



Needs Analysis in ESP and their Relationship with English for Civil Engineering Students

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Abstract

There is a very close interdependent relationship between English for Specific Purpose (ESP) and Needs Analysis (wants / interests analysis). ESP is an approach in teaching English based on the students' needs, while Needs analysis is an approach used to find out the full and accurate information about the needs of students in learning English. This article discusses about the important understanding of ESP and Needs analysis in language teaching, the history and development of the two disciplines as well as the relationship between need analysis and ESP in which all the issues give very essential contributions to the process of language learning especially in Teaching English for Civil Engineering students. The strongly advantage implication provided by those principles is; it can help designers and teachers of civil engineering to be able to identify all kinds of needs such as, methods of learning, learning materials, language content and assessment which are required and desired by the learners particularly civil engineering practitioners.

Key Words—Need Analysis, English For Specific Purposes (ESP), Language Teaching, English for Civil Engineering Students

1. INTRODUCTION

Since the 1960s, English for Specific Purposes (ESP) has grown to become one the most vital activities in the areas of English language teaching today (Dudley-Evan and John 1998). This discipline has become quite well known among any other language disciplines because of the status of English as an international lingua franca in almost any field of study. There has been a great demand in learning English as second or foreign language specific to occupational or academic purposes of learners who have studied General English but need language proficiencies for specific role such as; university students, accounting manager, nurses, hotel receptionist, engineer etc. The success of the development of ESP, of course, cannot be separated from the contribution of needs analysis, which has evolved since the early 1970s (West, 1994).

One of the 'absolute' characteristics of ESP, as defined by Dudley-Evan and

Johns (1998), is that ESP consists of English language teaching which is designed to meet specified needs of the learner. Robinson (1991) also agrees to include the criteria of learners' need in defining ESP. She defines that ESP course is based on an analysis of learners' needs "which aims to specify as closely as possible what exactly it is that students have to do through the medium of English" (Robinson, 1991, p.3). It's also stated by Lee (2016) that "the learning processes of ESP is not much different from those of general English except for the various content of learning, ESP could as well be used in the learning of any kind of English" (Lee, 2016, p.97). Many definitions of ESP have been given and each definitions concern with many aspects of language learning. However, most of the definitions always relate to the need of the learner in learning the language. Because according to Hutchinson et al "ESP is an approach to language teaching in which all decision as to content and method are based on the learners' reason for learning" (Hutchinson and Waters 1987, p.21). From these definitions, it can be clearly seen that there is a very close and interdependent relationship between ESP and needs analysis. This paper seeks to explore this relationship, as well as how need analysis has evolved in the field of ESP such as English for Civil Engineering Students. Before Coming to these topics, I am going to discuss what needs analysis is.

2. WHAT IS NEEDS ANALYSIS ?

Needs analysis is one of the most important components in teaching, which should be conducted before the course begins (West, 1994; Robinson, 1991; Jordan, 1997; Berwick, 1989; Dudley-Evans et.al, 1998; Hutchinson et al, 1987; Nunan, 1988, Cowling 2007 etc). Before designing an EOP/EAP course, it is essential for teachers or course designers to completely know about the learners. In this case, teachers need to find out as much as possible who the learners are, where they come from, why they are learning, who are their sponsors, where they are learning, how they are learning, what they need to know and what they do and do not know already. The more learner needs are clear, the more the objectives are expressed and the ESP course easily becomes successful (Theeb, H., & Albakrawi, M. (2013). Procedures used to collect information and determine the needs of learners who require a language are known as need analysis (Richards, 2001)

Language experts have attempted to define the concept of need analysis. However Richterich claims that "the very concept of language needs has never been clearly defined and remains at best ambiguous" (Richterich, 1983, cited in West, 1997). Still, the meaning of 'need' has been the focus of much discussion in the ELT world. Hutchinson and Waters (1987) point out that 'needs' are related to what the learner needs to do with the language in *target situation*, that is the situation in which the learners will use the language they are learning such as, writing university essay, doing presentation, writing business letters, answering telephone or reading instruction, etc. They distinguish needs from *necessities*, *lacks* and *wants*. *Necessities* refer to what the learner has to know in order to function effectively in the target situation. *Lacks* refer to the gap between the target proficiency and the existing proficiency of learners, and *wants* refer to what the learners themselves feel they want

to, even if the content proposed is not directly related to the usage of the language in the target situation. Brindley (1989) describes needs as *objective* and *subjective* aspects, which *objective* needs focus on “factual information about learners, their use of the language in real life communication situation as well as their current language proficiency and language difficulties. While the *subjective* need regards the cognitive and affective needs of the learner in the learning situation, derivable from information about affective and cognitive factors such as personality, confidence, attitudes, learners’ wants and expectation with regard to the learning of English and their individual cognitive style and learning strategies” (p.70). There are some others terms that have been introduced to help understand the concept of need such as, *perceived* versus *felt* (Berwick, 1998), *target* versus *learning need* (Brindley, 1989), and *process-oriented* versus *goal-oriented* (Brindley, 1989)

Those theories above show aspects as what need analysis concerns about in different perspectives and different philosophy. However, they contains similar issue which leads to the same goal, that is the ESP teacher or course designer should be aware that, different students have different language needs. This means that teacher has to take into account of the difference in providing materials and methodology in their teaching and learning process (Hutchinson and Waters, 1987). Another theory in relation to need that language practitioners should take into account is, the content of any ESP course should be determined by a comprehensive need analysis. Dudley-Evans et al (1998) state that it includes *target situation analysis*; which concerns to what the learners will be required to do through English, *present situation analysis*, concerns to what learners already know and what their strength and weakness in language skills and also what they lack in relation to target language needs, and *learning situation analysis*; refers to subjective, felt needs and wants that will affect motivation and participation

There are many methods in terms of procedure for conducting need analysis that have been developed (e.g. Richterch, 1973/1980, Munby, 1978 as cited in West, 1994; Yordan, 1997; Robinson, 1991; Richard 2001; Braine, 2001, Cowling, 2007 etc). These methods are used in order to obtain complete and accurate information of needs, which according to West it will establish a clear picture of target *needs* (necessities), *present deficiencies* (lackS), and *preferred learning* (wants/learning strategies) as at the start of ESP course (West, 1997). Robinson (1991) in this case, suggests seven methods of collecting data, which includes questionnaires, interview, case studies, tests, authentic data collection and participatory needs analysis. Ten years later, Jordan (1997) offers fourteen methods, which the items are more than Robinson’s. These consists of advance documentation, language test at home, language test on entry, self assessment (by students), observation and monitoring, class progress test, surveys, structured interviews, learners diaries, case studies, final tests, evaluation, feedback, follows-up investigation and previous research. However according to Braine, Robinson’s method appears to be more comprehensive and reflective of current practices. He points out the *authentic data collection*, today regards as “one of the most reliable methods of data collection in need analysis” (Brain, 2001)

What is more, Dudley-Evans et al (1998) state that in terms of collecting data in order to determine learners' needs, the main sources should be involved are; the learners, people working or studying in the field, ex-students, documents relevant to the field, clients, employers, colleagues and ESP research in the field. Braine (2001) suggests that the external factors such as staff, time and prevailing cultural attitudes must be taken into consideration when conducting needs analysis

3. THE HISTORY AND DEVELOPMENT OF NEEDS ANALYSIS IN ESP

Most analysis of the history and development of ESP focus on the 1960s and need analysis was introduced into language through the ESP movement in 1970s (Richards, 2001). However, focus on learners' needs has become increasingly important in ESP for language course designers, after the publication of Munby's Communicative Syllabus design in 1978 (Dudley-Evan et.al, 1998, Braine, 2001) which provided detailed lists to develop a profile of learners' communicative needs (Richard, 2001). Hutchinson et al, classify the development of ESP into five stages which include; register analysis in 1960s and early 1970s, rhetorical or discourse analysis in the 1970s and 1980s, target situation analysis from the 1970s, rhetorical or discourse analysis in the 1970s and 1980s, Target situation analysis from the 1970s and early 1980s, skills and strategies in the 1980s and learning center approach. Target situation analysis stage is usually identified as need analysis phase as the coming of age in ESP (Hutchinson and Waters, 1987).

West (1994/1997) in his *state of the art* paper on needs analysis states that initially, the term analysis of needs, was introduced by Michael West in India in 1920s when he was trying to establish the concept to cover *what* learners would be required to do in English in the target situation, and *how* learners might best master the target language during the period of training. The term then disappeared for almost 50 years and then returned in around 1970s for two main reasons: The work, of the Council of Europe (e.g. Richterich 1972) and Early work in ESP (e.g. ELTDU, 1970; Stuart & Lee, 1972/1985). West, in his point of view, gives two examples from these two sources; Richterich, 1971 and ELTDU 1970 and Stuart and Lee 1972/1985, to illustrate the major approach to needs analysis in ESP from that early period. In these Council of Europe documents, need analysis is used as the initial process for the specification of behavioral needs. It categorized personnel and then characterized their requirements in term of understanding, speaking, reading and writing. While in ELTDU (1970) and Stuart and Lee (1972/1975), according to West, "were rather more detailed and were based on extensive research". These two sources focused on analyzing the needs in business English by using *the situation* or *tasks* as the priority required by different categories of personel. West believes that these two examples of analyzing learners' needs in the job situation could refer to examples of *target-situation analysis*, which was defined by Mundy (1978) as the principal concern of that most well-known approach to need analysis (as cited in West, 1997).

Table 1. Evolution of Need Analysis

Stage	Period	Focus	Scope of Analysis	Example
1.	Early 1970s	EOP	Target situation analysis	Richterich, 1971, 1975/1980
	ESP			ELTDU, 1970 Stuart & Lee, 1972 / 1985
2.	Later 1970s	EAP	Target situation analysis	Jordan & Mackay, 1973 Mackay, 1978 Tarone & Yule, 1989
3.	1980s	ESP and EGP	Target situation analysis Deficiency analysis Strategy analysis Means audit Language audits	Allwright & Allwright, 1977 Allwright, 1982 Holliday & Cooke, 1982 Pilbeam, 1979 Jones, 1991
4.	Early 1990s	ESP	Integrated/computer-based analysis	Nelson, 1994

Source: West, 1994:1

In terms of the development of need analysis in the field of ESP, West classifies its development into at least four stages, which includes the period in the early 1870s, later 1970s, 1980s and early 1990. (See table: Evolution of need analysis). From the table given it can be clearly seen how the approach in need analysis has evolved over the past two decades and it has shifted and broadened scope of the analysis. In the early stage, needs analysis focused mostly on EOP (occupational) but in later 1970's, this changed to EAP (academic). In 1980's, the focus has shifted again to include general language teaching. ESP then has returned to become the dominant focus in the early 1990's. From the table, it also can be clearly seen there are some example of sources given to illustrate the major approach to needs analysis, which has given essential contribution to the development of ESP. West finds out there are 5 different approaches to needs analysis emerging in each Period :

1. *Target-situation analysis*: These needs also can be called necessities or objective needs. The earliest well-know approach of needs analysis, which was based on the form given by Munby (1978) in the early work of Council of Europe. Contemplating, questioning or observing those already in that situation identifies the language requirements of target situation. They operate at various levels of detail such as: establishing priorities in terms of skills (speaking, reading, etc) or establishing priorities in terms of ESP situations, function to tasks (speaking on the telephone, listening to lectures, etc).
2. *Deficiency analysis*: This concept is identified to improve the limitations of target situation analysis that did not take account of the present state of the learners' present situation in language proficiency. The analysis estimate the gap between the existing proficiency and the target proficiency of the learners.

3. *Strategy analysis*: This is an approach to teaching and learning the language. The proponents of the approach establish the preference of learners in terms of learning style and strategies or the method of teaching.
4. *Means analysis*: This approach examines the studying and teaching situation in which the language course is to take place in order to accommodate what would frequently be seen as constraints, such as; cultural attitudes, the teachers, the students, facilities, resources, materials, teaching methods, etc.
5. *Language audits*: This concept is much larger scale operation than the four concepts of analysis given. Language audits should take account all the levels of analysis in terms of the target languages to be learnt, the current deficiencies, an evaluation of current teaching method and assessment. (West 1997)

4. THE RELATIONSHIP BETWEEN NEED ANALYSIS AND ESP TOWARD ENGLISH FOR CIVIL ENGINEERING

From the definitions of ESP as well as the theory of needs analysis and its development over the 20 years in the area of ESP, we can see how important the role of needs analysis. In the concept of ESP, needs analysis is an essential part of language curriculum development and syllabus design since needs analysis is the awareness of a target situation (Hutchinson and Waters, 1987). That is why according to them the concept of ESP is different to EGP (English for General Purposes). In most ESP curriculum development or syllabus design, needs analysis has been considered as a fundamental step carried out in designing a course, because it can really help language teachers and course designers completely know beforehand what the language learners need to focus on, what the learners need to use the language in the target situation for and what material selection should be given. As mentioned by Robinson (1991), the first thing teacher should do when designing a course of English for specific Purposes is to conduct a needs analysis, which aims to specify as closely as possible what exactly that students have to do through the medium of English. Hence the syllabus of ESP should be driven by analysis of how the students need to use the language in the target situation (Hutchinson and Waters, 1987).

Furthermore, it is believed that needs analysis is the only one procedure that can be applied in order to obtain the accurate information about the learners' needs. And all information obtained is essential for designing ESP syllabus. This is because needs analysis a set of procedures, which according to Nunan, can be used for specifying the parameters of a course of study. "The parameters include the criteria and rationale for grouping learners, the selection and sequencing of course content, methodology, and course length, intensity and duration" (Nunan 1988:43). Richards as cited in Nunan (1988) suggests that in the context of ESP syllabus, need analysis should serve three main objectives: first, it provides a means of obtaining wider input into the content, design and implementation of a language program; second, it can be used in developing goals, objectives and content; and third, it can provide data for reviewing and evaluating an existing program (Richards, 1984 Cited in Nunan, 1988).

So far, English for Civil Engineering as one of the fields in ESP derives strongly advantage implication provided by those principles. It can be said that teaching English to the civil engineering students is a demanding issue in terms of

content, methods and techniques which are appropriate for the area of civil engineering works which ideally based on learner centered approach. It is also stated by Brindley that is in designing a course, analyzing students' needs can help designers and teachers of civil engineering to be able to identify all kinds of needs such as, methods of learning, learning materials, language content and assessment which are required and desired by the learners particularly civil engineering practitioners (Brindley, 1989). This means that to be successful in achieving the objective in language teaching of English for engineering, it should depend on how the course syllabus be specified through methodology, content of course or material selection, which is appropriate with students' needs and interest. In this case, all aspects of ESP learning given should encourage students to learn. Therefore, to accomplish a good learning situation, it is a great importance if the learner is also aware of his needs and interests and aware why he wants to learn English (Hutchinson and Waters, 1987). As a result, learners will be motivated and enjoy the process of learning, as facilitating factors in acquiring knowledge of target Language.

5. CONCLUSION

There is a close and interdependent relationship between English for Specific Purpose (ESP) and Needs analysis. ESP is an approach to learning English, which is based on learner' needs. While needs analysis is an approach used to find out the full and accurate information about the learner's needs. In other words, needs analysis is a part of ESP course, which has a very significant influence of the success of a language course. It means that to reach the desired result in a language course, when designing a course, the first thing teacher or designer should have to do is conducting needs analysis. In terms of teaching English to civil engineering students, those principles can really help language teachers to get a clear picture of what the course is going to be about in order to suite the needs and expectation of the learners in learning English in the particular area of civil engineering

Furthermore, needs analysis not only can benefit teacher in designing a course but also it can make students feel aware of their language proficiency or lacks; they can get information about their necessities and wants; and they can choose their preferred learning strategies. Last but not least, it can be said that learning is meaningful if it is appropriate with students' needs and interests.

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