

Evaluation of Petroleum and Geological Engineering ESP Course from Students' View points at Ouargla University in Algeria

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Abstract

The pressing problems encountered in teaching English for Specific Purposes (henceforth, ESP) at the University of Ouargla and particularly in the Faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences (FHREEUS) are the misapprehension of the ESP term and the misapplication of the ESP course. The researcher attempts to identify students' language purposes, their lack and preferences concerning English language courses. In an increasingly challenging context, it is necessary to assess the current ESP courses in order to identify and understand the degree to which they are useful to petroleum and geological engineering graduates and meet their ever-changing needs. Based on the conviction that students' needs are of crucial importance in the evaluation of the ESP course, we asked 93 students at FHREEUS, at the University of Ouargla, to express their perceptions and suggestions as to how they prefer learning English language. In practice, the appropriate tools to evaluate ESP courses are questionnaires, interviews, experimental results, etc. Thus, a descriptive evaluative method that involves a data-gathering questionnaire was implemented to make a set of practical inferences to the research hypothesis. The results revealed that a vast majority of students responded negatively to the effectiveness of the ESP courses in terms of reflecting their English language needs. The study clearly indicated the requirement and pressing need of ESP course based on students' wants and expectations.

I- Introduction :

In Algeria, where English is taught as the language of international communication and the internet, ESP has recently become increasingly one of the most important areas of EFL teaching today since there has been a clear determination to integrate it into higher education curricula, principally after having introduced it as an essential subject in the LMD system programs. According to the University of Ouargla, English for Specific Purposes (ESP) is, then, an approach to English language teaching which gave a high priority to the language forms and elements students would need in their areas of study. However, in the Faculty of Hydrocarbons, Renewable Energies, Earth and Universe Sciences (henceforth, FHREEUS) the students were not offered a practical and satisfactory ESP course. The lack of effective ESP courses at FHREEUS is one of the major troubles faced by both teachers and students in the Departments of Petroleum Production, Petroleum Drilling and mechanics, and Earth and universe sciences.

Our interest in ESP originated from our teaching experience in the faculties of science and technology at the University of Ouargla. The researcher already taught ESP course in different engineering faculties and institutes at the University of Ouargla for around 15 years and he is therefore entirely acquainted with all the difficulties involved in ESP teaching-learning process. In the faculties of science and technology language teachers are usually required to deliver ESP courses to both undergraduate and master students. In regard to the disapproval and criticism expressed by the different stakeholders about the lack of acceptable English proficiency among students, it has evolved into and eventually been essential to carry out a needs analysis survey to evaluate and give strength to the current ESP course in engineering faculties and respond to the students' expectations of access to suitably effective English learning for their future academic and job careers, and of convenience in the delivery of courses. Further Basturkmen (2010)

clarifies that need analysis is the identification of language and skills which are used in ascertaining and improving the content for the ESP course.

Investigating engineering students reasons for studying ESP course and their learning preferences can help teachers upgrade their teaching (Scrivener, 2005). Therefore, applying NA before mapping out ESP course can supply purposeful information for teachers to determine what should be included as language forms and elements in the course based on students' specific needs instead of teachers' improvisation or appreciations only.

I.1. Aims of Study:

The study was conducted through three basic objectives:

- to examine the ESP course currently taught in Petroleum and Geological engineering Departments at FHREEUS, Kasdi Merbah University in the Algerian province of Ouargla and make sure how far they satisfy the students' learning needs.
- to recognise the academic and professional needs of engineering students in two different engineering departments at FHREEUS at Ouargla University.
- to recommend changes and adjustments in the existing ESP course so that the Students' communication needs could be satisfied.

I. 2. Research Questions:

Accordingly, the following research questions were posed:

- To what extent is the current ESP course relevant to the petroleum and Geological engineering students' needs at FHREEUS, at the University of Ouargla?
- What are the language practices that students perceive as their needs for improvement in both academic and professional communication?
- How can the English course be improved to serve students' needs?

I.3. The significance of the study:

This study was conducted with an objective to improving the English language proficiency of students at FHREEUS. In light of this, it is of vital importance to evaluate the effectiveness and suitability of the ongoing ESP course, which is taught to students. It is expected that it will benefit students significantly in their future academic and professional communication. This study will also help Ouargla university decision makers to discern how effective the ESP course is, along with identifying the weaknesses and strengths of the course. Moreover, it will urge all the stakeholders (teachers, administrators, professionals) at FHREEUS to take charge of the students' needs and proceed to the reorganization and improvement of the ESP courses in terms of students' needs and demands. Pons (2001:18) points out that a teacher who is aware of the educational needs of their students is in a better position to elaborate effective instructional material.

I.4. ESP at Ouargla University

The emergence of English as an international language is nowadays unquestionable. Crystal (2000) and Nunan (2001) argued that the expansion of English language come up with unlimited access to the modern world of science and technology, worldwide communication, and intercultural understanding. Learning English has become a major focus of interest for both students and teachers at FHREEUS. For the students, they have strong motivation for learning English language to increase their communication abilities. They learn English in order to be competitive particularly in their discipline. Having English in their stock of knowledge puts them at a distinct advantage over others who are unable to use English. Whereas, the teachers seek to gain more updated data to implement new strategies and styles in their teaching practices; make changes in course content; refine their pedagogical and research purposes; and develop their oral communicative skills for conferences and symposiums.

It is essential to mention that, the University of Ouargla, as most Algerian universities do not offer adequate and satisfactory ESP courses. This might not be an explicit evaluation of the

ESP situation in Ouargla University, but the fact that ESP courses are designed without a plan, aim, purpose or direction, they become obsolete and ineffective due to their lesser applicability. Normally, the course would meet students' specific needs within predefined target situations. Thus, ESP teachers are required to teach not only English language, but they are expected to teach English language through specific-field content and objectives. In this regard, Hemche (2014) stated that ESP teaching in Algeria still fails to function normally; unable to deal with students' target needs and showing a lot of anomalies in almost every aspect such as learning conditions, teacher training, teaching load, materials and classroom aids.

I.5. The Area of EST

EST appertains to ESP approach, which emerged soon after the Second World War when a large growth in scientific, technological and commercial activity started to spread at high speed. Consequently, many scholars and professionals began designing EST courses and curricula that students might need in their research and future job careers and which would be more relevant to their needs. EST is, therefore, the approach to language learning/ teaching in which the choice of the content, activities and materials are based on the students' needs. EST

“is known to have been developed especially rapidly. English for Science and Technology has always set and continues to set the trend in theoretical discussion, in ways analysing language and the variety of actual teaching materials” (Swales, 1985).

Petroleum and geological engineering is, therefore, a field with its own special language. It possesses its own English which is technically referred to as EST. EST is the type of English used in scientific publications, manuals, technical reports and academic lectures, etc(Li & Li, 2015). It is used to depict and define physical and natural facts, their processes, characteristics, principles and applications in productive activities (Kenneth, 2004). Algerian language researchers in higher education and technological scientific areas conducted several case studies with focus on enhancing the teaching/ learning operation and prospect of the research and professional facets of science and technology.

II– Methodology:

Jordan (1997) announces that there is no single approach to carry out needs analysis. Every researcher works in different circumstances that impact on the choice of method in carrying out their enquiry. Students' needs analysis is the key point of ESP course evaluation as this approach of language learning is learner centered. Thus, Needs analysis for this study uses two complementary approaches but the emphasis will be more on TSA than PSA. These approaches are both suitable to the field of ESP (Dudley-Evans & St John, 1998; Jordan, 1997; West, 1994, 1997) and have been adopted by former needs analysts. Within this study, PSA is related to TSA, and they will be carried out together. TSA (when used in itself) is not adequate to determine the needs of the target population in English language without considering their PSA. Therefore, brought together, TSA and PSA may elucidate which approach(es) should be followed in order to provide an acceptable course design for engineering students at FHREEUS.

II.1. ESP Course Evaluation

ESP Course evaluation has taken an important role in higher education research during the last decades. In regards to evaluation, both program and course evaluation involve different stakeholders (teachers, students, professionals, administrators, etc.) and deal with various purposes (e.g., accreditation, accountability, promoting the value of the course). Based on this, Alderson and Scott (1992) assume that both insiders and outsiders should be implicated at all

stages in the evaluation process. Alderson (1992) explains that there are situations where it is justifiable that an outsider be asked to evaluate a program. For more clarity on this issue, Genesee and Upshur (1996) states that the results of assessment can be exploited by all the stakeholders for various purposes. Teachers are the principal users of this information, primarily to make decisions about the ongoing course, students' current learning needs, instructional activities, etc.

II.2. Needs Analysis

It is not easy to reach a unanimous agreement upon the definition of needs analysis among ESP researchers. This can be explained by the apparently controversial combination of two essentially subjective terms: "needs" and "analysis". The term "needs analysis" is defined by several authors. While Brindley (1989) describes it as "the gap between what the learners' actual needs are and what should be taught to them." Hutchinson and Waters (1987) define needs as necessities, wants and lacks. Thus, it can be said that needs are what students will be expected to do with a foreign language in a target situation, and how students might best acquire the target language during the learning period (West, 1994). Further, needs-analysis is perceived as a feedback procedure that functions at three interconnected levels: subjective learner needs (students' needs), objective analysis of target-situation needs (institutional) and learning situation needs (practical needs). Deciding on target objectives and the means for concretizing these objectives entails negotiation and making concessions within and across the three levels. Needs, in their different types, are examined and re-evaluated throughout the language course. As Lynne Flowerdew (2013) claims, needs analysis focalizes on the instruments and procedures of collecting and assessing information relevant to the course. Thus, we decided to conduct our needs analysis by means of questionnaire due their effectiveness and reliability. The procedure is to administer the questionnaire which assists the researcher in incurring actual data regarding students' perceptions and preferences.

II.3. Participants

A pilot survey for this research initially included 98 participants chosen randomly from different programs and levels at FHREEUS. However, 5 of the questionnaires were rejected because they were not fully completed. Therefore, the participants were limited to 93. The target student population in this study was all the students who studied in the academic year 2021-2022 in FHREEUS, at the University of Ouargla. The FHREEUS provides three years of instruction that qualifies the students to graduate with a license degree in petroleum and geological engineering. Alternatively, French and Arabic are the medium of instruction in the departments. In addition, English language course is taught to all the petroleum and geological engineering students over two semesters in each university degree year. Most of the students were already engaged in their 2nd and 3rd academic year at the time of the study. Further, the study was done three months after the students had stepped on an ESP course intended to meet their academic requirements. This had perhaps made the students more undeniably more informed on the ESP course content and its implications, and more comfortably able to express their attitudes and demands about the means to achieving their objectives. In this regard, the distribution of participants by fields of study is displayed in the table below:

Table 1
Distribution of Participants by Fields of Study

Study fields	Number	Percentage
Petroleum Production	35	43.87 %
Petroleum Drilling and Workshop Mechanics	33	31.63 %
Earth and Universe Sciences	30	24.49 %
Total	98	100%

II.4. Tools

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

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

II.5. The Questionnaire

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

II.6. Procedures

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

Before administering the questionnaire, the researcher met with four (4) instructors who were teaching the second and third-year students. For each of the grades, a class time was granted to the researcher to carry out the study. During the study, the students were informed of the aims and importance of the research. They were also instructed to give real and honest responses. Moreover, they were informed about the time they would spend in filling in the questionnaire. The subjects were also encouraged to ask for any explanation if needed. Immediately after they finished answering the questionnaire, they were asked to review their answers for imperfections or missing responses.

III- Findings and Discussion:

III.1. Findings

The findings of the study were provided based on the data collected through the questionnaire. For the purpose of data analysis, the findings were presented in frequency tables which displayed counts and percentages. For this to occur, course content, objectives, materials, skills assessments, instructional strategies, classroom aids and time allocation, and all other aspects of the ESP course, were measured and analyzed together.

The results of students' evaluation of ESP course are displayed in the following tables:

Question1. How do you assess your English level?

Table 2

Students' Proficiency Level

Statements	N° of respondents	% of respondents
My English is weak and I need to improve it considerably	31	33%
My English is average, But I need to learn it more	44	47.3%
My English is good and I need to make some improvement	16	17.2%
My English is very good and I don't need to improve it	2	2.5%
Total	93	100%

As shown in Table 2, LMD engineering students in FHREEUS had an intermediate (average) level in English with 47.3% which is visibly an indication for students' need to develop their English proficiency to the next levels (good and very good). However, the results showed that the number of the students with low English level (33 %) is not trivial. This might be related to the lack of students' motivation due to the ineffectiveness of English courses delivered in FHREEUS. The other reasons might be summarized in the lack of accuracy in terms of objectives, and inadequacy of teaching and handling of scientific materials.

Question 2. For what purposes do you want to study English?

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

Table 3
Students' Purposes for Studying English Language

Purposes for studying English	N° of respondents	% of respondents
a. for developing communication skills	61	65.2%
b. for pursuing academic studies	51	55%
c. for professional purposes	58	62.3%
d. for reading and understanding technical reports on engineering issues	42	45.3%
e. because attending the English language course is compulsory	7	8%
f. for working abroad	6	7%

According to the results mentioned in the table above, there were about 65.2 % of students who said they preferred to study English for developing their communication skills. This could be interpreted that petroleum and geological engineering students wanted to communicate with native English users and exchange their field study knowledge with them or benefit in return from their scientific experiences. Besides, 55 % of the respondents wanted to study English for academic purposes. In addition, the statistics revealed that 62.3 % of the informants opted for the use of English in their future job careers; this might be due to the fact that English is the medium of communication in multinational oil and gas companies operating in Algeria. The students also expressed their preferences for reading and understanding technical reports on engineering issues in English at the frequency of 45.3 %. And only 8 % of the respondents chose the option of compulsory attendance as the reason that makes them study English language and attend course sessions. Lastly, the results displayed that the students did not express any interest for working abroad where English has a higher status. The table above simply showed that 7 % of informants chose this option.

Question 3. How far do you agree with the following aspects of your English course?

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

Referring to the course content, eleven aspects were evaluated, and the results can be seen in the table as follows:

Table 4*Students' Perceptions about the Aspects of the Current ESP Course*

Statement	1		2		3		4		Total	
	No	%	No	%	No	%	No	%	No	%
a) the course is at the right level for you	5	6 %	62	67.1%	14	15%	11	11.9%	93	100
b) the topics in the course are relevant to your study field	53	57.2%	12	13%	17	18.3%	10	11.5%	93	100
c) the course objectives are clearly stated and understood	60	65%	7	8.2%	19	21%	5	5.8%	93	100
d) the course takes into account your learning needs	58	62.2%	19	20.5%	9	10%	6	7.3%	93	100
e) the course content is sufficiently adequate to prepare you for success in the job market.	53	57 %	2	2.5 %	30	33.1%	7	7.4%	93	100
f) the course helps you improve your English skills	49	52.4 %	11	12.2%	23	25.4%	9	10%	93	100
g) the materials used in the course are effective for learning English language	8	9.1%	52	56.3 %	24	26%	8	8.6%	93	100
h) the teaching methods used in class are motivating to study the course	44	47.2%	19	20.5%	23	24.6%	7	7.7%	93	100
i) The tests covered all the learning points	10	11.1%	62	66.4 %	20	21.3%	1	1.2%	93	100
j) Assessment has helped you to improve your performance in English	41	44%	22	23.9%	22	24%	7	8.1%	93	100
k) the time allocated (per week) for English course is sufficient	82	88.6%	3	3%	4	4.1%	4	4.3%	93	100

The results in table 4 showed that almost all students (67.1 %) disagreed that the course level is suitable for their actual proficiency. Thus, the teachers need to check out the materials to make sure that they do not include language difficulty, which is beyond students' ability to understand; neither rudimentary nor tough. Gatehouse, K. (2001) found that low language ability students could find the content activities hard to cope with. As students' language abilities vary, teachers can ensure the materials fit in with students' different language proficiencies. As for the 2nd statement listed in the table above, the overall consensus from the respondents, the topics were not relevant enough to the students' field of study at FHREEUS. Most students responded negatively to the suitability of topics with their field of study (57.2% strongly disagree). The topics must allow an approach that specifically involves petroleum and geological engineering field of study. The respondents' answers to the 3rd statement in table above indicated that 65% of students felt that the objectives of the course have not been articulated adequately. This could be interpreted that the course material is not related to their personal educational goals or to any other goals they can recognize as being important. It is inferred that the course is somewhat disorganized, that the topics do not match up together, and that there is no clear orientation. With well-defined course goals, students will have a clear statement of the purpose and objectives of the course. Moreover, The informants' responses to the 4th statement revealed that more than

half of students stated that the current ESP course did not take their English language needs into account: 62.2% (strongly disagree) and 31.5% (disagree) of them claimed that there exists a gap between their current ESP lessons and their English language needs. This, in fact, demonstrated that ESP course have not yet been successfully corresponding to students' needs; courses which focus the teaching of English language needed. In regard to the 5th statement, the table above displays that seventy- eight and a half percent (59.5 %) of students did not agree that the English course prepare them for success in the job market. This means that students expect a systematic proceeding of a job specific needs- based course to practise all the needed skills and relevant project-oriented activities in order to meet the job market requirements. The purpose of the 6th item in the table above is to discover whether ESP course helps students develop their English language skills. It is obvious that students, more than half of them (64.6 %) were unsatisfied with the skills used in ESP course, whereas only 35.4% of them agree with the skills developed in the classroom. Substantially, in ESP it is a needs analysis that tailors which language skills are most needed by the students, and the course is delineated accordingly. Furthermore, the students' responses to the 7th statement vary between agreement and disagreement. A considerable proportion of respondents (56.3 %) disagreed about the materials used in the current ESP course while (26 %) expressed their agreement. The respondents did not agree that the course materials contained adequate skills and knowledge needed by engineering students. The results showed that there was unavailability of effective Instructional materials which could increase students' performance at FHREEUS. It stands to reason that students would prefer to use a variety of teaching materials such as handouts, academic and occupational based materials, Internet and video materials, scientific articles, and audio-visual presentations to enhance their motivation and participation. As represented in the table above, the informants' answers to the 8th statement indicated that more than half (67.7 %) of them disagreed with the methodologies the instructor applied in the teaching process. However, 32.3% of students tended to be satisfied. This makes us understand that teachers of English language in non-English departments as the case of FHREEUS need a sort of cooperation with subject specialists, as well as training in ESP teaching to get through the specific needs of the students. In regard to the 9th item, a big proportion (66.4 % disagreed) of respondents reported that the assessment activities used in ESP/EST tests and exams are inappropriate whereas 21.3 % of them announced their agreement about the suitability of the assessment activities and procedures. Most experts agreed that the exams and tests failed to measure such important abilities as effective oral and written communication. For the 10th item listed in the table above, a big number of respondents (67 %) showed a negative attitude towards the assessment tests because they believed they did not help them to improve their performance in English, a subject that is so crucial for their future job careers in petroleum and geology fields which are mainly practised through an English medium. This implies that the whole assessment process seems vague and it does not tell exactly where the learner stands. Logically assessments in ESP classrooms are deemed to raise learners' opportunities to determine their strengths and weaknesses as they were faced with a variety of task types, and improve their skills and performance. Finally, for the 11th item, a considerable number of respondents pointed that the time allocated to their English course per week is insufficient. It can be clearly deduced from the table above that a vast majority of the respondents (84.6 %) were not satisfied with the amount of time spent in English language course. They felt that with one hour and half per week it was difficult to cover all the aspects of the course.

Question 4. To what extent do you think there is inconsistency between your learning styles and your instructors' teaching styles?

Table 5*Inconsistency between Students Learning Styles and ESP Teachers' Learning Styles*

Statement	No much		Little bit		Too much		Total	
	No	%	No	%	No	%	No	%
Gap between the teachers 'styles of teaching and learners' learning styles	9	11%	20	22%	62	67%	93	100%

As shown in the table (5) the results expressed that there was obviously a gap or inconsistency between the teachers' styles teaching and learners' learning styles as 67% of students claimed that there was too much gap between the present teaching situation and their expectations. Since there was inconsistency between the teachers' teaching styles and learners' learning styles, effective learning would not occur in class. Felder and Spurlin (2005) states that when mismatches exist between learning styles of most students in a class and the teaching style of the instructor, the students may become bored and inattentive do poorly on tests, get discouraged about the course.

Question 5. State whether your ESP course emphasizes the following skills.

The purpose of this question is to find out which skills are emphasised on the most, the respondents were offered the ability to select various choices.

Table 6

Students' Perceptions about the Frequency of Language Skills Used in the Course

English languageskills	N°	Percentage		N°	%
Listening skills	42	45%	1. Following lectures	66	71, 1 %
			2. listening to teacher's instructions for assignments	57	62 %
			3. listening to oral presentations	4	4 %
Reading skills	44	48%	1. Reading texts in class	33	35.2 %
			2. Reading course handouts	58	63.1%
			3. Reading texts on the laptop	1	1.2 %
Writing skills	15	16%	1. Taking notes in lectures	8	9 %
			2. Writing assignments and reports	8	9 %
			3. Writing reports and summaries	2	2.6 %
Speaking skills	10	10.5%	1. Giving oral presentations	3	3 %
			2. Debating course topics	5	5.3 %
			3. Asking questions in course sessions	7	8.2 %

It is obvious from the table above that speaking and writing skills receive a little practice, with (10.5%) for speaking and (16 %) for writing. Listening and reading skills receive much more practice which are represented by (48 %) for listening and for reading (45 %) of the sample. Among the sub-skills of listening, the results revealed that following lectures (71, 1 %) and listening to teacher's instructions for assignments (62 %) were perceived to be more frequently used in class. The remaining listening sub-skill, listening to oral presentations (4 %), was seen to be practised less. As for reading sub-skills, the findings showed that the most frequently used sub-skill was reading course handouts with a percentage of (63.1 %), followed by reading texts in class (35.2 %). On the other hand, the least frequent reading sub-skill practised in class is reading texts on laptop (1.2%). With Regard to the writing and speaking sub-skills, the findings displayed that the respondents seldom write assignments and reports and rarely take notes in lectures (9 % each) and only 2.6 % of respondents who chose writing reports and summaries.. It was also mentioned that the students rarely ask questions during class (8.2 %), debate course topics (5.3 %) or give oral presentations (3%).

Question 6. Identify and prioritize the skill you need to improve most?

The students were asked to grade the skills they wanted to improve in the language course in terms of priority. The participants could select more than one option. The results are presented here below:

Table 7

The Students' Order of Priority of English Language Skills

Language skills	Not a priority		Low priority		Medium priority		High priority		Essential		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Listening	4	4.1	5	6.1	18	20.1	9	10.2	55	59.5	93	100
Speaking	8	9.1	8	9.2	8	8.3	10	11.3	58	62.1	93	100
Reading	8	9	5	5.1	8	9	15	16	57	60.9	93	100
Writing	12	13.1	11	12.5	13	13.7	12	12.6	45	48.1	93	100

The results showed that all the skills mentioned in the table above are approved by more than half of the respondents. The percentages indicated that the skills are important for students to possess in order to succeed in learning English language and overcome the probable challenges and obstacles. It appears clearly from the table above that the four language skills have nearly the same level of importance to fulfill students' target needs. Speaking was ranked by students as the first primary skill they hoped to improve in the language course (62.1%), considering that speaking is usually undervalued in many ESP courses based on target situation needs analysis. Reading was ranked in the second position in terms of importance in students' discipline (60.9%). In fact, reading skills are needed to be developed for science and technology students. Listening comprehension skills came next, as recognized by 59.5 % of the subjects. Writing was put in the fourth position with

48.1 %. There are a lot of reasons students give for avoiding the hard work of writing. One of the most usual obstacles is a lack of time. Many students concentrate much more on skills such as reading or listening. Overall, the students' need in taking training in speaking and reading is more influential than listening and writing.

Questions 7. Do you agree that the materials used in the course respond appropriately to the following statements?

Table 8

Students' Perceptions about Materials Used In the Current Course

Course materials	Strongly Agree		Agree		Neutral		disagree		Strongly Disagree	
	No	%	No	%	No	%	No	%	No	%
a) stimulate interest	2	2.4	5	5.3	34	37	47	51	4	5
b) are appropriate to your level	7	8	10	11	17	19	51	55	6	7
c) are well organized	7	8	12	12.7	19	20.3	49	53	5	6
d) are related to your field of study	5	6	4	4.1	30	31.9	53	57	1	1
e) help to understand the content	3	4	7	8	21	23	58	63	2	2
f) are boring	6	7	46	50.2	33	35.8	4	5	2	2

Based on the table above, the results showed that the respondents complained of the lack of effective materials used in course sessions, which has a crucial role in decreasing students' interest in learning English language. This confirmed the assumption that the present English

courses did not meet the students' expectations to reach the desired level. The students' perceptions about the materials used in the present English language course were mostly shared between 'disagree' and 'Neutral' choices. Concerning the first statement about whether the students agree or disagree that the materials used in class stimulate their interest, most of them disagree (51 %) and 37% responded in a neutral way. The second statement about the students' perceptions about the appropriateness of materials to students' level was answered with percentages of (55%) disagree and (19%) neutral. The statement that materials are well organized was disagreed by most of the students (53%), and 18.3 % answered neutral. Concerning materials related to students' field of study, more than half of students (57 %) disagreed with this statement and 31.3 % of respondents indicated neutral. When given the statement that materials used in English courses help them understand the content, most of them (63%) disagreed and only 23% answered in a neutral way. The last item is a negatively keyed statement that differs in direction from the previous listed positively-wording statements, which is typically used to reduce acquiescent response tendencies that might bias the measurement of the construct of interest. The materials are boring (negative) is in contrast with the first statement suggesting that materials stimulate interest (positive). The respondents' answers to the last statement arrived at (50.2%) agree and (35.8 %) neutral. Both of the last statement and the first statement showed almost the same percentages. Based on reverse scoring scale which runs in opposite direction, the last statement was answered with agreement; however, in the first statement the disagreement was dominant.

Question 8. Which Classroom Learning Activities do you want to practise in English class?

As part of the needs analysis questionnaire, students in FHREEUS, Ouargla University were asked about their preferences of class activities and preferred linguistic components.

Table 9

Classroom Learning Activities Preferred by the Students

Activity Types	N° of respondents	% of respondents
a) Reading and exploring texts	54	58 %
b) Written exercises	49	49.3%
c) Writing summaries and reports	49	47.7%
d) Oral presentations	53	57.2%
e) Group discussions	50	42.3%
f) Expanding vocabulary in the subject area	57	61.1%
g) Grammar exercises	24	25.4%

As shown in the table, students' responses indicated that reading and exploring texts were highly rated essential in English class (58 %). They considered reading and exploring texts in class is very important for them. This result showed a clear picture about the reality of students' needs for reading texts in their target field of study. As can be seen from table 9, Oral presentations came in the second place with (57.2%) of the students' choices while group discussions obtained nearly the same of the votes with (42.3%). Another item the informants indicated as the most essential component in their English course is expanding vocabulary in the subject area. The students found that the introduction of the specialist vocabulary was the most needed linguistic element. This result scores the highest percentage (61.1%) in this section. However, written exercises (49.3%), and Writing summaries (47.7%) are identified as the less ranked preferred activities in the list. Richards and Renandya (2002), proved that 'vocabulary is a core component of language proficiency and provides much of the basis for how well learners

speak, listen, read, and write'. The least chosen item, in the respondents' view, showing a score of (25.4 %), is practising grammar exercises in class. The role of grammar in ESP teaching is often misconceived as ESP is not regarded to be associated with teaching grammar (Dudley-Evans & St John, 1998). In ESP English course, however, it is essential to point up many essential grammatical features the texts display and also some others, which may appear in the event of some verbal communication.

Question 9. In class how do you prefer learning?

The question (9) was intended to find out students' preferred learning styles and strategies. The analysed data are presented in the table below..

Table 10
Students' Preferred Learning Styles

Students preferred learning styles	Strongly agree		Agree		Disagree		Strongly disagree	
	No	%	No	%	No	%	No	%
a) Listening To Lectures	55	59.1	46	17	16	18	5	5.3
b) Copying From The Board	54	58	12	13	18	20	8	9
c) Taking Notes From Power-Point Presentations	53	57.2	19	21	15	16	5	5.8
d) Taking Notes From Teachers' Instructions	50	53.3	17	19	21	23	4	4.7
e) Reading Class Materials	53	57.1	18	20	16	18	4	4.9
f) Conducting Class Debates And Discussions	64	69	17	19	10	11	1	1
g) Using Of Translation In Classroom	39	42.2	5	6	21	23	27	28.8
h) Using Internet Resources In Class	57	61	21	23	9	10	5	6

As shown in table (10) all ESP teachers acknowledge the importance of understanding the students' different learning style preferences and their role in attaining academic success. The first most preferred learning style (59.1 % strongly agree) mentioned by the respondents was listening to lectures. Research demonstrated that information is more easily learnt when it is linked to what one already knows. Thus the lecture needs to build a bridge between students' knowledge background and the new material or subject topic of the lecture (McKeachie and Svinicki, 2014). Furthermore, the results of the items (b,c,d) showed that the majority of students with almost similar percentages (58 % , 57.2%, 53.3%) wanted to engage in the learning styles like copying from the board, taking notes from power point presentations, taking notes from teachers' instructions in terms of course delivery methods. Research suggests that a teacher's teaching style can impact student learning and motivation (Bolkan& Griffin, 2017; De Meyer et al., 2014). In the same manner as with the previous items, reading class materials, another learning style, is strongly preferred by the respondents (57.1 % strongly agree). In this style, activities are used to enhance self-discovery and practise critical thinking skills, which can often help students develop an effective understanding of the topic. Based on the results of the item (f), the students expressed favourable attitude (69 % strongly agree) towards classroom debates and discussions. Whereas, 6 out of 93 students stated that they strongly disagreed with the implementation of debates and discussions in ESP class. As an instructional method, debating engages students in expressing their views from two competing perspectives with the goal of contradicting each other's arguments (Chang & Cho, 2010). However, the students' responses towards the use of translation in classroom revealed that 42.1 % of them strongly agree with the statement. Translation is an efficient ESP learning method if the load of translation done is well-proportioned, activities are well-thought out and the student's profile and needs in each specific course well- rationalized. Also the findings of this question showed that attitudes of students towards the use of the internet are very positive and high (61%).

Question 10. Which teaching/learning aids do you prefer in the class?

Table 11
Students' Preferences of Classroom Aids

Type of aids	N° of respondents	% of respondents
a) Audio recordings	9	9.5%
b) Internet resources	65	63%
c) Video/film	56	60.3%
d) Written /Printed materials	56	60.1%
e) Using the board	42	45%

The question (10) in a form of multiple choice question which investigates students' preferences for teaching aids used in ESP.

From the findings in table above, we find that the three top options chosen by the informants were Internet resources, videos and written printed materials come successively with 63 %, 60.3 % and 60.1 successively. Engineering students need to be exposed to the use of Internet during their English language sessions and also to keep pace with the latest communication trends. Neo millennial learners are capable of seeking the help of modern technology to meet their current needs (Siemens, 2004). Whereas, using the board during lectures called forth responses with 45%. Only 9.5% of respondents opted for the incorporation of audio recordings. Little emphasis was put on audio materials, as they do not encourage participation and lack interest or stimulation. Integrating different teaching materials would engage, maintain and refresh students' interest in the course.

Question 11. In your opinion, how much time a week do you think should be allocated for English class?

Table 12
Students' Preferences for the Weekly Teaching Time

Suggested course sessions	N° of respondents	% of respondents
a) One course session	13	14.1 %
b) Two course sessions	61	65.5 %
c) Three course sessions	19	20.4 %
Total	93	100%

From the table (12) above it is obvious that a big majority of students proposed two course sessions with (65.5 %). This would be acceptably adequate for students to increase their English level and satisfy their needs (see question 3 and table 4 above). Moreover, 20.5% showed preference for the amount of 3 sessions weekly in order to cover all the aspects of the English language course.

III.2. Discussion

The main purpose of the present study was to investigate how petroleum and geological engineering students perceived the English language needs in FHREEUS at Ouargla University. For that reason, NA is used as the appropriate method for carrying out research about identifying and analysing the learning needs of ESP/EST students. In this respect, many studies (Hutchinson and Waters, 1987; Nunan, 1989; and Dudley-Evans and St-John, 1998) agreed that an ESP course should be designed according to the findings of an exhaustive NA to identify and bridge the learning gaps and then meet the needs of ESP students.

From analysis of students' questionnaire, the following elements can be retained as main findings:

In response to the hypothesis which states that Petroleum and Geological Engineering students at FHREEUS have a negative attitude towards learning English taught in their faculty, the results of the questionnaire unveiled that a large number students are very much concerned

with the importance of English for their academic fulfillment, further studies and prospective careers (see question 1 in the questionnaire). Accordingly, they strongly agreed that their purposes for studying English were mostly academic and professional. Generally, engineering students study English 'not because they are interested in the English Language or English culture as such, but because they need English for study or work purposes.' (Robinson, 1991). However, apropos the present status of the ESP/EST course, analysis, unfortunately, has proved that this course is highly disjointed from students' language needs. That is, the highest percentage of the respondents expressed negative views about the effectiveness of the English course, as shown in Table 3. Nunan (1989) mentioned that "the effectiveness of a language program will be dictated as much by the attitudes and expectations of the learners as by the specifications of the official curriculum" (p. 176).

As revealed in the present situation analysis, the level of a majority of students in the sample is average in English, which is clearly a good indication for students' need to promote their English competence to the superior levels (high and very high). However, the results also showed that the number of the students with low English level (33 %) is not minimal; the issue which should be the focus of all ESP teachers. In order to take the analysis a few steps further, it was noted that students were confronted with several problems, such as insufficient language skills, insufficient teaching time and lack of clarity of the course objectives. It seems that the students found the course objectives not well-defined with the implication that they did not help them gain clarity about the content to be learnt and achieve their target need. According to Graves (2000), "stating goals helps to define priorities and to make choices. Clear goals help to make teaching purposeful". Furthermore, the findings showed that most of the respondents expressed the view that one hour and a half per week during all the academic year is not enough for the ESP/EST course to help them achieve proficiency in the language. This might be consistent with their English language lacks and their awareness and desire to attend more training courses. More than that, students encountered difficulties such as low achievement in ESP, unsuitable teaching materials and teaching styles since most of ESP/EST courses are based only on following lectures, reading texts and handouts, and occasionally on grammar and vocabulary along with the inexistence of effective teaching aids and materials during the lectures, such as instructional videos, internet resources and misuse of classroom supplies.

With regard to the petroleum and geological engineering students' English language needs, the results indicate that there are many English language skills that the students need to learn in order to adequately apply in the target situation. This was perceivable from the results showed in Tables 7 and 8, which depict the frequencies of English language skills used in the present ESP course and the importance of these skills respectively. It seems that the only skills that were more frequently used are reading and listening. This demonstrates that productive skills were not used enough, which conveys that students did not have the possibility to practise the knowledge they acquired through receptive skills and failed to ensure that the received knowledge is understood. Because students could not generate any kind of outcome, it is very hard for instructors to evaluate the achievements of their students and provide feedback. A study that was carried out by Indrasari (2016) demonstrated that what students really want in ESP classes is the use and incorporation of more speaking and writing activities and this guarantees that receptive skills and productive skills are integrated. Coincidentally, all the language skills have been perceived by the subjects to be important to acquire regardless of being used frequently or not. Regarding the problem that was mentioned earlier, students emphasized that having receptive skills (reading and listening) as the only skills to perform in class, is not sufficient. Effectively, they agreed that they need to deal with different teaching skills and activities. Moreover, learning how to speak and how to write would adequately help them to have a chance to apply and use what they have studied. The truth is, writing and speaking skills are more essential than can appear on the surface and every ESP/EST learner needs to improve them

Moreover, we noted that a large majority of students expressed their desire that the content of the teaching-learning materials should be related to the area of specific English. They agreed

that teaching should be centered on science and technology English associated with their academic branch. In the matter of learning styles and strategies used in the present ESP course, the results clearly indicated that the majority of the students found the teachers' teaching styles are not appropriate enough to make them acquire the proficiency that help them function skillfully in the target situation. In the matter of students' preferences, the results showed that there was a gap between the students' preferred styles and the teachers' teaching approaches in ESP/EST class. This proves that ESP instructors were not truly aware of their students' learning needs. The study clearly pointed out that the students opted for the diversity in the way they wanted to learn. As far as the choice of the learning aids is concerned, a big number of students (60.1 %) still maintain their preference for printed materials. The reason might be that print materials are easier to learn from. The study also revealed that the respondents preferred using internet resources for academic purpose. This should be due to the fact that the use of internet enables them extending the scope of their reading and learning, motivate peer and group learning. On the contrast audio aids, writing on the board are of lower priority. Finally, as for the time allocation to the English course at FHREEUS technology, It can be obviously deduced from the results above that a big majority of the respondents (84.6%) believed that the time allocated to the ESP/EST course was not sufficiently adequate. They felt that with two hours per week it was difficult to cope with all the components of the course thoroughly. Henebry (1997) made the same remark when he found that the students would have less chance to understand the course if the course was scheduled just once a week. The questionnaire included a question for students to choose the suitable amount of time that should be allocated to ESP course according to their preferences. A vast majority of the students preferred two course sessions per week with (64.5%) and (20.4 %) opted for three course sessions believing to be sufficient for English course. However, only two students still stick to the option of one session.

The analysis of the findings divulges the lack of an adequate ESP course that satisfies the students' learning needs in the faculty of Petroleum and Geological Engineering in FHREEUS at the University of Ouargla. This study displayed that in order to respond to the requirements of these special learners, it is advised to design an ESP course that ensures more attention to the course objectives accompanied with the elaboration of pertinent design of special courses that meet to the students'' academic and professional needs.

III.3. Recommendations

In summary, a few recommendations are presented below:

- a) understanding the lectures in the field study
- b) using English for professional purposes
- c) specialised knowledge
- d) teacher's Training (improving teaching styles)
- e) developing needs analysis
- f) providing access to information via internet
- g) using video and internet based learning materials rather than audio recordings
- h) improving the students' language skills
- i) learning through listening and taking notes
- j) taking note from teachers' instructions
- k) taking notes from power-point presentations
- l) copying notes from the board
- m) reading texts in their field of study
- n) practising debates and discussions in the classroom
- o) participating in class discussions
- p) learning and expanding vocabulary
- q) writing summaries and reports
- r) adding more weekly class sessions to the course

IV- Conclusion:

The major novelties of the study and their pedagogical inferences

The objective of this study is to find out the current implementation of English for specific purposes (ESP) at FHREEUS whether it has satisfied the students' needs and demands or not. The samples of this study are the three departments: petroleum production department, petroleum drilling and mechanics department and earth and universe sciences department. The result of this study shows that the present implementation of English course is not appropriately sufficiently effective at the three departments: there were a lot of lacunas as regards the content, skills, styles, materials and time allocation for the course.

The findings of the study should be given more concern as generating more insights into the study of ESP taught for engineering students; it provides sufficient data and a detailed account of English language needs in higher education, it suggests new findings to the investigation of such needs in the area of ESP; it also adds to the study of ESP and its teaching practices; additionally, it applies a study survey research design that makes use of a questionnaire instrument to obtain standardized data from all participants in the sample, which can be taken as an example of using the needs analysis method for research in the area of ESP course design; last but not the least, it yields significant data on the evaluation of the researched ESP course content and materials.

The results of the study have important implications for the teaching of English for engineering students and some of its findings may be transposable to other ESP contexts. By unveiling learner needs, the instructors and professionals can obtain substantial information that supplies a planning framework and tools in identifying the objectives and outcomes of the course. Moreover, present and target needs analysis provide clear understanding of students' learning demands. The results on learner needs for ESP course provide that a dual-perspective analysis of the present and the target situation needs suggest more awareness of the roles ESP instructors may need to perform in order to proficiently teach special English language. And finally, the study should be useful for anyone engaged in ESP course development, particularly in the science and technology disciplines in Algeria.

Limitations

The major limitation of this study is that it provides little basis for generalization of results to the wider population. Since the study inquired only one single case in a particular higher educational setting and examined a unique language teaching situation, the results are not generalisable. There are two other limitations that could be addressed in future research. First, time constraints; participants are only accessible during a particular period of time. Second, self-reporting bias referring to the respondents' attitudes and beliefs due to the use of only a questionnaire survey instrument.

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