English through contact and communication because of practice especially in the workplace.

Interviewer: Have you received any training in English from the respective company?

Interviewee: No, because they know that my studies were in English.

Interviewer: What are the communicative difficulties you encountered in workplace?

Interviewee: I can say that we work in multinational context, we have a problem of pronunciation which I myself find difficult when I speak to native speakers or other international workers like Indians, Pakistani people... They have a problem with pronunciation. Especially in meetings where you are in need to understand every single word said by them especially managers. At the technical level, there is always there is something new to learn.

Interviewer: Does the BP company as a foreign language context and culture create a problem of communication for you?

Interviewee: For me, no cultural awareness is important for me. So I accept their culture and they do so for me.

Interviewer: What about other skills regarding reading and writing?

Interviewee: I think the speaking skill is the most difficult one because it is spontaneous and it does not give you time to think. It is direct.

Interviewer: What are the most important shortcomings of Algerian workers in petrochemical domain?

Interviewee: The problem with Algerian workers is that they speak French and they study in French and when they join work they find English. I think only few can speak English in workplace. It is a big issue especially when they come to technical English and communication, they don't know how to write emails reports... You have to know the word exactly how to write.

Interviewer: Are there specific skills when you use English in emails and reports?

Interviewee: Sure, you need skills of openings and endings and the appropriate use of technical words. And Algerian workers they lack such skills. I Can say that they have 20 percent in English and 80 % is French and Arabic.

Interviewer: What do you suggest to reconsider ESP teaching at university for petrochemical specialty?

Interviewee: They have to enhance English use in the university studies, and it is very important for all the specialties and subjects.

Interviewer: What are the skills and aspects should be focused on in teaching of English?

Interviewee: All skills are important and the most important ones are speaking and writing?

Interviewer: do you think that ongoing trainings are important in developing language skills in workplace?

Interviewee: yes, sure, technical trainings and language trainings are important in workplace because there are different sections in the field. Each section has a specific linguistic repertoire.

Interviewer: Do you have any comment you want to add at the end sir?

Interviewee: English now is a global language and it is the language of work, may be they have engineering diploma in specific field but they need English as a tool of communication. It opens for them so many doors of work and opportunities in multinational companies like BP.

Interviewer: Thank you for your cooperation.

Appendix Nine. Transcription of British Managers Structured Interview

Interviewee Mark

Interviewer: good afternoon boss, so I have an interview here with BP managers in Algeria. Are you ready Boss for the interview?

Interviewee: yes, go ahead

Interviewer: Let us start with general information questions. Would you please tell us about your position and responsibilities in BP company?

Interviewee: sure, my position is a manager of a section of operations in field work and coordinator, we are responsible of arriving experts, their safety and security. Our responsibility is to make sure that our workers and experts are prepared for work and emergency situations

Interviewer: ok, how long have you been working in BP company in Algeria?

Interviewee: I have been working here about 10 years now.

Interviewer: is English an important condition is recruiting Algerian engineers is BP company?

Interviewee: yes, absolutely, new recruiters need to have a level in English.

Interviewer: what is your overall view about Algerian engineers English in fieldwork?

Interviewee: I think that the overall level is acceptable in general English especially with the new generations younger workers but still they are weak in technical English of fieldwork. The new generation has a better level than old generation, I think it is because of the change happening in the interest in learning English nowadays.

Interviewer: now, we move to Algerian engineers' ESP lacks in BP Company; well, how do you find professional communication with Algerian engineers in fieldwork?

Interviewee: I think, it is a critical and an important question in the sense that even you find Algerian engineers mastering the English language still we find difficulties with them in fieldwork professionally, sometimes they don't understand us when we go deep in a given professional discourse.

Interviewer: perfect, where the problem lies exactly Sir?

Interviewee: sometimes the problem is in the use of professional vocabulary and sometimes in the discourse itself.

Interviewer: have you faced any kind of misunderstanding in communication with Algerian engineers in BP?

Interviewee: Yes, many times but each time I try to understand and give them pieces of advice to develop their professional level in English.

Interviewer: could you please us challenging examples from your experience about such kind of misunderstandings in professional meetings?

Interviewee: yes, when someone does not speak English, you have to be sometimes creative, translator, you need applications of translation in your phone. in written communication like emails you use email translation.

Interviewer: based on your experience, to what extent Algerian workers are good in the mastery of receptive skills?

Interviewee: sometimes you have certain people who are very patient. Well I don't know about reading part but may be listening is difficult for them because they are not familiar with our accent as native speakers. And for those who do not speak English, it is very difficult to communicate with them.

Interviewer: what about speaking and writing?

Interviewee: I think writing is much more difficult than speaking because when you come to write your speech so many things must be changed. I would say that their writing is worse but still they can use technology and automatic translators.

Interviewer: do you provide trainings of ESP in petrochemical domain for Algerian workers in BP company?

Interviewee: In fact, it depends on which department workers will work. In our department of security, we do not provide trainings.

Interviewer: ok, what language skills needed to develop to meet BP workplace?

Interviewee: well, first we need from them to have general communicative skills. And then e they need to have the willingness to learn and develop their professional language from the workplace. Yet, coming to BP with ESP skills would be much better.

Interviewer: what do you think of cooperation between university and BP company to reconsider ESP teaching for petrochemical specialty based on workplace needs?

Interviewee: obviously this is very helpful and save time and efforts since engineers join work with professional English of high quality to meet the requirement that you need for that particular job.

Interviewer: do you think that using translation apps would help in communication?

Interviewee: yes of course very helpful?

Interviewer: do you think that virtual team work would help in facilitating communication?

Interviewee: I think yes, online communication helps,

Interviewer: can you give us an example?

Interviewee: I myself have people who work with me and they don't speak English and we are obliged to use emails and translation to communicate with each other. They write emails in French and I use translator in both ways.

Interviewer: last, what are your suggestions to develop ESP skills of our petrochemical students at university?

Interviewee: they just provide students with the training they in need. BP company should also help to develop its workers level and skills in ESP. it should provide trainings to develop good attitude and work together regarding their differences, language and cultural backgrounds.

Interviewer: Thank you very much sir for your cooperation.

Interviewee John

Interviewer: good afternoon boss, so I have an interview here with BP managers in Algeria. Are you ready Boss for the interview?

Interviewee: yes, go ahead

Interviewer: Let us start with general information questions. Would you please tell us about your position and responsibilities in BP company?

Interviewee: ok my position in the company right now is fuel drilling expert, my responsibility is about drilling PNS. Those responsibilities include firstly HSE, secondly controlling crew members in areas of work to make sure that they carry their duties as it should be.

Interviewer: How long have you been working for BP company?

Interviewee: I have been working for BP in different places in the world, Africa, Holland, Libya, Tunisia, and now I am in Algeria since 1994.

Interviewer: Is English an important condition or requirement in recruiting Algerian workers in BP Company?

Interviewee: The Algerian language is both Algerian and French, from my point view yes it is. English is an important condition in recruiting Algerian engineers.

Interviewer: ok, what is your overall view about Algerian engineers level in English?

Interviewee: well if I understand the question correctly, I find Algerian engineers willingness to learn English embarrassing, they master two languages and some of them three languages including English. their level in English is average and very few Algerian who I work with have a poor English.

Interviewer: now, we move to Algerian engineers' ESP lacks in BP Company; well, how do you find professional communication with Algerian engineers in fieldwork?

Interviewee: it is very crucial question for a number of reasons because if you are involved in a context of professional communication in fieldwork, it would not be successful if the language used is not appropriate and purposeful.

Interviewer: how do you find Algerian ESP terminology related to petroleum field in workplace?

Interviewee: for certain personnel who are in professional position, the terminology they use is correct and related to the domain. But sometimes, we find difficulties with workers who ignore the exact and the appropriate terminology and substandard.

Interviewer: have you faced any kind of misunderstanding in communication with Algerian engineers in BP?

Interviewee: yes, I had situations when workers do not understand questions or instructions and one way to go over this is to use other techniques to facilitate communication from both sides such as translation or switch to French or Arabic.

Interviewer: based on your experience, to what extend Algerian workers are good in the mastery of receptive skills?

Interviewee: I would say listening because reading you can time to read a text but listening you don't have time because some people like me who speak too fast so again a native speaker supervisor or manager who speak to an Algerian worker should slow down to confirm every listener could understand.

Interviewer: what about speaking and writing?

Interviewee: ok I would say the problem of communication appear clearly in these two skills but you can see frustration in some people because they are afraid from not saying it correctly.

Interviewer: do you provide trainings of ESP in petrochemical domain for Algerian workers in BP?

Interviewee: no, it is not available at the moment.

Interviewer: ok, what language skills needed to develop to meet BP workplace?

Interviewee: I believe they need to develop speaking and writing skills most, because income careers they come across the English language and to that itself is a problem because English is something investable in workplace.

Interviewer: what are the ESP skills and competences needed in BP?

Interviewee: All of them.

Interviewer: what do you think of cooperation between university and BP company to reconsider ESP teaching for petrochemical specialty based on workplace needs?

Interviewee: I think it is fantastic if such agreements take place to link theory to practice.

Interviewer: do you think that using translation apps would help in communication?

Interviewee: yes, yes, it is very helpful and that goes for me as well. I have one of the Algerian guys who explain things to me and I can never understand because of his broken English so I ask him to say it in French or Arabic and I use automatic translator. I can speak proper English or I speak an English that an Algerian worker would understand and I take into account the cultural and language differences.

Interviewer: do you think that virtual team work would help in facilitating communication?

Interviewee: yes, I agree, such as google teams, what's up, I think nowadays what is an influence becoming now of digital tools in Algeria, you can see use of movies and apps to be good in English.

Interviewer: last, what are your suggestions to develop ESP skills of our petrochemical students at university?

Interviewee: yes, if we can take up modules of ESP within the curriculum would be fantastic.

Interviewer: what are your suggestions to develop ESP skills of our workers in BP?

Interviewee: They should have the time and facilities for training to learn English.

Interviewer: anything you want to add please at the end,

Interviewee: what I can say is you can pick up a language another way as well if I have a problem to speak to an Algerian guy, I start listen to what they are saying and watch their mannerism and gestures and then I can guess what they are saying. And that is another way of communication that can help as well.

Interviewer: Thank you very much.

Interviewee Steven

Interviewer: Would you please tell us about your position and responsibilities in your company?

Interviewee: Ex Drilling & Workover Supervisor for GB/ Anadarko for the last 20 Years

Interviewer: How long have you been working in an international workplaces/overseas?

Interviewee: More than 35 years

Interviewer: Is English an important condition in recruiting Algerian workers in this BP Company?

Interviewee: Yes, unfortunately English is still the main Language of Choice for International Companies Beside French, but as I learned here in Germany recently according to HSE every Company is supposed to have a general Language defined to be their main Communication of Choice.

Interviewer: What is your overall view on Algerian engineers' English language competence in fieldwork?

Interviewee: I was impressed with ENTP's engineering and their language skills for many years. I had the privilege to meet many great engineers in that company, whether in design, technical drawing, or execution. Once the goal was understood and most of them spoke three languages, Arabic, French and English, it was executed to the satisfaction of the international client

Interviewer: How do you find professional communication in (ESP) in the field work with Algerian workers in BP company as a multilingual/ multicultural business context?

Interviewee: It is essential as above this is the language of choice for most of all international clients.

Interviewer: How do you find Algerian workers English professional terminology in petrochemical domain?

Interviewee: It depends where you are going... On the engineering level it is good and I am surprised how many people do speak English, lower down some people do speak it, some don't.

Interviewer: Have you faced any misunderstanding/confusion while processing workplace oral and written communication in BP workplace? Could you give us any example of challenging ESP communication in meetings?

Interviewee: Every toolbox talk you hold on the crew member level you want an Interpreter who speaks Arabic/ English languages fluently. Many drillers I met take the written English instructions and then did listen for a French clarification. They all spoke perfectly French and then took their notes

Interviewer: Based on your experience in the Algerian context, what are the language difficulties that Algerian workers have in English language receptive skills (listening, reading)?

Interviewee: Lack of words.... To communicate a language, it generally takes between 2000 and 3000 words to know I guess, it might be more or less. All persons I met tried very hard to understand what I was saying and if they did not understand, which you can see in their eyes they went to somebody who did and translated for them. I cannot really say that in 20 years anything was lost in translation.

Interviewer: Based on your experience in the Algerian context, what are the language difficulties that Algerian workers have in English language productive skills (speaking, writing)?

Interviewee: First and least important coming to mind is Grammar but the context is right on the Mark. Many reports I have seen might not be grammatically correct, and mine is not either, but the message got communicated and acted upon.

Interviewer: Do you provide English language trainings in petrochemical domain at the level of your company for Algerian recruited engineers to foster their English communication skills? If yes, what language skills do you focus on in such trainings?

Interviewee: When GB got into contract with ENTP I know for a fact it did. There was an English trainer for multiple month to train the crews available on voluntary bases. Since these guys were working 12 hours many were still taking the course adding to their time and I even have to say it was successful. All of a sudden even the Roustabouts spoke English and understood what I was saying and the most important thing was that they told me when they did not understand what I was saying.

Interviewer: Do you think that Algerian petrochemical students need an English for Specific Purpose program at university before graduation and joining work in such multicultural/ multilingual companies?

Interviewee: Yes, and NO. I think your country provides already such a diversity on the Engineering Level in Languages. It may be necessary for some Levels out of my expertise but for the drilling part all essential personnel spoke good enough

English or French for starters. If international companies decide to improve that specifically it should be job related

Interviewer: What are the language skills and communicative competences needed in BP work place?

Interviewee: On this one I cannot comment but I would say communicative English.

Interviewer: Do you think that adopting translation between Arabic/French and English languages in your workplace is a good strategy to facilitate communication?

Interviewee: It sure helps, the more people understand in either language, the better for any operation

Interviewer: Do you think that using digital technology (online communication), virtual teamwork facilitates your communication with Algerian workers?

Interviewee: No, I am old school, any hour, any conversation I had, person to person, sticks, there will be a memory...., anything on the web is just a computer game, no offense to Bill Gates or Steve Jobbs.

Interviewer: What are your recommendations for educational institutions in Algeria to develop ESP communication for workplace communicative needs?

Interviewee: Teach English like Hamza did, Basic communications, then enhance the level on oilfield language, which can be very diversified, depending on where you work

Interviewer: What are your recommendations for BP company as an important business company/partner in Algeria to develop its workers' communicative skills?

Interviewee: Listen...., Learn and provide the means to enhance the communication. Deutag/ENTP has done that with success. 30+% of our workers took the chance and did the course though it took an extra hour out of their 12hour workday but I was amazed by the results

Interviewer: Would you like to share any additional information from your experience that we have not discussed yet?

Interviewee: Many to share, but not the place, I adore the willing of the Algerians to learn on their own terms, once you give them the opportunity and then adopt. I had the privilege to work with some great engineers and some who probably just bought their ticket, like in any other country. What Algerian universities need to put out is good engineers with reliable certs and if a person fails they need to say So, whether we like it or not.

Interviewer: Thank you for your answers sir

Résumé

Cette étude explore les cours, les méthodes et les lacunes en matière de compétences communicatives dans le département de Pétrochimie de l'Université de Skikda qui adopte une approche d'enseignement/apprentissage de l'anglais sur objectifs spécifiques. Elle tente également d'enquêter sur les besoins de communication sur le lieu de travail de la Société British Petroleum (BP) afin de combler le vide dans le domaine, et de développer ainsi une unité de cours modèle pour la spécialité respective. Sur la base d'une approche à méthode mixte, une étude exploratoire quantitative et qualitative est menée. Les données sont tirées à l'aide de deux questionnaires administrés à l'ensemble de la population des enseignants (13 enseignants) et un échantillon aléatoire de 60 étudiants en Master Pétrochimie d'une population de 147 étudiants du département cité. Voire, une évaluation est réalisée sur un cours d'anglais sur objectifs spécifiques conçu par des enseignants du même département. Comme cette étude est menée dans deux contextes différents, six ingénieurs Algériens et trois cadres Britanniques du personnel de la Société (BP) sont interviewés. Les résultats montrent que l'enseignement/apprentissage de l'anglais sur objectifs spécifiques ne répond pas aux ambitions attendues. Ni les enseignants ni les étudiants ne sont satisfaits du contenu actuel des cours. Les ingénieurs et les cadres Britanniques interviewés prétendent qu'ils rencontrent des difficultés énormes pendant leurs échanges sur les lieux de travail. Quant à l'évaluation du contenu du cours, elle montre le répertoire technique, les compétences productives et les situations de simulation liées au domaine pétrolier sont rarement introduits. Cette étude est achevée par un cours modèle suggéré ainsi que quelques recommandations pour combler l'écart entre l'enseignement de l'anglais pour objectifs spécifiques et les besoins de communication en milieu de travail.

ملخص

تسعى هذه الدراسة إلى إستكشاف واقع تعليم / تعلم اللغة الإنجليزية لأغراض معينة في قسم الدراسات البتروكيمياوية في جامعة سكيكدة، مع التركيز على محتوى الدورة وطرق التدريس والفجوات الموجودة في مهارات التواصل. كما تسعى إلى التحقيق في احتياجات التواصل في مكان العمل بشركة البترول البريطانية (BP) في الجزائر وبالتالي تطوير وحدة دورة تكوين نموذجية للتخصص المذكور أعلاه. إعتقاداً على منهجية البحث المختلطة، أجريت دراسة استكشافية كمية ونوعية حيث إستمدت البيانات من إستبيانين للاستاذة و الطلبة ،تقييم محتوى دورة الانجليزية الموجهة لطلبة ماستر بقسم البتروكيمياوية بجامعة سكيكدة و مقابلتين في شركة البترول البريطانية. وزعت الإستبيانات على عدد إجمالي من أساتذة الإنجليزية لأغراض معينة في قسم البتروكيمياويات (13 أستاذ) و ستين طالبا يحضرون لشهادة الماستر بنفس القسم تم إختيارهم بطريقة عشوائية من بين مجموعة إجمالية عددها 147 طالبا، وتم تقييم محتوى الدروس للسداسي الاول لعام 2022 \ 2023 من حيث المواد الأصلية المستخدمة ومهارات اللغة التواصلية المقدمة. كما تمت مقابلة ستة مهندسين من مجموع 52 عاملاً جزائرياً وثلاثة مديريين بريطانيين في شركة البترول البريطانية. وقد كشفت نتائج الإستبيانات أن تعليم / تعلم الإنجليزية لأغراض معينة لدراسات البتروكيمياويات في جامعة سكيكدة لا يعكس المعايير العالمية لتدريس وتعلم تلك اللغة وأن الطلاب والأساتذة غير راضين عن المحتوى الحالي لدورة الإنجليزية لأغراض معينة من حيث الخصوصية و السياق إذ أوضح تقييم محتوى الدورة أنه نادراً ما يتم تقديم المعارف الفنية والمهارات الإنتاجية ومواقف المحاكاة المتعلقة بمجال البتروكيمياويات. أما فيما يتعلق باحتياجات التواصل في مكان العمل، فقد أعرب المهندسون الجزائريون عن أنهم يواجهون صعوبات جدية في الإستماع والمحادثة و كذا الكتابة بالإنجليزية في ميدان عملهم. ويؤكد مديرو شركة بريتيش بتروليوم كذلك على الصعوبات التي يواجهها العمال الجزائريون في هذا الصدد. وبناءً على ذلك، تم إقتراح دورة وحدة تدريس نموذجية بمعية بعض التوصيات لسد الفجوة بين تعليم برنامج اللغة الإنجليزية وإحتياجات التواصل في مكان العمل.