Needs Analysis as a Starting Point for Designing a Syllabus for English Specific Purposes Courses

Fazilet ALACHAHER (Benzerdjeb)
Relizane University Center - ALGERIA -
redbenz13@gmail.com

Abstract:

English has become a lingua franca in many areas of modern science and technology leading to the growing demand for English for specific purposes courses. As the abbreviation suggests, such courses should cater for very specific needs - those of particular groups of people working in various narrow fields. Most universities who acknowledge this tendency try to equip their students with both knowledge of the subject matter and the skills to cope in the foreign language.

Aboubekr Belkaid at the Faculty of Science in Tlemcen at the Technology Department offers applied higher education in six areas: informatics, automatic control systems, construction engineering, production engineering and entrepreneurship, fuel technology, and power engineering. For all students who studied English at school it is a compulsory subject. During the first year, they complete a general English course, which aims at increasing students' general proficiency in the language in order to prepare them for the subsequent English for specific purposes course. As for the courses' content, the language teachers are only provided with very broad guidelines and are asked to produce their own syllabi. There are no difficulties with teaching and producing syllabi for general English, as this is exactly what teacher training prepares teachers for. However, as far as ESP courses are concerned, teachers are left to their own devises.

The initial impulse in response to such a task is to transfer the list of items from the contents page in one of the course books available in the college library and plan the teaching according to it. This is very convenient and does not require much effort from teachers apart from familiarizing themselves with the subject matter beforehand. However, before applying this approach, teachers should ask themselves the following question: does the use of specialized materials alone constitute ESP teaching? Obviously, in order to answer it it is necessary to define the nature of ESP and the ways in which it is different from general English courses.

Keywords: ESP ; English ; Syllabus ; Courses ; Objectives

For our enclosed study, we can say that there can be different ways to understand what exactly ESP means. First, as the acronym suggests, it can be seen as a special variety of the English language taught to a particular group of people pursuing a common aim. From this point of view, learners of English working in medical contexts need to be taught "Medical English" – a list of relevant terms such as illnesses, symptoms and treatments, in addition to some phrases that are frequently used by doctors and patients and grammatical structures that are most likely to occur in target situations. Similarly, other professionals have to focus on the features typical of the language related to their working area.

Such a vision of ESP teaching was predominant in the earlier stages of its development around the 1970s, as summarized by Richards (2001: 29), and have since then undergone a major transformation. The current view is that ESP is not a product, but rather a process. For example, Crystal (2003: 108) defines ESP as 'a course whose content is determined by the professional needs of

the learner'. A similar idea is expressed by Hutchinson and Waters (1987: 19) who see it as an approach to teaching. Also, Gatehouse (2001) stresses that 'the focus of the word "special" in ESP ought to be on the purpose for which learners learn and not on the specific jargon or registers they learn.' Thus, ESP concentrates on the same English language, but the course organization is conditioned ultimately by the needs of the students.

This brief overview implies that the key stage in an ESP syllabus design is needs analysis. Only then is it reasonable to start selecting suitable materials or making any other decisions regarding the course. Thus, the aim of the current paper is to create the conditions for the production of an efficient ESP syllabus by determining the needs of the students attending the Faculty of Science at Tlemcen University (specialty technology ST).

The enclosed study will examine the role of the needs analysis in the process of ESP syllabus design, look at the general structure of syllabi, identify the components of the needs analysis and outline the techniques traditionally employed for this purpose. The second chapter of the work will represent an application of the principles discussed in the theoretical part and will consist of the needs analysis of a particular group of students. In addition, it will discuss the implications that the analysis might have for a syllabus design.

1. NEEDS ANALYSIS IN AN ESP SYLLABUS DESIGN
1.1. Characteristic features of an ESP course
Although the most distinguishing feature of an ESP course is definitely the fact that its content is

dictated by the results of the learners' needs analysis, there are at least two more defining features (Dudley-Evans and St. John 1998, in Dudley-Evans 2001: 132):

> - ESP makes use of the underlying methodology and activities of the disciplines it serves.

> - ESP is centered on the language (grammar, lexis, register), skills, discourse and genres appropriate to these activities.

In what follows other important but not obligatory characteristics of ESP are discussed.

First, in contrast with General English learners, ESP learners are enrolled in the course not for the sake of language knowledge but in order to be able to function in a specific context using the language as a tool, which Gardner and Lambert (1972, in Lightbrown and Spada 2006: 64) define as instrumental motivation as opposed to integrative motivation – 'language learning for personal growth and cultural enrichment' (Lightbown and Spada, ibid.). Broughton (1993: 190) implies that many ESP learners do not possess integrative motivation and usually are not interested in 'cultural, literary and aesthetic life of English-speaking countries.' It can be argued that these, more practical intentions make the overall aim seem more realistic and, thus, more achievable. Many ESP learners usually start attending the course because in their working environment there is a gap in their ability to fulfill particular job tasks requiring some command of English. Because of that, they, or their employers, usually have more precise expectations from the course. In addition, a feasible aim makes ESP

learners more willing to apply the newly acquired knowledge in practice.

However, one should not forget about the other category of ESP learners – young adults, those who are not yet specialists and are still at university. These students are slightly different from those that have just been discussed. Because they do not have much working experience, and consequently do not know where exactly, if at all, they would need English, they might take the course for granted and demonstrate much lower levels of motivation. On the other hand, for them school years are not that far behind, which means that their aptitude for learning and memory are better.

ESP learners who come from similar working environments might have similar learning styles. For example, an observation relevant to our situation, where the course participants are the students of science and technology, has been provided by Rogers (2000: 7), who writes that 'scientists usually have enquiring minds', which means that instead of ready-made rules they enjoy discovering things for themselves and questioning existing truths. She adds that information gap activities are very efficient provided the task requires analysis and setting hypotheses, and that this group of learners especially benefit from both cooperation and competition with their peer students. Thus, it can be concluded that scientists learn best by making predictions, solving problems and explaining things to each other.

One more important characteristic of ESP students is that their level of English tends to be intermediate or above (Dudley-Evans and St. John 1997,

cited in Gatehouse 2001). Indeed, in our case ESP course for the college students is preceded by a 120 academic hour course of General English in order to ensure that their level is high enough to cope with the requirements. Nevertheless, it seems that more and more lower level students enroll in ESP courses at the faculty of science.

The issue that can be frightening for an English teacher faced with the requirement to teach ESP is their lack of knowledge of content area. Although it seems unfeasible to teach about something that you do not understand, many specialists working in the field believe that 'there is no need for an ESP teacher to be an expert in the subject matter. Moreover, it is the students, not the teacher, who should be experts in the content area and thus responsible for what is covered in the course:

With the best will in the world, teachers cannot be expected to possess this knowledge – other than by chance coincidence of personal experience or extensive contact with a given category of learners. It is the learners themselves who possess this knowledge, even if they may lack the insights or metalanguage to express it in a pedagogically usable form (Tudor 1996: 76).

Finally, the difference between ESP and general English teachers mentioned by Hutchinson and Waters (1987: 157) is that the former usually receive no special prior training as for how to fulfill the above-named roles efficiently. That, in a way, makes ESP teachers amateurs learning to teach the subject on their own by trial and error.

In conclusion, describing the characteristic features of the ESP teacher, we should remember that because ESP is based on the particular needs of students,

it is an ultimately learner-centered approach, and thus, it emphasizes the learners' knowledge, experience, attitudes, responsibility and development rather than the teacher's excellent performance in the classroom.

One more important aspect that should be discussed before moving on to the issues of syllabus design is the use of materials in ESP courses. Several controversial issues have been raised in relation to the requirements that such materials should meet. First of all, some authors insist that the language in the materials should be authentic (Rogers 2000: 6). Moreover, Carver (1983, cited in Gatehouse 2001) considers the use of authentic materials one of essential features of ESP courses. In order to comment on this requirement, we should first elaborate on the issue of authenticity in course books. Authentic materials are defined by Rogers and Medley (1988, in Shomoossi 2007) as those reflecting the language genuine for a particular social and cultural situation and produced by and for native speakers. Nevertheless, Widdowson (1990: 44) objects to such a vision of the concept of authenticity:

> Authenticity of language in the classroom is bound to be, to some extent, an illusion. This is because it does not depend on the source from which the language as an object is drawn but on the learners' engagement with it. In actual language use <...> meanings are achieved by human agency and are negotiable: they are not contained in text. To the extent that language learners, by definition, are deficient in competence they cannot authenticate the language they deal with in the manner of the native speaker.

In addition, Hutchinson and Waters (1987:59) doubt the possibility of using authentic texts in ESP, as any text there will be 'automatically removed from its original context'. Thus, the focus must be not on the authenticity of a text but on its pedagogical value for the learners. In other words, a good ESP coursebook should prepare learners for using the language in real-life situations by setting tasks that are likely to occur in their professional environment.

Finally, one more problem that an existing course book might pose according to Rogers is that the focus of the activities in a course book may be on the development of the skills different from those that a particular group of learners would want to concentrate on. It seems that this point is very simple to check as most published materials nowadays have a detailed table of contents introducing the skills and the language areas that are going to be given priority.

To sum up, effective ESP courses typically exploit some samples of authentic language use and encourage genuine communication; their content is relevant to the students' purposes but need not be highly specialized; the material presented there is more or less up-to-date and concentrates on developing the skills necessary for the students' efficient functioning in the target language in their professional surroundings.

1.2. Syllabus design

There are some important decisions that need to be made before attempting to produce a syllabus. If to summarize general guidelines of syllabus writing provided by Dick (2005), the following steps could be

identified. First of all, one has to decide on what basis they are going to select the items to be included there and how these items will be organized. In other words the type of our syllabus has to be established. Secondly, the teaching situation has to be analyzed to reveal the conditions under which the syllabus will be implemented and the available resources, potential problems, as well as external factors that might force us to depart from the syllabus at some point must be determined. Next, it seems necessary to examine the target learner group focusing on students' abilities, learning preferences and needs, which is obviously a vital prerequisite for setting course objectives. Only then does it seem realistic to start devising the structure of the syllabus and preparing suitable materials. In addition, before the product is ready to be implemented it is probably necessary to plan the methods of assessment. Finally, as there is always something that could be improved, there should be some space left for any possible changes during and at the end of the course.

From this explanation it is obvious that the actual syllabus design, if one attempts to provide a good syllabus, is preceded by a lot of preparatory analytical work and is absolutely impossible without a needs analysis. However, before moving on to examining the process of needs analysis in some detail, it seems necessary to look at whether there are any special requirements as for the type of syllabus for an ESP course as well as examine the role of the syllabus in an ESP course planning, so that the syllabus could adequately reflect the results of the needs analysis.

1.2. A/Type of syllabus

Throughout the history of language teaching various types of syllabi have been used. Before speculating about which type can be considered best suited for an ESP course, a brief overview of available options might be useful.

Traditionally a distinction has been drawn between product oriented and process oriented syllabi. As the terms suggest, the former are based on the awareness of what the learners will know or will be able to do at the end of a period of study, while the latter focus on how the development of learners' competences occurs. As Nunan (1988: 12) neatly puts it, 'what we mean when we refer to "process" is a series of actions directed towards some end. The "product" is the end itself.' In a similar vein, White (1988: 44) divides all existing syllabi into either what he labels Type A or Type B syllabi, where the emphasis is on the subject matter or the learning process respectively. In his work, White refers to other authors using different criteria for distinguishing between the two types. For example, Allen (1984, cited in White ibid.) views the former in terms of an 'interventionist approach' dictating the sequence of objectives to be reached, and opposed to it is the latter – a 'non-interventionist approach', where learners can determine their own objectives in the course of active participation in authentic communication. In addition, White draws parallels between his term Type A and what Ellis (1984, cited in White ibid.) describes as syllabi extending students' analytic knowledge which 'is not available for' 'spontaneous communication'. No matter which terminology is used the essence of the distinction stays

the same. The concluding distinction that White indicates is that Type A syllabi are ultimately linguistic in nature, while Type B syllabi rely more on pedagogy and psychology.

Although there could be some other criteria added to the list, the essence of the distinction seems quite apparent. Still some examples might make it even clearer: the group of product oriented (or Type A) syllabi consists, among others, in grammatical, lexical, functional and situational syllabi; while the process-oriented (or Type B) syllabi include task-based and learner-centred syllabi. There are also skill-based syllabi, which White places somewhere in between his Type A and Type B syllabi.

The question now is where in this classification a typical ESP syllabus belongs. On the one hand, many ESP course participants wish to develop the skills necessary to fulfill their job-related tasks in English, which means that task-based syllabi could be suitable. On the other hand, they also need to cope with the language in specific working situations, suggesting situational syllabi. In fact, Nunan (1988: 12), who approaches the question from a slightly different angle, writes that it is not that the elements such as topics, functions or situations, around which the syllabus is built, define whether the syllabus is process oriented or product oriented, but rather that these elements, that can all be included in one syllabus, are process or product oriented. Hutchinson and Waters (1987: 85) provide examples of all types of syllabi taken from different ESP coursebooks without prioritizing any of them. Similarly to Nunan,

they imply that a good syllabus considers both the product and the process consisting of a number of elements:

> Any teaching materials must, in reality, operate several syllabuses at the same time. One of them will probably be used as the principal organizing feature, but the others are still there, even if they are not taken into account in the organization of the material.
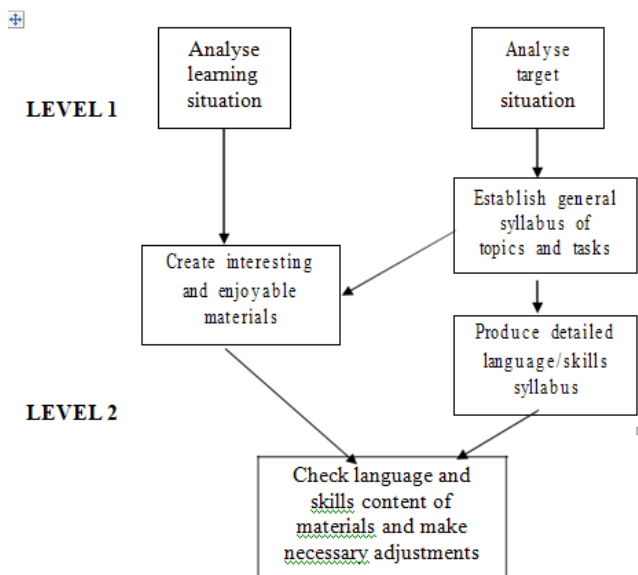

Figure 1: The role of the syllabus in a learning-centred approach.

As we can see from the figure, the content of a syllabus depends on two factors: the actual learning situation and the target situation. Thus, the first level of syllabus design represents the analysis of these two. The analysis of the former enables to provide materials that will most likely be suitable for each individual course.

The analysis of the latter helps to determine relevant topics and tasks which, in turn, leads to a more detailed planning of which vocabulary, grammar and pronunciation areas should be dealt with in order to employ the topics most efficiently and which skills should be addressed for learners to cope with the established tasks. Finally, on the second level the results of both types of analysis are complemented and, if necessary, adjusted against each other.

To sum up what has been discussed in this section, any syllabus, including an ESP syllabus, should be multidimensional and reflect various aspects. It can be organized around different aspects such as topics, structures, notions, skills or learning tasks. Yet, it does not mean that other aspects are undervalued or not presented in the course at all. The syllabus should be oriented towards some end, or the product. At the same time it should not underestimate the importance of the learning experience, or the process. As a good syllabus should accommodate the needs of different students, it has to be implemented allowing for both the analytic and synthetic approach to new material processing. In addition, a given syllabus must leave room for all learnt material to be recycled at some point, so that the students' understanding of how the language system functions as a whole could deepen. It is vital to keep in mind that the role of a syllabus is not that of a dictator or, worse, an item of bureaucracy. Instead, it should function as a backbone, and help the course designer organize the contents in the most efficient and enjoyable way for the students as well as the teacher. However, what is probably the most important prerequisite for creating an

efficient syllabus is the selection of the content that would be relevant for the course participants, which is based on a thorough examination of their needs.

1.3. Needs analysis

As it was concluded in the previous section, a syllabus compilation is necessarily preceded by a needs analysis, as it 'provides a basis for setting goals and objectives' (Nunan and Lamb 1996: 27). Thus, the concept is worth examining in some detail: its definition and emergence in language teaching as well as the tools for conducting a needs analysis.

West (1997: 68) provides a brief overview of the origin of needs analysis. According to his article, the term was first used in the 1920-s, but because it referred to determining the needs of the general language learners, who studied English simply for the sake of knowing English, it did not seem very relevant at that time and did not linger. Its return is closely associated with the emergence of ESP in the 1970-s, since when the scope of the concept has evolved and expanded. As a result, what is meant by needs analysis has also gradually changed.

As Hutchinson and Waters (1987: 54) point out, what is meant by needs analysis here is ultimately the analysis of the target situation needs – the kind of language that the learners have to acquire to cope in the target situation. In other words, the analysis of the target situation needs points at a desired final destination of the course. However, before trying to set any objectives as to where one should arrive at the end of the course it seems logical first to determine where one is at the beginning of the course. This part of needs analysis is generally

referred to as present situation analysis (Dudley-Evans 2001: 133).

It is generally acknowledged that the target situation analysis should be complemented with the learning needs analysis - what the students should do to succeed in the course completion. These needs embrace various individual peculiarities of students and their learning styles that cannot be ignored, as they might both foster or impede their learning depending on how the course is organized (Tudor 1996: 97).

Target situation and learning needs analysis are often called objective and subjective needs analysis respectively (e.g. Tudor, ibid.), as the former collects information about the actual requirements for language use as they exist in the target situation, while the latter addresses subjective perceptions of the course participants about what they feel the course should be like. As a result, 'there is a tendency to equate objective needs with the specification of content, and subjective needs with the specification of methodology' (Nunan 1988: 44).

There are various techniques available for gathering information about the objective needs. For example, Robinson (1991, in Tudor 1996: 73) suggests a list of techniques that could be divided into two types:

> 1- The source of information is the learners themselves: questionnaires, interviews, tests, participatory needs analysis

2- Information is derived from the target situation analysis: observations, case studies, authentic data collection.

Considering the efficiency of each of these techniques, it seems that turning to the first set is reasonable in the cases when the students are more or less familiar with the target situation, either they already are surrounded by the language at their work place or they have at least a general conception of what kind of language they would need to acquire by the end of the course. However, there are many students who participate in an ESP course in order to prepare for a target situation not knowing yet what this target situation is like. In addition, many university students, like in our case, simply have an ESP course as a part of their programme. In these circumstances trying to elicit any useful information directly from prospective students does not seem feasible. Otherwise, these methods would generate a lot of information within a short period of time.

The second set of techniques is obviously not only much more time and effort consuming but might also require some additional resources. For example, in order to conduct an observation we need to find a native speaker performing the same tasks as our potential course participants. If a given course takes place in a country where English is taught as a foreign language, this may be too demanding. Case studies concerned with learner observation at his or her work place are probably not as easy to undertake either. Alternatively, existing data collected within somebody else's case studies could be analysed. Also, what could be quite fruitful and seems

realistic is the examination of corpora containing authentic data:

Any material collected *ad hoc* for a particular teaching situation can constitute a corpus which can be analysed to produce suitable lexical and grammatical items to help in the creation of a syllabus
(Gavioli 2005: 25).

In order to determine the subjective needs of students we might observe them in the process of learning or trust the judgment of our experienced colleagues conducting ESP lessons. For example, in one previous section we have already mentioned some learning preferences that according to one ESP teacher scientists share. However, probably the most accurate information can be elicited from the learners themselves by means of questionnaires or interviews.

Having introduced possible techniques, it could be concluded that the best result will probably be generated if a combination of methods is used. In addition, before choosing a suitable method the purposes of the needs analysis should be established, as these might vary depending on the learners. (Richards 2001: 52).

One last aspect that being not a component of needs analysis is still an essential complementary phase is what Holliday and Cook (1982, in Hyland 2003: 65) refer to as means analysis, or examination of the context in which teaching and, hopefully, learning is to take place. Means analysis can be invaluable in helping to interpret the results of needs analysis before

implementing them in the syllabus. Hyland (ibid.) lists some of the aspects to keep in mind: the society, the institution, the resources, the course and the class.

The first aspect embraces a range of things starting from the status of English and ending with the methods, materials and relationships between the teacher and the learners appropriate for a given society. Similarly, the institution's policy regarding the teaching of the language has to be considered. The next category involves the availability of teaching professionals, materials, technical aids and other facilities. Among the characteristics of the course that should be considered are organizational matters such as the purpose, the length, the intensity and the place of the course in the curriculum. Finally, the characteristics of the group as a whole have to be analysed.

2. NEEDS ANALYSIS at the Faculty of Science (Tlemcen University)

The main aim of the empirical part of the thesis was to determine the needs of Tlemcen faculty of Science students who are going to take an ESP course as a part of their curriculum the following year. In other words, the research represented the first stage of an ESP syllabus design process, the outcomes of which could subsequently be used when making any important decisions considering the course contents and execution, such as the selection of items to be included in the syllabus or the choice of materials to be employed. It was hoped that with the help of the needs analysis it would be easier to produce a more efficient syllabus for the

students of the three specialties: informatics, fuel technology and automatic control systems.

The needs analysis was preceded by a means analysis – examination of the conditions under which the course is to take place with special attention to the available resources and the course participants' level of English.

The needs analysis procedure was based on Hutchinson and Waters needs analysis framework (see Appendix 1) and consisted of two parts: an objective needs analysis and a subjective needs analysis. The aim of the former was to establish the requirements of the language use in the target situation, while the latter was concerned with the examination of the characteristics of the learners.

Both the objective and subjective analyses started with identifying the reason why the students register for the course, because the whole nature of the course depends on its purpose. In our situation students do not have much choice: they take ESP as it is a compulsory subject in their curriculum. Thus, it might seem that there is no apparent need for the course at the time it occurs; yet it is widely acknowledged that in order to meet the demands of the current fiercely competitive workforce market, technology professionals should possess versatile skills with a very high priority of the language skills. Consequently, the first task for the empirical part of the thesis was to look at the objective reasons for conducting an ESP course at Tlemcen faculty of Science as well as the students' subjective perceptions of the necessity of an ESP course. The second task was to determine what

should be studied in order to reach the objectives established by both the target situation demands and the students themselves. All in all, the following research questions were formulated:

1. Why is ESP a part of Tlemcen faculty of Science curricula?

2. Why are the students taking the course, apart from it being a compulsory subject?

3. What should be included in the ESP syllabus for a course in Tlemcen faculty of Science?

A combination of methods was employed to generate the answers: observation of the teaching situation, student questionnaires and testing, analysis of the results of two objective needs analysis projects.

2.1. Means analysis

In Tlemcen Faculty of Science, students can choose between two foreign language modules: English or French. A module consists of a general language course and a language for specific purposes course. The majority of the students register for the English language module, as this is the language they studied at school. It can be claimed that English is considered a very important subject in the college curricula, as substantial funds are allocated to improve the conditions for both teaching and studying English.

First of all, three English teachers are currently employed to make sure the size of language learning groups is small and each student receives enough attention. On average, a group consists of 8 or 9 students.

Secondly, the language center enjoys its own library with a fine collection of study materials: course books, reference books, graded readers, books on English culture and literature, dictionaries and academic journals. Moreover, there are separate sets of materials devoted to developing each of the language skills. Thirdly, all language teachers are provided with their personal CD players and many classrooms have a television set, DVD player, and computer.

Nevertheless, most materials are concerned with teaching general English. Although there are several specialized course books meant for teaching ESP, teachers are still lacking the necessary methodology. Furthermore, there are no course books that could be entirely suitable for teaching English to the students of some specialties, especially fuel technology and automatic control systems.

The lessons are once a week, lasting 3 academic hours and the length of the course is 16 weeks. In other words, there are 16 meetings altogether and the interval between them is quite long. At the moment the purpose of the course is not explicitly declared in the course description, apart from stating that the course objective is to acquire technical vocabulary and develop specialized language skills.

2.1. A/Students' level of English

At the beginning of the general English course, which necessarily precedes ESP in Tlemcen faculty of Science curricula, a placement test was administered in order to determine the level of students' general proficiency in English.

For that purpose the paper and pen version of the test in English was used. The test takes about 30 minutes and consists of multiple choice questions assessing grammar, vocabulary and reading. There are two parts in the test: the first one is meant for all students and the other one – only for students whose competence in English is at a high level. Because there was no data concerning the levels of the students who entered the college, it was decided that all students should take both parts.

The test was administered during the first general English lesson by the students' teachers. The students were told that they were to be divided into two ability groups according to the results of the test.

The levels are ranged according to the Common European Framework of Reference for Languages with A1 – Beginner, A2 – Elementary, B1 – Lower Intermediate, B2 – Upper Intermediate, C1 – Advanced and C2 – Very advanced.

The results of the test are given in Figure 2 below. Out of 64 students who are planning to take ESP the following year the largest category (55%) were at level A2. The next category – 23% had level B1. The same percentage of students (9%) was at levels A1 and C1. Finally, only 2 students (3%) were at level B2.

Figure 2: Placement Test results.
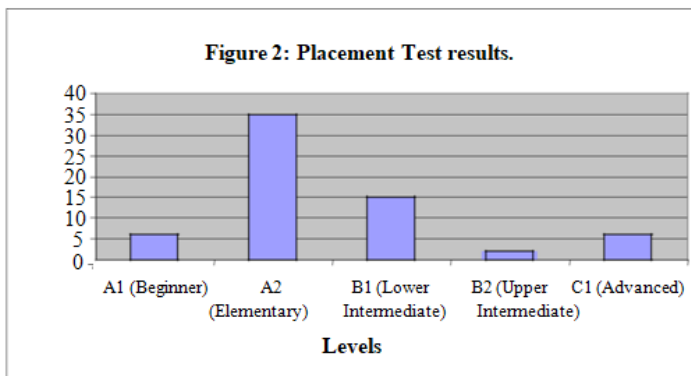
Because the research was conducted when the general English course was not yet over, it was not thought reasonable to administer another test to determine the students' levels immediately before the beginning of the ESP course. However, according to a subjective evaluation of the author, who taught about half of these students, most students would go one level up after about a year of English studies in the college. This opinion is also supported by the statistics from the previous academic year, which is given in the Table1 below and demonstrates the number of students at each level at the beginning and the end of the general English course.

Table 1: Placement Test results

Year 2006/2007	A1	A2	B1	B2	C1
Beginning of the general English course	15	20	9	5	1
End of the general English course	0	12	22	13	3

To sum up, the teaching conditions in the Faculty of Science seem fairly favourable, as teachers have access to many resources and the learning groups are quite small. On the other hand, there is still a lack of specialized materials and the way the lessons are scheduled in the timetable is not very efficient. Furthermore, the difference in the students' levels of proficiency in English is very large. Fortunately, there is a possibility to split larger groups into two ability groups according to the results of the placement test.

2.2. Subjective needs analysis
2.2. A/The students' questionnaire

The general purpose of the students' questionnaire was to collect the information on the characteristics of the future course participants. The questionnaire (see Appendix 2) consists of two parts. In the first part (questions 1-4) the respondents are instructed to provide some personal details such as their specialty, age, sex, native language (Q1) and level of English (Q2). In addition, the respondents are asked to state whether they currently have to use English in their job or studies (Q3) and to assess the amount of specialist knowledge acquired so far (Q4).

The second part (Q5-11) is aimed at revealing the students' attitude to ESP, as well as their expectations of the course. To be more precise, questions 5, 6 and 7 are meant for measuring the initial level of students' motivation for devoting their time to the subject, and concentrate on three separate aspects: interest, importance in comparison with other subjects and usefulness. The next question (Q8) tries to specify the

reasons why students believe the course could be useful for them. The last two questions aim (Q10-11) at eliciting the respondents' assumptions regarding the course objectives and to obtain a general idea of their learning preferences.

The vast majority of questions (Q2-9) are multiple-choice questions with three to five available options. In addition, there are several open-ended questions (8, 9 and 11) included in case the respondents might wish to add something to the variants provided by the designer of the questionnaire. In one question (Q10) the students are asked to rate the forms of class work from 1 being the most effective to 4 being the least effective.

The questionnaires are in English and were distributed directly to the students during their English lesson by their English teacher. They were allowed to ask questions for clarification if necessary and were given help with formulating their ideas in open-ended questions.

2.2. B/Sample

The questionnaire was conducted among four groups of students of three specialties: informatics (one group with Estonian as the language of instruction and one group with French as the language of instruction), fuel technology and automatic control systems (both with French as the language of instruction). Informatics and fuel technology groups were represented by first year students, while automatic control systems by second year students. These groups were selected as the sample

because their study programmers are the same concerning the studies of English and they will all take ESP the following semester.

Overall, 43 students completed the questionnaire, which comprises a little more than 80% of the total number of students from the above-named groups registered for the general English course and expected to register for the ESP course. 13 of them were studying automatic control systems, 9 – fuel technology and 21 – informatics.

Of the respondents 30 were male and 13 female. Almost all students' first language was French, 2 respondents were from Mali and 2 – bilingual. 32 students were 19-20 years old, 9 students 21-22 years old and 2 students were older than 30 years old.

The levels of English as assessed by the students themselves are given in Figure 3 below. The students were asked to assess their own levels of competence, as very often they do not agree with the teacher's assessment or the results of the placement test.

Figure 3: Students' self-assessment.

Number of students

| | Elementary | Lower Intermediate | Intermediate | Upper Intermediate | Advanced |

Level of English
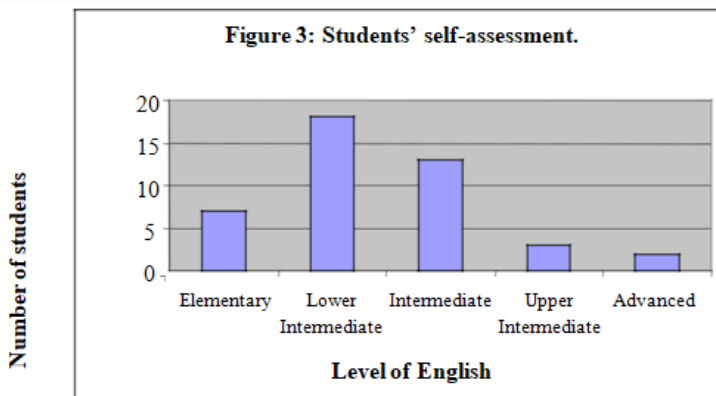
All but one respondent already had to use English in their jobs or studies to a greater or lesser extent. 23 respondents (53%) used English from time to time, 11 (26%) used English seldom and 8 (19%) used English a lot.

The majority (79%) of the students believed that they had acquired the basics of their main field of study, 14% felt that they did not know much about their speciality

yet and only 3 students (7%) were confident enough to assess the amount of their knowledge as substantial.

2.2. C/Students' attitudes to an ESP course

Most respondents (93%) expressed an overall interest in taking ESP with only 3 students answering that they were not very interested in the course. 34 students (79%) considered it as important as other subjects and 6 more important than other subjects in the college. Only 3 respondents rated it as a less important subject in their study programs. About two thirds of the students (65%) regard ESP as a very useful course. In addition, 7 respondents thought that it could be useful for them in the future. 6 of the respondents did not have a strong opinion concerning the usefulness of ESP and 2 left the question unanswered. None of the respondents chose to answer that ESP is a waste of time.

To the question whether ESP will be useful for using materials written in English related to the students' specialty all but one respondent, who considered the course not very useful for that purpose, gave an affirmative answer with 12 of them opting for "very useful". The situation is slightly different with the next question where 8 students thought ESP would be not very useful for finding a better job. Even more students (53%) thought that ESP would be very useful for communication with specialists from other countries. Only 2 students considered the course not very useful for that purpose. Finally, all but two students felt that ESP would be useful for improving their general language skills, among them 11 evaluated it as very useful.

Not many students provided any additional reasons why ESP could be useful for them. Here are the only 9 suggestions received as to why else it could be useful:

1. *for improving professional skills*
2. *to feel myself more confident*
3. *for moving higher up the career ladder*
4. *for reading manuals*
5. *for buying products*
6. *for producing goods meant for English speaking communities*
7. *for more efficient communication with colleagues*
8. *for doing trainee practice abroad*
9. *for exchanging experience with other enterprises*

2.2. D/Students' expectations of an ESP course

Concerning the students' expectations of ESP, terminology was considered the most important component of the course by 13 students (30%). 29 students (67%) agreed that it would be useful for them. Only 1 person claimed that they already knew all the necessary terminology. 35 students (81%) answered that they needed to study different topics related to their speciality. Only 5 respondents rated it as most important for an ESP course. There were 3 students' who considered studying different topics unnecessary. For one of them the reason was that the person did not want to study the same things as they had in other subjects again and the other two thought that it was not useful.

Revising grammar was thought to be useful by 29 students and most important by 5 students (79% altogether). 9 respondents did not want to have any grammar in their ESP course, as 3 people estimated their knowledge of grammar as sufficient and 6 people felt that including grammar would not be useful for them.

According to the students, of the language skills most attention should be paid to speaking with 17 students rating it as the most important and 21 as useful (88% altogether). Next comes the development of writing skills with 7 students considering those the most important and 28 useful skills (81% altogether). Only a little behind is listening: 12 students found it the most important and 22 useful (79%). Finally, reading skills were considered the most important by 7 respondents and useful by 25 respondents (74% altogether). Of the skills that were already quite well developed reading skills were mentioned 10 times, writing and listening both 5 times and speaking just one time.

In addition to what had been provided by the author of the questionnaire, three students also mentioned that they would like to develop their communicative skills. One respondent wished to work on the presentation skills as well.

The students' opinions of the way class work should be organized are reflected in the Table 2 below, where they are represented in the order of frequency in the respondents' rankings from 1 being the most effective to 4 being the least effective. One respondent left the question unanswered. The numbers in the table show how many students gave each form of class work mark (1, 2, 3 or 4).

Table 2: Students' learning preferences

	1	2	3	4
Teacher explains a new topic and corrects my mistakes when I do exercises	16	17	7	2
Class discussions, role-plays/group work	14	8	10	10
Analyzing language structures and trying to work with new words on my own	9	8	14	11
Songs/films/games/projects/presentations	3	9	11	19

As the table demonstrates, the most preferred forms of work were teacher-oriented lessons, where the teacher explains some new material and then corrects students' mistakes when they practise, and speaking-oriented lessons, where students' are given plenty of opportunities for discussions, role-plays and group work. Although these two received almost the same amount of highest rankings, it can be noticed that there were only two respondents who considered the former the least effective, while for the latter opinions were divided. The third place in the order of preference is occupied by analytic ways of learning. However, here too opinions are mixed. Finally, the least effective way of learning according to the students appeared to be songs, films, games, projects and presentations. For this option the general tendency is much clearer with only three students expressing a preference for this form of class work and the most number of respondents rating it as the least effective way.

Proceeding to the last question, which invited the respondents to express any other wishes or recommendations that could be taken into account when planning the ESP course for these three groups of students, many people left the question unanswered. To be more precise, approximately 50% did not answer this open-ended question. On the other hand, some student gave more than one suggestion.

Some students used the question as an opportunity to once again emphasize their opinion expressed earlier about what should be included in the course. For example, here are the comments regarding the importance of studying terminology and specialized language:

- *I would like to study things related to my speciality*
- *I would like to learn new words for my speciality*
- *Special language for automatics.*
- *We need to learn more professional terminology*
- *It will be useful if teacher gives us lists of specific terms and English terms for useful actions with a computer.*
- *To give words with Russian translations and test us at the next lesson.*
- *We must know as many as possible our speciality words.*

- *It would be necessary to devote a couple of lessons to reading manuals, because they mostly use the same words.*

Another category of recommendations was about paying more attention to developing various skills:

- *More listening tasks, please*
- *Perhaps we could do more reading exercises.*
- *Maybe more home reading.*
- *To develop our speaking skills by practising with English people, maybe to communicate with specialists from Siemens, Nokia and others.*
- *It will be great to communicate with specialists or students from other universities. But to do this we need more speaking.*

Some comments concerned the forms of class work:

- *ESP should not be boring and full of terminology. It is necessary to include some reading tasks, films and projects. I consider that these things will develop students.*
- *Teacher must help students correct their mistakes in grammar and pronunciation.*
- *I know that learning languages without grammar is impossible, but for me, if you can speak, it is more useful for our world.*
- *I would like that teacher always corrected me when I speak or write and explain the*

mistakes at the lesson or consulting hour. Precisely look after my mistakes and advise me how to improve.

ɞ *More role-plays, group work – it is useful for developing our speaking skills.*

ɞ *More work in group, speak a lot, discussions.*

ɞ *There could be more short presentations prepared by students to develop communicative, researching and presentation skills. It will help us in our future jobs and when writing our graduation paper.*

Two comments were about the kind of information the students would like to learn:

ɞ *Maybe I'd like to hear something about new information technologies or programs, or equipment. Also, it will be interesting to know what countries have the most developed technologies and why.*

ɞ *To know about jobs in another country; who to speak to, where people can get information or help.*

Finally, three responses were connected with the organizational aspects of the course:

ɞ *We all have different levels of English.*
ɞ *We need more ESP, at least 5 credit points.*
ɞ *If the weather is good, can we have lessons outside?*

2.3. Objective needs analysis

This section of the empirical part dealt with determining the requirements for the language use in the target situation. We were particularly interested in revealing which language skills and for which purposes should be developed more in order for students to cope in the target situation. The target situation for the students of Tlemcen Faculty of Science was defined as their specialty jobs. The second attempt had a similar aim. As the author of the report on the project states, it was aimed at "bridging the gap between work communities and vocational language education" and examining "communication situations relevant to work". The project represents a survey consisting of interviews and questionnaires, with the former designed for enterprises' employers and the latter for employees.

Figure 4: Data Analysis
Do you have to read
1 - instructions, 2 - business letters, 3 - emails, 4 - the Internet,
5 - goods' specifications, 6 - price lists, 7 - specialist literature,
8 - contracts, 9 - legal documents
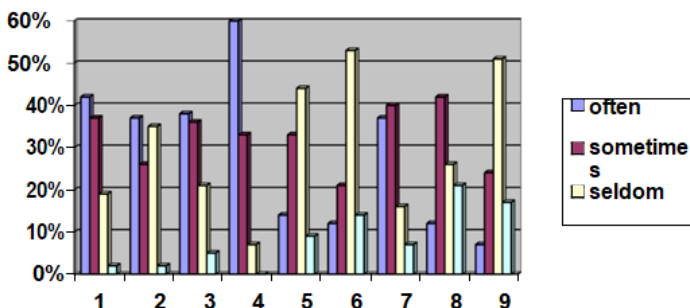
The second skill in the questionnaires was speaking (see Table 4). Employees most often had to ask questions in English. Once again, it could be argued that asking questions is probably not a speaking situation, but rather a sub-skill which is required in most speaking situations. Thus, similarly to the previous part where the Internet was considered the most frequent category, asking questions obviously had to occupy the first place. This was followed by speaking on the phone and speaking to foreign visitors. For both companies the ability to speak to foreign colleagues and take part in meetings was quite important. Not very frequently required tasks were chairing meetings and making presentations. It is interesting that the questionnaire designers included following instructions in the speaking part, as this seems to require listening skills rather than speaking.

In sum, if to take into account the availability of resources and students' preferences and interests, a list of topics for the course could include the following:

1. Science and technology in general (e.g. describing mechanisms or systems, technical problems, latest developments).

2. Communication at work (e.g. means of communication, intercultural communication, communicational strategies, communication breakdown, small talk).

3. Giving personal information (e.g. talking about one's working place, job responsibilities, hobbies,

preferences in food or sights, interesting events, traditions of one's city and country).

4. Being in a foreign country (e.g. business trip, studying, doing trainee practice or working abroad).

Another significant aspect to be considered is the amount of grammar in the syllabus. On the one hand, 79% of those students at the Faculty of Science who participated in the survey believed that they needed to revise grammar during their ESP course. On the other hand, because the lesson is only once a week, only the most prominent language structures could be reviewed. This implies that the course designer should conduct additional research and analyze target discourse types, which have been revealed as a result of the objective needs analysis, to identify these prominent elements of the language. When this is done, a lot of materials for students' self-study should be prepared to provide enough opportunities for grammar practice.

Finally, both the objective and subjective needs analyses generated the most information about the language skills to be included in the syllabus. It is interesting that the order of importance of the four language skills was different according to the students' perceptions and the employees' reflections.

CONCLUSION

Although ESP courses are in great demand nowadays, designing one is not an easy task for teachers who have not received any formal training in this area and for whom the whole concept of ESP and its teaching

methodology can be rather vague. Exactly such a case was the underlying motivation for writing the present thesis, which attempted to define the nature of an ESP syllabus in order to be able to compile one for the students at the Faculty of Science in Tlemcen.

The term "needs analysis" embraces several aspects including the target situation analysis, the present situation analysis and the learning needs analysis. The present situation analysis deals with 'the investigation of learners' weaknesses or lacks' (Dudley-Evans 2001: 133). The target situation analysis, also known as the objective needs analysis, looks into the requirements of the language use in the contexts where the course participants are likely to have to operate in English. The learning or subjective needs analysis examines the course participants' perceptions of what the course should be like. In addition, in order to ensure the successful realization of the needs analysis results in the course syllabus, a means analysis should also be conducted. The aim of the means analysis is 'to provide insights into the target teaching situation that will allow the development of learning programs which are responsive to and capable of fitting in harmoniously with local conditions' (Tudor 1996: 133).

The techniques traditionally employed for conducting a needs analysis could be divided into two types: those where information is derived from the course participants such as questionnaires or interviews and those where information comes from the analysis of the target situation language use.

The empirical study in this paper, which concentrated on objective and subjective needs analyses, used both these types for collecting the necessary information. The former addressed the findings of two research projects carried out in Tlemcen, whose main purpose was to provide information on the target situation language requirements for ESP syllabi designers. The latter represented a survey conducted among 43 students who have ESP in their curricula and aimed at revealing their attitudes to and expectations of the course.

Although both objective and subjective needs analysis demonstrated that ESP is a useful component of the college study programs, it turned out that the students prioritize the skills that are not necessarily the most important in the target situation. For example, writing skills that are not very often required in the target situation ranked very high in the students' list of preferences for the course. On the other hand, reading that seems to be the most valued skill in the target situation was considered a necessary part of the syllabus by the least number of the students.

The results of the objective needs analysis revealed that contrary to the students' opinion, studying professional terminology should not be a primary goal of the course, as there are a number of much more immediate tasks that do not require the use of highly specialized vocabulary, such as the ability to engage in small talk or read an email from a foreign colleague. This also corresponds with the conclusion reached in the theoretical part that 'ESP teachers do not need to learn specialist subject knowledge' to conduct a good course

(Hutchinson and Waters 1987: 163). The same applies to the choice of topics for the course. The analysis of the target situation language use allows to suggest a list of possible topic areas: general science and technology, communication at work, giving personal information and being in a foreign country.

An important implication that the analysis of students' learning preferences together with the means analysis have for the syllabus design is the need to include learner-training activities, especially at the beginning of the course, as the groups are not homogeneous and individual students will have to work independently on the areas that are problematic for them. Because the course is short and not very intensive, probably the best it could do is to guide the students as to how they could improve.

Although the current research is far from exhaustive, it seems to have reached its aim in preparing the ground for an ESP syllabus design. The thesis looked at the characteristics of an ESP course, identified the steps in the process of syllabus design, outlined the general structure of syllabi and completed the key stage of syllabus design – the course participants' needs analysis, the results of which will be extremely valuable for setting course objectives and preparing suitable materials.

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Appendix 1 NEEDS ANALYSIS FRAMEWORK
(Hutchinson and Waters, 1987)

Objective needs	Subjective needs
Why is the language needed?	**Why** are the learners taking the course?
- for study;	- compulsory or optional;
- for work;	- apparent need or not;

- for training; - for a combination of these; - for some other purpose, e.g. status, examination, promotion.	- Are status, money, promotion involved? - What the learners think they will achieve? - What is their attitude towards the ESP course? Do they want to improve their English or do they resent the time they have to spend on it ?
How will the language be used? - medium: speaking, writing, reading etc.; - channel: e.g. telephone, face-to-face; - types of text or discourse: e.g. academic texts, lectures, informal conversations, technical manuals, catalogues.	**How** do the learners learn? - What is their learning background? - What is their concept of teaching and learning? - What methodology will appeal to them? - What sort of techniques are likely to bore alienate them?
What will the content areas be? - subjects: e.g. medicine, biology, architecture, shipping, commerce, engineering; - level: e.g. technician, craftsman, postgraduate, secondary school.	**What** resources are available? - number and professional competence of teachers; - attitude of teachers to ESP; - teacher's knowledge and attitude to the subject content; - materials; - aids; - opportunities for out-of-class activities.
Who will the learners use the language with? - native speakers or non-native; - level of knowledge of receiver: e.g. expert, layman, student; - relationship: e.g. colleague, teacher, customer, superior, subordinate.	**Who** are the learners? - age / sex / nationality; - What do they know already about English? - What subject knowledge do they have? - What are their interests? - What is their socio-cultural background?

	- What teaching styles are their used to? - What is their attitude to English or to the cultures of the English-speaking world?
Where will the language be used? - physical setting: e.g. office, lecture theatre, hotel, workshop, library; - human context: e.g. alone, meetings, demonstrations, on telephone; - linguistic context: e.g. in own country, abroad.	**Where** will the ESP course take place? - Are the surroundings pleasant, dull, noisy, cold, etc?
When will the language be used? - concurrently with ESP course or subsequently? - frequently, seldom, in small amount, in large chunks.	**When** will the ESP course take place? - time of day; - every day / once a week; - full-time / part-time; - concurrent with need or pre-need

Appendix 2 THE STUDENTS' QUESTIONNAIRE

Dear Student,
I am doing research in teaching English for specific purposes (ESP) for my master's thesis. Because you are going to take this subject in the future, I am very interested in your attitude to and expectations of it. Please, be so kind as to answer my questions. Please, be honest, because this is very important for my results!
Thank you!

PART 1
1) Please, provide the following information about yourself:
- Speciality:
- Age:
- Sex:
- Native language:

2) What do you think your level of English is (underline the suitable variant):

| elementary | pre-intermediate | intermediate | upper-intermediate | advanced |

3) Do you have to use English in your job or studies at present?

| Yes, a lot | Sometimes | Not much | No |

4) How much specialist knowledge do you already have in your main field of study?

| Very much | Basics | Not much yet |

PART 2
5) Are you interested in taking an ESP course?

| Yes, very much | Yes | Not very much | Not interested at all |

6) How important do you think ESP is in comparison with other subjects?

| More important than many other subjects | As important as other subjects | Less important that other subjects |

7) Do you think ESP will be useful for you?

| Yes, very useful | Yes, but not now | I am not sure | No, it's a waste of time |

8) Do you think ESP will be useful:
- For using materials related to your speciality written in English?

| Yes, very useful | Yes | Not very useful | Not useful at all |

- For finding a better job?

| Yes, very useful | Yes | Not very useful | Not useful at all |

- For communication with specialists from other countries?

| Yes, very useful | Yes | Not very useful | Not useful at all |

- For improving your general language skills?

| Yes, very useful | Yes | Not very useful | Not useful at all |

- For any other reason (please, explain):

9) During your ESP course do you think you need
- to study some professional terminology in English?

Yes, it's the most important	Yes, it will be useful	No, I already know all the necessary terminology	No, it will not be useful

- to study different topics related to your speciality?

Yes, it's the most important	Yes, it will be useful	No, I don't want to learn the same things again	No, it will not be useful

- to revise English grammar?

Yes, it's the most important	Yes, it will be useful	No, I already know all the necessary grammar	No, it will not be useful

- to develop your reading skills?

Yes, it's the most important skill	Yes, it will be useful	No, my reading skills are already quite good	No, it will not be useful

- to develop your writing skills?

Yes, it's the most important skill	Yes, it will be useful	No, my writing skills are already quite good	No, it will not be useful

- to develop your listening skills?

Yes, it's the most important skill	Yes, it will be useful	No, my listening skills are already quite good	No, it will not be useful

- to develop your speaking skills?

Yes, it's the most important skill	Yes, it will be useful	No, my speaking skills are already quite good	No, it will not be useful

- other (please, explain):

10) What forms of work would you prefer to dominate in your ESP class? Rate the following from 1 (the most effective for you) to 4 (the least effective for you)

- Teacher explains a new topic and corrects my mistakes when I do exercises
- Analyzing language structures and trying to work with new words on my own
- Class discussions, role-plays/group work
- Songs/films/games/projects/presentations

11) Please, write about anything you would like your teacher to take into account when planning your ESP course.