Investigating English Language Needs of Petroleum Master One Students at Kasdi Merbeh University in Ouargla, Algeria

[1]GHEDEIR BRAHIM MOHAMMED, [2]NESBA ASMA

[1,2] University of El-Oued, University of Sidi Belabbes, Algeria

Abstract: **Needs analysis is an essential first step for designing appropriate language courses to help students acquire knowledge in their academic studies. To determine what students need to achieve through the medium of English, it is imperative to carry out a needs analysis. Starting from this view, the current study seeks to identify the academic English language target needs of petroleum master one students at Kasdi Merbeh University in Ouargla, Algeria. Guided by Hutchinson and Waters' (1987) framework of needs analysis, the study surveys the perceptions of sixty petroleum master one students about their present English language proficiency, the academic English language proficiency necessary for their academic studies, and the English language skills they desire to learn. A questionnaire is used for data collection. Also five teachers teaching English at both the Faculty of Applied Sciences, precisely at the Department of Mechanics; and the Faculty of Fuels and Geology, precisely at the «Department of Petroleum Studies» and the «Department of Geology» are interviewed face to face by the researcher. The results show the significance of English for petroleum master one students and identify the students' needs, lacks, and wants with regard to the English language. The research work concludes with pedagogical implications that help to improve the current English language course based on students' needs.**

Keywords: **course design, English for Specific Purposes, needs analysis.**

1. INTRODUCTION

Many researchers (Hutchinson & Waters, 1987; Nunan, 1989; Robinson, 1991; Dudley-Evans & St John, 1988) put forward the idea that identifying students' needs should be the first step in designing appropriate English for Specific Purpose syllabus.

Previous research in science and technology education framework shows that the English language is of paramount importance in the academic and professional life of students of science and technology.

English is an essential tool in science and technology education and therefore integrating English into engineering, science, and math courses is an effective way to improve the performance of science and technology students in oral and written communication.

Similarly, as English has become the international language of science and technology, science and technology students have to face this fact while they are students since books, papers, handbooks, journals, etc written in English are included in their reading lists; and after graduation they need English as one of their most valuable resources at the labor market.

However, petroleum master one (M 1) students, as a part of science and technology framework, at Kasdi Merbah University in Ouargla, Algeria, can be described as low-competent in English language. This is because it is not designed according to the students' needs and if the students' needs are taken into account in the first place in designing an English language curriculum, the students' achievements would be enhanced.

Needs analysis has been regarded as the most appropriate method as it can tell us a lot about the nature and content of the learners' target language needs.

The present study adopts Hutchinson & Waters (1987) approach to needs Analysis because in comparison to approaches to Needs Analysis suggested by other scholars, it provides a more manageable framework for analyzing the target situation and also a parallel framework for analyzing learning needs. It is also clear and comprehensive as it includes the target situation analysis, the present situation analysis, objective needs, and subjective needs by dividing the learners' target needs into necessities, lacks, and wants. Moreover, Hutchinson & Waters approach has been recommended and adopted by many researchers.

The findings of the present study are strongly expected to help course designers to create an appropriate English language course for petroleum M 1 students. Therefore, the study addresses the following questions:

1) - What is the present academic English language proficiency of petroleum M 1 students at Kasdi Merbeh University, Ouargla in Algeria?

2) - What are the academic English language skills necessary for petroleum M 1 students from their points of view?

3) – What are the academic English language skills necessary for petroleum M 1 students, as a sample of science and technology students, from the points of view of teachers?

4) - What are the petroleum M 1 students lacks?

5) - To what extent is the English language course relevant to the petroleum M 1 students needs and expectations?

2. LITERATURE REVIEW RELATED TO NEEDS ANALYSIS

2.1. Definitions of Needs Analysis:

A key stage in ESP is needs analysis. Needs analysis is the corner stone of ESP and leads to a focused course (Brown, 1995; Chambers, 1980; Dudley-Evans and St John, 1988; Ellis and Johnson, 1994; Jordan, 1997).

According to Robinson (1991: 7), "needs analysis is generally regarded as critical to ESP, although ESP is by no means the only educational enterprise which makes use of it ". Strevens (1977) suggests that needs analysis is a necessary first step for teaching English for specific purposes; it is more concerned with the nature of scientific discourse. Hutchinson and Waters (1987: 53) argue that any language course should be based on needs analysis.

Needs analysis is fundamental to an ESP/EAP approach to course design. Dudley- Evans and St John (1988: 121) also state that " needs analysis is the process of establishing the what and how of a course ". Language needs analysis is essentially a pragmatic activity focused on specific situations. Therefore, in the ESP and EAP context, needs analysis is crucial in determining the aspects of language that are critical for a particular area of teaching and if needs are clear, learning aims can be expressed more easily and language courses become more motivating. In fact, successful experiences in designing ESP courses show the importance of conducting needs analysis to ascertain learners' target and learning needs and then integrate the required linguistic elements and skills into the syllabus (Hutchinson and Waters, 1987).

As Robinson (1991: 8) suggests, needs analysis is not only for determining the "what and how of language teaching". He adds that a study of needs analysis should be repeated so that it can be built into the formative process. This would lead to a very formative database of learners, sponsors, subject specialists and above all ESP practitioners' views and opinions of the English language.

The literature written on ESP in general reveals that needs analysis is central in ESP. It is a key concept that has been considered inevitable to be conducted before designing any successful ESP course.

2.2. Approaches to Needs Analysis:

Several approaches to needs analysis have been provided by different scholars. The first important approach to needs analysis (NA) is named Target Situation Analysis (TSA). According to Jordan (1997), the TSA is related to any needs analysis focusing on the learners' needs at the end of learning a language course. Its main concern is to prepare materials for designing the communicative syllabus. This approach to needs analysis is represented by Munby' s (1987) model of needs analysis.

Another important approach to NA is called Present Situation Analysis (PSA). The PSA is based on identifying learners' control of the target language at the beginning of the language course (Jordan, 1997). It seeks to estimate students' present strengths and weaknesses in the language skills and in the experience of learning (Dudley-Evans and St John, 1988). In the PSA approach, there are three main sources for collecting information: the learners themselves, the language teaching establishment, and the user institution. From each of these sources, information is sought regarding levels of ability, resources, and views on language teaching and learning. Hence, in this context, the success of learning in an ESP course is based on learners' identification of their learning objectives, and learning objectives set out by the teaching establishment and the user institution.

As a natural development of the TSA and the PSA, Hutchinson and Waters (1987) propose their approach to NA, in which they advocate that materials and methodology of an ESP course are to be determined by learners' needs. Their model combines TSA and PSA, and objective needs as well as subjective needs. This approach divides learners' needs of the language into two types: target needs and learning needs. The former is related to what knowledge and abilities the learner needs to have in order to function effectively in the target situation; and the latter refers to what the learner needs to do in order to learn. In addition, Hutchinson and Waters (1987) divide target needs into three key parts: necessity (needs identified by the requirements of target situation), lacks (the necessary proficiency for the target situation minus what the learners already know), and wants (what the learners desire to learn).

In the approach suggested by Dudley-Evans and St John (1998), NA is broadened largely to encompass not only the TSA and the PSA, but also deficiency analysis, linguistic analysis, discourse analysis, genre analysis, and means analysis. According to this model, in order to analyze and identify the learners' needs, all of these multifaceted approaches to NA should be adopted and applied.

This study adopts Hutchinson and Waters' (1987) approach to NA because in comparison with approaches to NA suggested by other scholars, it provides more manageable framework for analyzing the target situation and also a parallel framework for analyzing learning needs and is comprehensive and clear as it includes the TSA, the PSA, objective needs, and subjective needs by dividing the learners' target needs into necessity, lacks, and wants. Moreover, Hutchinson and Waters model to needs analysis offers a useful classification of needs which may be seen to reflect differing viewpoints and give rise to different forms of NA. It has also been recommended and adopted by many scholars and researchers.

3.   ESP COURSE DESIGN

Hutchinson and Waters (1987: 65) define the course as: "an integrated series of teaching/learning experiences whose ultimate aim is to lead the learners to a particular state of knowledge".

ESP teachers are concerned more with designing appropriate courses for various groups of learners (Hutchinson and Waters, 1987). There are three factors influencing ESP course design which are: language description, learning theories, and needs analysis. the interdependence of these factors in the course design process is very important. The course design must bring the learner into play at all stages of the design process.

Additionally, there are three main stages that should never be neglected when designing an ESP course: setting the objectives of the course on the basis of target and learning needs. This involves analyzing the learners' needs, lacks, and wants, choice of the appropriate teaching/learning theory, and choice of the appropriate materials (authentic materials) which could be done through evaluation, development, or adaptation. By following these steps, one has the chance of designing an ESP course that really meets the requirements of the target learners.

Most importantly, in the context of ESP course design, needs analysis is the corner stone of ESP and leads to a focused course (Brown, 1995; Chambers, 1980; Dudley Evans and St John, 1998; Jordan, 1997). It plays a vital role in the process of designing and carrying out any ESP course. In this framework, Dudley-Evans and St John (1988: 126) mention that needs analysis aims at knowing learners as people, as language users and as language learners. Second, a study of needs analysis also aims at considering how language learning and skills learning can be maximized for a given group of learners. Third, needs analysis aims at knowing the target situations and learning environment so that data can be appropriately be interpreted.

It is obvious that needs analysis is a very crucial first step prior to designing and developing a language course. In brief, needs analysis is a primary specific characteristic in designing ESP courses. In order to design adequate ESP courses, learners' needs must take a top priority by course and syllabus designers.

4.   METHODOLOGY

The methodology implemented in this study is both qualitative and quantitative. As the purpose of this study is identifying learners' needs and better describe them regarding both learners' and teachers' views, the qualitative approach seems to be appropriate as a part of this mixed methods research. Besides, as the focus of the quantitative approach is to represent the actual results derived from research instruments in terms of numbers and statistical results, quantitative approach seems to be suitable as a part of this mixed-methods research.

So, a multi-method approach that involves both quantitative and qualitative research methods is adopted in this research work. Triangulation of sources and methods (Gorard and Taylor, 2004) is also attempted in order to secure the validity and reliability of the research.

Data is collected by using students' questionnaire that included closed and open-questions and is administered to sixty (60) students. Besides, semi-structured interview is administered to five (05) teachers of English in an attempt to identify the students' needs, lacks, and wants with regard to the English language.

4.1. Sampling:

Sampling is an important of most educational research projects. The significance of sampling comes from the fact that the precision of conducting the sampling procedures determine the extent to which the research findings can be generalized. Sampling refers to the selection of a subset of elements from a large group of objects for the purpose of being able to draw general conclusion about the entire population.

The target student population of this study are the students of Petroleum M 1 students studying in the academic year 2015 – 2016 at the Department of Petroleum Studies at Kasdi Merbeh University, Ouargla in Algeria. The total number of participants are sixty (60) male students divided equally between three master branches: 20 students from "Mechanical Petroleum Fields", 20 from "Exploration", and 20 others from the branch of Production, who are selected randomly.

Additionally, five teachers teaching English at both the Faculty of Applied Sciences, namely, the Department of Mechanics; and the Faculty of Fuels and Geology, precisely, the Department of Petroleum Studies and the Department of Geology at the University of Kasdi Merbeh, Ouargla, are interviewed face to face by the researcher. The five teachers are chosen purposefully from very close science and technology disciplines, as there is only one English teacher at the Department of Petroleum Studies, who are asked the same questions. They are interviewed at the Faculty of Applied Sciences, the University of Kasdi Merbeh on May 2016, in a planned meeting.

4.2. Description of the Students' Questionnaire:

The questionnaire is designed in three parts:

Part A

The first part of this questionnaire asks for the demographic and background information of the respondents on their gender, specific academic specialty, years of studying English in schools, and English proficiency in the four basic skills: Listening, Speaking, Reading, and Writing. The participants are questioned to state their English language skill levels of those four basic skills by ticking in only one box under the four categories of each skill: "Very good", "Good", "Moderate", "Poor", "Very poor".

This background information about the participants is important for the present study as it equipped the researcher with information about the present English level of the respondents.

Part B

The second part of the students' questionnaire (Part B) concerns the students' English language needs in their ESP English course, Applied English. This part comprises sixteen items of English-language needs in the area of language basic skills

which is broken into four skills: Listening, Speaking, Reading, and Writing, including four items of listening skills, four items of speaking skills, four items of reading skills, and four items of writing skills. The participants are asked to indicate the level of importance of each item which represents their English language needs in each language skill area listed in the questionnaire. The four levels of importance used in the questionnaire are: "very important", "moderately important", "slightly important", and "not important". Each level of importance is accorded with a number, (1 stands for very important), (2 for moderately important), (3 for slightly important), and (4 for not important). The students are requested to circle the numbers listed in front of each item to indicate the level of importance of each of them.

Part C

This part of the questionnaire is designed to provide data whether the ESP English course devoted to the petroleum M 1 student is relevant to their academic specialty needs; the participants are asked to circle one answer among four listed as follows: (a lot, somehow, a little, not relevant at all). Additionally, the respondents are requested if the time devoted to the ESP English course is satisfactory. Meanwhile, they are questioned about their preference in terms of the number of sessions per week they would like to have English class. The students are also asked if their ESP English teacher(s) is an English teacher or subject specialist and if they prefer to be taught by English teacher or subject specialist. In order to assess the learning difficulties the respondents face in the course(s), they are given four items and they are asked to order them according to the level of difficulty using numbers in front of each item, number one (1) stands for the most difficult, and number four (4) stands for the least difficult. In part C of the students' questionnaire, the participants are requested to indicate the degree in which the ESP English course help them in four given tasks stated in form of items in the questionnaire. The four answers are given in a scale below the question and they were asked to circle the appropriate number accordingly: (1: a lot of/ 2: somehow/ 3: a little/ 4: did not help at all).

The last question in part C of the questionnaire concerns the aspects in which the respondents acquire in English language by the end of the ESP English course.

4.3. Description of the Teachers' Interview:

This semi-structured interview comprises twenty-one questions. The questions used, and asked include the following broad lines:

- The academic degree, qualifications, experience and job status of the teaching staff.

- The issue of timing allocated to the ESP English course.

- The type of English taught by the ESP English teachers: General English, English related to science and technology, or English related more specifically to the students' field of the study.

- Collaboration between English teachers and the teachers of the specific field in the discussion of the ESP English course content according to the entire program of the students' specialty: between existence and non-existence.

- The level of the students' motivation, attendance, and achievement to the ESP English course in relation to the variable of designing the ESP English course on the basis of learners' academic needs.

- The learners' needs, lacks, and wants whether taken into consideration or not when designing ESP English courses.

- The type of materials used in the ESP English course teaching and the basis of the selection of these materials.

- The classification of the four language skills (Listening, speaking, reading, and writing) in terms of importance for the learners' of science and technology disciplines from the point of view of the English language teachers.

5. CONCLUSIONS AND DISCUSSION OF THE RESEARCH FINDINGS

The respondents considered all English language skills to be important in their academic study especially speaking and writing.

The findings of the present study reveal that the students of M 1 petroleum studies at Kasdi Merbeh University, Ouargla assess themselves as lacking much proficiency in the four English language skills. However, their level at reading skills is the highest followed by writing skills. On the other hand, teachers report that speaking and writing are of top priority for

ISSN 2394-9686

International Journal of Novel Research in Education and Learning
Vol. 4, Issue 1, pp: (20-26), Month: January – February 2017, Available at: www.noveltyjournals.com

the ESP English course for the students of science and technology in general though the ESP English course for the students of M 1 petroleum studies focuses on reading skills and marginalizes the remaining skills.

Based on the findings of the study, the students prefer the English language skills to be related to their academic discipline that's why they assert the aspects of English related to general English to be the most difficult when compared with the aspects related to science and technology or the academic branch of the students.

The researcher notes that the targeted students desire to improve their proficiency in the four English language skills, particularly speaking and writing.

Given the discussion of the findings on English language needs derived from the present study, learners' perceptions of the appropriateness of the English language course they take would be of more importance than the perceptions of other stakeholders, as Nunan (1989: 176) notes that " the effectiveness of a language program will be dictated as much by attitudes and expectations of the learners as by the specifications of the official curriculum ". This study shows that the ESP English course(s) presented to the students of M 1 petroleum studies is highly removed from the petroleum students' language needs. In other words, a great proportion of the subjects voiced negative views to the usefulness of the ESP English course. This point of view is shared by the EST English teachers interviewed in this study.

Raluka (2002) argues that ESP learners are current or future specialists who need English for their specific area and who are aware of their needs. He adds that these learners know exactly what they need English for and they know what the ESP English course should offer them. In this study, the majority of the students assert their weakness in speaking and listening skills and they have the perception that speaking and listening skills, and communication in general should be given priority when designing an ESP course. This may be a result of the fact that the students would like to improve job-related skills in order to be able to function effectively in the workplace where English is the medium of communication especially in foreign companies.

The findings of the present study also reveal that a large proportion of the students together with teachers have the view that one semester is not enough for the English course to aid them gain proficiency in the language. The students need to attend more training courses as well as teachers who need much training in ESP.

6. CONCLUSION

The purpose of the present study is to identify the language needs of petroleum M 1 students at Kasdi Merbeh University, Ouargla. It attempts to examine to what extent the course being offered addresses petroleum master one needs and to discover how students rate their competence in particular skills related to their academic and professional domains. Meanwhile, it tries to identify petroleum M 1 student's difficulties in learning English.

The results of this study show that the English language course offered to the students of petroleum M 1 students at Kasdi Merbeh University, Ouargla does not meet their English language needs.

ESP course should meet the needs of adult learners for academic and/or professional purposes. Designing an appropriate ESP course that suits target groups in an academic setting is not an easy task for course designers and ESP practitioners. The present study attempts to investigate the English language needs of petroleum master one students in order to facilitate the process of preparing appropriate courses attached to their needs.

The findings of the study are useful for the ESP course designers, teachers, and researchers in the field from the following angles: first, it provides contributions to teachers and syllabus designers to envisage the possible deficient or forgotten skill areas of the English course offered to the students of petroleum M 1. Second, it raises the awareness of needs analysis for ESP courses so that different needs analysis would be carried out. Finally, it helps syllabus and curriculum developers and designers be aware of the students' needs and thereby respond to such needs during the preparation of textbooks and programs pertinent to the students' academic and professional life.

In this concern, some fundamental aspects should be considered to propose the ESP English course(s) framework. First, a comprehensive ESP needs analysis focusing on a number of tasks and skills in listening, speaking, reading, and writing for academic and professional purposes should be conducted. Then, goals and objectives should be formulated. Subsequently, the content of the course based on the results of language needs analysis should be determined and

constructed. One should note that, the ESP English course is not considered as a final product that remains unchanged. Course development should be viewed as an on-going- process. It can be revised and modified through course evaluation and needs analysis.

This study is limited in several aspects. First, its subjects are drawn from the same university, Kasdi Merbeh University, Ouargla, and therefore its results may not be generalized to other educational settings or other population with different backgrounds. Future research involving a large sample across the country would help validate the findings of this study. Another limitation of this study concerns its methodological design where only a questionnaire survey and interview are adopted to collect research data. Other additional types of survey instruments should be included in further studies to obtain more in-depth information. Finally, the list of items and questions in both the questionnaire and the interview of this study is adequate and complete but it is subject to further confirmation and modification in future researches related to this study.

REFERENCES

[1]   Brown, J. D. (1995). The Elements of Language Curriculum. Boston: Heinle and Heinle.

[2]   Chambers, F. (1980). Are-Evaluation of Needs Analysis. The ESP Journal. 131-135.

[3]   Dudley-Evans, T., & St John, M.J. (1988). Developments in English for Specific Purposes: A multi- disciplinary approach. Cambridge: Cambridge University Press.

[4]   Ellis, M and Johnson, C. (1994). Teaching Business English. Hong Kong: Oxford University Press.

[5]   Gorard, S and Taylor, C. (2004). Combining Methods in Educational and Social Research. Mainhead: Open University Press.

[6]   Hutchinson, T. & Waters, A. (1987). English for Specific Purposes: a learning centered approach. Cambridge: Cambridge University Press.

[7]   Johnson, B., & Christensen, L. (2000). Educational Research: Quantitative and Qualitative Approaches. Needham Heights, MA: Allyn and Bacon.

[8]   Jordan, R. (1997). English for Academic Purposes: A guide and resource book for teachers. Cambridge: Cambridge University Press.

[9]   Munby, J. (1987). Communicative Syllabus Design. Cambridge: Cambridge University Press.

[10] Nunan, D. (1989). Designing Tasks for the Communicative Classroom. Cambridge: Cambridge University Press.

[11] Raluka, N. (2002). Designing an ESP Course. A Case Study. http://www.biblioteca.ase.ro/resure/resure_electronice /revista_articole.php?rn=11

[12] Robinson, P.C. (1980). ESP (English for Specific Purposes): The Present Position. Oxford: Pergamon Press.

[13] Robinson, P.C. (1991). ESP Today: A Practitioner's Guide: New York: Prentice Hall.

[14] Strevens, P. (1977). Special Purposes Language Learning: A Perspective. Language Teaching and Linguistics. Abstracts. Vol. 10, no. 3. Pp. 145-163.