

Needs Analysis and Environment Analysis: Designing an ESP Curriculum for the Students of the Polytechnic University of Tirana

Margarita Paci

Center of the Foreign Languages
Polytechnic University of Tirana, Tirana, Albania
margaritapaci@gmail.com

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Abstract

Needs analysis is important in terms of students' involvement in every phase of the educational process. Developing an English for Specific Purposes Curriculum is closely related to learners' objectives, learning strategies, language attitudes, and expectations from the course and learning habits. Another important factor is the environment where this curriculum will be implemented. The purpose of this paper is to explain how to conduct needs and environment analyses for the engineering students in the Polytechnic University of Tirana and how to include them in the development of an ESP curriculum. We pose the hypothesis that by focusing on students' needs, objectives, expectations and learning styles as well as by taking into consideration the learning environment is improved the teaching/learning of a language for specific purposes. First, we will set some basic principles for conducting needs and environment analyses and afterwards we will proceed with the practical application of such analyses in the PUT's context. The results of the surveys, students' observations and the interviews conducted with ESP teachers indicate the variety of students' needs. Finally, based on those needs, there are drawn conclusions regarding the development of a more effective curriculum for the students of the engineering sciences.

Keywords: Curriculum development, needs analysis, environment analysis, English for Specific Purposes

1. Introduction

According to a survey about the future of the English language (Graddol, 2000) English will not be replaced by any other language as a lingua franca for the next 50 years. It will continue to have a strong status becoming the language of science, medicine, politics, business, internet, online communication, arts and sports. It is therefore very important that the Albanians, and in particular students have good knowledge of it if they want to advance in their field of study since most of the materials are in English.

Indeed, English takes a special importance as a library language for Albanian engineers and as a means of communication in conferences, symposia and seminars. This means, they should have enough linguistic knowledge to understand texts and in particular journals and periodicals, in order to interpret the data and theories and to update their knowledge with the latest technological developments. But on the other hand, engineers do not need English only to read but also to communicate. Active participation in the abovementioned meetings requires good linguistic skills in order to talk with colleagues about the latest developments in their field of specialization.

Polytechnic University of Tirana is one of the few higher education institutions in Albania that trains engineers in: information technology, electrical engineering, mechanical engineer, civil engineering, architecture and urban planning, geosciences, physical engineering and mathematical engineering. Thus, it should train students not only in their field of study but also equip them with adequate knowledge of English when faced with the demands of the labor market. Hence it is necessary to design an English language curriculum to meet the students' needs at best.

1.1 Research Focus

This paper aims at:

- Improving the English curriculum in the Polytechnic University in order to meet the students' needs and labor market's demands.
- Exploring some key factors that should be considered and analyzed during the process of curriculum design.

2. Material and Method

2.1 Theoretical Background

Curriculum design is a complex process. It consists of the main steps for developing and implementing a curriculum. Although there are different opinions about these steps, (Richards, 2001, Nation 2010, Litwack 1979; Briggs 1977; Nicholls & Nicholls 1972 etc.) almost all of them mention three main elements: (1) environment analysis; (2) needs analysis; (3) objectives.

Environment analyses, often called 'constraint analysis, refers to the analyses of the context where a language curriculum will be used. Every context contains factors which may facilitate or hinder a curriculum's success. This is the reason why it is important to identify those factors and their effect. The factors may be social or institutional. Social factors include educational policies, language teaching tradition and community attitudes to language learning. Institutional factors include the human aspect (teaching staff and institutional policies and the physical aspect (environment where the learning process takes place).

Environment analysis is an important part of curriculum design because it ensures that the course will be usable. For example, if the level of training of teachers is very low and is not taken into account, it might happen that the teachers are unable to handle the activities in the course. Similarly, if the course material is too expensive or requires facilities that are not available, the course may be unusable. Generally, the importance of a factor depends on the effect it has on the validity of a course.

The second important part of an ESP curriculum design is needs analysis. It aims to obtain information about the learners' professional and linguistic backgrounds, their preferred learning styles, learning strategies, their motivation, and their willingness to attend classes, do homework, and commit themselves to learning. Learners' linguistic proficiency and the lack thereof are also very important in order to shape the syllabus and provide for quality teaching and teaching materials according to the learning context.

Finally, the third element of curriculum design is objectives and goals. They are very important because they assist the teachers and students in directing and defining the vision they should have along the process of learning a foreign language. The goals help the teacher in measuring the students' progress. Similarly, they help the students in measuring their own linguistic knowledge and progress (Haloçi et al.2008).

2.2 General Background of Research

The language curriculum in PUT has evolved from training students with English for General Purposes into English for Specific Purposes. EGP curriculum has prevailed in PUT for many years until 2003. The year 2004, with the implementation of the Bologna Declaration, marked the first efforts to prepare a curriculum that was in line with students' needs and labor market demands and in 2008 there was designed a curriculum based on students' needs analysis. The syllabus produced by this analysis direct even today's work of teaching staff of the Foreign Language Center in PUT. The current curriculum is a step forward in the field of curriculum designing because it was based on students' needs analysis but it has many drawbacks. First, it relied on needs analysis without taking into consideration the environmental factors especially two important factors for its success: the large number of students in classes and their heterogeneous linguistic background. Second, there was used only one means of data collection which was the questionnaire. Experience has shown that reliance on only one means can result in inaccurate information. Thirdly, the questionnaire was thematically limited. It focused only on students' preference with regard to the type of textbook and there were not taken into consideration their interests, proficiency, motivation, learning styles and the skills they would like to improve. Finally, the textbook selected after the evaluation of the results, often treated topics which were not related to the students' field of study resulting in students' dissatisfaction and alienation with the English course.

Under these circumstances, there arises the need for developing a curriculum which takes into consideration all the factors which affect its success such as students' linguistic background, their goals and interests and the social and institutional factors typical to PUT.

2.3 Sample of Research

The sample of this research consisted of 172 students who volunteered to take part in the survey. They were from different faculties such as Electrical Engineering, Geodesy, Civil Engineering, Architecture and Mechanics and from

different academic years: 2011-2012 and 2012-2013.

English for specific purposes is offered as a course in the first semester of the first year in the Bachelor studies so most of the participants (134) were first year students in their Bachelor studies. However, we have to point out that in this first semester, they take very few courses related to their field of study and as a result they might not be aware of their true needs regarding English. Thus, the sample was enriched with 37 students in the first year of their Master studies.

2.4 Instrument and Procedures

We relied on a combination of data so that our analysis would be as closer as possible to the students' needs and interests and in order to achieve its main purpose, that is to enhance the quality of foreign language teaching.

The first instrument was a questionnaire that had twenty-nine items. The purpose of the questionnaire was to obtain as much information as possible about the participants' linguistic needs, professional and English-learning related goals, age, field of study, commitment to learning, motivation, and learning styles. The questionnaire was presented in Albanian in order to avoid any misunderstanding, whereas the quantitative analysis was carried out using SPSS.

The second instrument was a General English Placement Test. The purpose of this test was to discover the respondents' level of proficiency in English. The test had 30 grammar items that ranged from very beginning to advanced levels of difficulty; 15 reading comprehension items in four reading passages that ranged from beginning to advanced levels of proficiency; the items were all multiple-choice with four alternatives to choose the right answer from. There was also an oral interview that consisted of 15 items. In the oral interview, the first seven items were of the short-answer type, and the other eight were open-ended questions that prompted students to think critically and elaborate on their answers. The students' oral proficiency was assessed according to a rubric prepared beforehand. The oral interview was also used to find out which students had an intermediate and above level of oral English proficiency and to confirm their level of grammar and reading comprehension.

The third instrument consisted of a semi-structured interview with PUT's English teachers. The focus was mainly on the students' proficiency, their learning needs and the difficulties the teachers have encountered in all aspects of their work.

The last instrument was an observation of the institutional and social factors by using Nation's chart of environment constraints and effects (Nation, 2010)

3. Results

3.1 Needs analysis

The following section outlines the results and findings related to the participants' linguistic background, motivation, learning styles, the skills and the type of English they would like learn.

The general English Placement Test confirmed the teachers' answers on students' proficiency. It showed that the groups in PUT consisted of students of different levels of proficiency in English. In the following charts is illustrated this heterogeneity respectively in the groups Geodesy IB and Civil Engineering IF.

Table 1. Geodesy IB

Proficiency	Percentage (%)
Beginner	56,5
Intermediate	30,4
Advanced	13,1

Table 2. Civil Engineering IF

Proficiency	Percentage (%)
Beginner	0
Intermediate	53,3
Advanced	46,7

The results of the questionnaires enabled us to develop a detailed profile of the sample. The majority of the participants (73,4%) were aged 18-25 and had attended a general high school with a small percentage (12%) coming from vocational high schools. Surprisingly, only 41.5% were studying what they really wanted. The rest, which also makes up the majority, had not been able to enter their favorite faculty. These findings are very important because they account for students' general lack of motivation. This lack of motivation toward English language learning is supported even by the students' reluctance to work outside the classroom. Only, 12.5% of the participants agreed to dedicate more than 4 hours per week to language learning outside the classroom.

Table 3: Skills the students would like to improve

Skill	Percentage (%)
Listening	30,7
Reading	4,9
Speaking	46,1
Writing	8,7
Grammar	3,5
Vocabulary	6,1

When asked which skill they wanted to improve most, the result of the analysis indicated that students and their professors expressed different needs. While professors believed reading was the most important skill for them, students themselves considered speaking and listening skills as most needed (see Table 3). On the other hand, when asked what they might need English the most, about 48,4% of the participants stated that they might need English for studying and consulting materials in their field of study which means that even developing reading skills is quite important,

Table 4. Reasons for using English

Reason	Percentage (%)
Studying & consulting materials	48,4
work	19,9
training	5,4
communicating	15,5
tests	5,4

It was also observed that the students make use of different learning styles but at the same time show a preference for traditional teaching methods with the teacher at the center. 45.7% of them preferred a teacher-led instruction full of explanations. They do not like either pair work or group work. However, 30% admitted that they learned best when engaged in creative activities and course assignments. (See Table 5).

Table 5. Students' learning styles

Learning styles	Percentage (%)				
	Most Satisfactory	Very Satisfactory	Satisfactory	Little Satisfactory	Unimportant
I learn best when I see something	35,1	35,1	15,8	8,8	5,3
I learn best when I hear something	31,6	45,6	22,8	0	0
I learn best when working by myself	27,1	11,9	25,4	25,4	10,2
I learn best when working with another	11,5	11,5	32,7	23,1	21,2
I learn best in small groups	9,3	16,7	33,3	25,9	14,8
I learn best in pair work	5,6	22,2	22,2	19,4	30,6
I prefer to solve an exercise without	20	17,5	20	7,5	35

teacher's help					
I prefer a teacher oriented class full of explanations	45,7	34,8	15,2	0	4,3
I learn best when engaged creative activities- projects	25	22,7	25	9,1	18,2

Finally, the respondents (72.4%) would like the English language course in PUT to train them with both general English as well with English about their field of study.

Table 6. Type of English the students prefer

Type of English	Percentage (%)
General English	15,8
Specialized English related to their field of study	11,8
Both	72,4

3.2 Environment analysis

The following section outlines the results and findings from analyzing environment factors. Analysis of social and institutional factors showed that social factors, which include educational policies, language teaching tradition and community attitudes to language learning, favored the learning of English. Albania has a long tradition of foreign language teaching starting in 1635 with Latin and in 1921 with the languages for specific purpose (A. Fida & L. Buza; 2012). Regarding educational policy, English is one of the languages most supported by the Ministry of Education. In fact it is the language that is taught most at all levels of the Albanian education system. The Minister of Education, Myqerem Tafaj, has announced that English will be a compulsory exam for high school students in 2013. Likewise, masters and doctorates will be provided in this language.

On the other hand, there were distinguished some institutional factors which could have a negative effect on the curriculum if neglected. Implementation of the Bologna Cart on September 18, 2003 reduced the time allocated to foreign languages. This decision which was taken by the Faculty Councils without the representatives of the Foreign Language Centre limited foreign language teaching / learning in PUT. Furthermore, in almost all PUT's faculties, the English course is offered in the first semester of the first year, resulting in an overload for the center's staff.

As it can be inferred, the foreign language center covers the teaching of foreign language in all PUT's faculties. This center consists of qualified staff with a long experience in foreign language teaching. They conceived the new curriculum in 2004 and this also led to a new organization of the classroom and into a livelier professor-student interaction. Unfortunately, they were not trained to face the new situation created by the reforms carried out at the university level.

As for the physical aspect, there is a foreign language Laboratory but unfortunately it is not equipped with modern infrastructure and other facilities, such as CD-player, video-projector, etc., are almost non-existent. However, in the different faculty libraries can be found numerous literatures in foreign languages but they are rarely visited by the students.

4. Discussion

The analysis of the data obtained from the questionnaire, placement test, interviews and observations showed that we are dealing with a contingent of students who are heterogeneous not only in their linguistic needs but also in the occupational goals, wants, motivation, learning styles and learning strategies. As a result, there should be developed a curriculum which takes into account this heterogeneity but at the same time meets the students' needs in accordance with the learning environment in PUT where there is a qualified teaching staff that develops learning activities without a language laboratory and with a reduced number of hours available for foreign language learning.

Thus, the curriculum cannot be based only on a textbook but teachers should conduct differentiated work with smaller groups of students who find by themselves specialty texts online or in magazines and analyze or study them according to their level of proficiency and in accordance with the objectives set by the instructor beforehand. In this way, they are encouraged to carry out independent work.

We have to bear in mind that the number of classes is insufficient and the teacher's role is to provide students with learning techniques, to facilitate learning, to show the way of reading and approaching a text, and finally developing a report or commenting on it.

Since the students would like to improve their speaking and listening skills, there should be provided more activities that help develop these skills. Furthermore, in order to ensure an effective English language learning, there must be addressed topics of interest to students and should be used a variety of motivating learning activities aimed at improving students' communication skills, linguistic knowledge and specialized terminology in line with general knowledge of English.

5. Conclusions

For those developing ESP courses, utilizing a learner-centered approach can help practitioners effectively design and teach a course that will meet the specific needs of their students. The process should first begin by conducting a needs analysis, an analysis of the learners' language ability, in order to get to know what type of language they already know and what type of language they lack. Again, this knowledge will not only allow curriculum designers to decide what and how to teach, but also decide on whom they will teach and how to cater for a myriad of learning styles, goals and motivation. However, a needs analysis exercise would not be complete without identifying the environments constraints and overcoming them with the means available.

Finally, by focusing on students' needs, objectives, expectations and learning styles as well as by taking into consideration the learning environment is improved the teaching/learning of a language for specific purposes

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