

Needs Identification for an ESP Pharmacy Course

*María del Pilar García Mayo
and Vicente Núñez Antón
Universidad del País Vasco*

The concept of needs analysis has undergone several shifts over the years. Although it has been criticized because of its limitations, establishing the needs for a particular group of students by means of a needs analysis project is critical to ESP syllabus design. This article analyzes the data obtained from both structural interviews with Pharmacy specialists and a 50-item questionnaire given to Pharmacy students at the University of the Basque Country. The results show that a detailed needs analysis project produces essential information about the type of materials to which specialists and students give the highest priority.



1. Introduction

This paper presents the results of a needs analysis study carried out in the College of Pharmacy of the University of the Basque Country. The English for Specific Purposes (ESP) course in this College has been taught for five years but, because of changes in academic staff, no needs analysis had been conducted so far. We first provide an overview of the importance of needs analysis within an ESP framework. Then, we focus on some local features and the type of needs analysis carried out in our project. A summary of the results obtained together with some comments on their implication for syllabus design are also offered.

2. The Importance of Needs Analysis

The "techniques and procedures for collecting information to be used in syllabus design" are referred to as needs analysis (Nunan 1988:13). As a concept, needs analysis is not peculiar to language teaching; the techniques Nunan mentions were borrowed from other areas of education, training and development. Needs analysis was first popularized in the 1960's in the United States in a political and ideological climate favouring accountability and relevance in educational programs, learner centeredness and a closer relationship between learning and its purpose. In language teaching, the concept of a formal analysis of language needs was elaborated in connection with the Council of Europe Modern Language Project of the 1970's. Wilkins (1976:75) was one of the first to detail its importance in course design.

The first step in the construction of any language syllabus or course is to define objectives. Whenever possible these will be based on an analysis of the needs of the learners and these needs, in turn, will be expressed in terms of the particular types of communication in which the learner will need to engage.

Interest in needs analysis as an instrument in course design was first taken up by ESP. At this time, the needs were determined by the demands of the target situation (i.e. the language requirements of the students' future work or study). These target needs are identified through a Target Situation Analysis (TSA) (Chambers (1980)). Widdowson (1981) considers this type of needs analysis a *goal-oriented* definition of needs. The idea is that once the language of the target situation is described, the course can be devised by applying that description. The most elaborate model devised for carrying out a needs analysis is found in Munby (1978). The Munby approach, though very thorough, has been criticized for being time consuming and mechanistic and for collecting data *about* the learners rather than *from* the learners, among other things (West 1994:9). This criticism of objective needs analysis work led in the 1980's to a change of emphasis and there is now a greater focus on what is called subjective needs analysis, which derives more information directly from the learner, from his/her learning needs. Widdowson (op. cit.) considers this subjective needs analysis as *process-oriented*:

Whereas the goal-oriented approach, then, focuses on the selection of language by reference to the ends of learning, allowing the means to be devised ad hoc, the process-oriented approach focuses on the presentation of language by reference to the means of language and allows the ends to be achieved by the learner by exercising the ability he or she has acquired. In general, the current drift in needs analysis is toward simpler, more informal procedures. Needs analysis remains useful to ESP although it no longer commands the same attention that it once did¹.

We think that both target situation needs and process-oriented or learning needs must be taken into account when carrying out a needs analysis study,

¹ For a detailed review of the importance of needs analysis in language teaching see West (1994).

which later will help us to devise an adequate syllabus. Let us see how these two types of needs were considered in our project and how information was gathered about the two.

3. Local Features

The ESP course in the College of Pharmacy is offered to students who pursue degrees in Pharmacy, Dietetics and Food Technology. English for Specific Purposes is an annual 9-credit elective in their careers. The course can be taken at any time during their studies, although we know now that 85% are second-year students. Due to the fact that the students belong to three different speciality areas, we find ourselves facing a class with different levels both as far as knowledge of English and as far as their subject-area knowledge. The amount of time spent with students is three hours per week. There were 105 registered students, divided into two groups, in the 1993-1994 academic year and one professor in charge of the two groups. Although students were divided into those two groups at random, a placement test has already been devised and has been administered at the beginning of the 1994-1995 academic year. Students are now grouped according to their level of English.

4. Target and Learning Needs

In our needs analysis study for the design of an ESP course for Pharmacy, information on target needs was gathered by means of interviews with subject area specialists. Information on learning needs was gathered using a questionnaire (50 items) that students completed at home. A participatory needs analysis (Robinson, 1991:14) was also carried out: students made suggestions about various aspects of the course at different times during the academic year. These suggestions were taken into account whenever it was possible because they were an important motivating factor for students.

4.1 Summary of Results

As we have already mentioned, the information presented in this paper is part of the needs analysis study we are carrying out. We present now the information gathered in interviews with subject-area specialists and the

information obtained from the questionnaires students completed. The third and fourth stages of our project consist of collecting information from other ESP (Pharmacy) teachers in Spanish universities and from pharmaceutical companies and laboratories. These data are being analyzed. We think that an exhaustive and detailed needs analysis, a needs analysis that tries to obtain information from a variety of sources is basic to implement an appropriate syllabus and choose the appropriate pedagogic materials.

A. Interviews with Subject-Area Specialists

In the interviews with subject-area specialists we basically followed the framework for analyzing target needs in Hutchinson and Waters (1987:59). These authors provide us with six main questions that we will briefly answer in the order presented. To the question *Why is the language needed?* the unanimous answer was that English is used for study purposes in the specialists' fields and for work whenever they spend periods of time in foreign laboratories (or whenever visiting professors spend time at the University of the Basque Country). *How is the language used?* Reading and writing are the two language skills they need most, whereas speaking and listening are also needed but to a lesser extend. These specialists exchange information via manuscripts and contributions to international journals above all. They need to update information about new developments in their relevant research areas and, therefore, they need to read numerous articles in foreign journals. That is why these specialists want students to improve their reading and writing skills in English and consider them basic for the students' future professional life. Speaking and listening skills are considered less important, perhaps because not many specialists have the opportunity of spending long periods of time overseas. They need, however, to be able to express themselves with a certain degree of accuracy because English is the language used in the international conferences they attend. *What will the content areas be?* The content areas are, quite naturally, the specialists' research areas. The question *Who will the learner use the language with?* has partly been answered: these specialists use English both with native and non-native speakers in the framework of international conferences and the people they use the language with are also specialists in their corresponding fields.

In the question *Where will the language be used?* Hutchinson and Waters consider the physical setting, the human context and the linguistic context. As we have already mentioned, English among professors of the College of Pharmacy is used in conferences and workshops, in meetings with foreign laboratory representatives or in foreign laboratories whenever they have the opportunity to spend a period of time there. English is used either abroad or in Spain. *When is the language used?* In our particular case, most specialists consider that they use English frequently in its written form (either reading or writing in English) and, to a much lesser degree, orally.

In short, the interviews with subject-area specialists provided us with important answers to the question 'What knowledge and abilities will the learners require in order to be able to perform to the required degree of competence in the target situation' (Hutchinson and Waters, 1987:60). The specialists gave highest priority to reading and writing skills. Time permitting, they suggest, attention should also be paid, to speaking and listening skills as these play an important role in our students' future professional life.

B. Information Gathered from Students

The 105 registered students in the 1993-1994 academic year were given a questionnaire that they completed at home. Due to reasons already mentioned (i.e. changes in academic staff), it was administered in the middle of the academic year. Our intention is to administer the questionnaire (with minor changes) to the 1994-1995 students as well because we agree with R. Richterich and J.L. Chancerel (1980) in that a needs analysis study should be an ongoing process. The questionnaire includes, in one way or another, all the questions asked by Hutchinson and Waters in their framework for analyzing learning needs (Hutchinson and Waters, 1987:62). Those questions are: *why* are the learners taking the course (i.e. is it compulsory or optional, what is the students' attitude towards the class...), *how* do the learners learn? (what methodology will appeal to them), *who* are the learners? (age, sex, what do they know already about English)... etc.

Let us summarize now the information regarding our students. 95% of them are between 18 and 21. All of them have come to the university after

studying COU and passing the university entrance exam (*selectividad*). 86% have studied English for more than six years and has spent only 1 year without studying the language. All these data are very important because we could, in principle, assume that these students have reached an intermediate level (Intermediate-Mid following the ACTFL Proficiency Guidelines) in their high school years². Also, we will not have to deal with students that have no previous background in English or that, having taken English in high school, have not worked with the language for some years.

A little over half of the students (52%) have not studied any other foreign language, and the great majority (90%) are not currently studying English anywhere else. As for the reasons why they are taking the course, students were given five possible answers and they could choose as many as they considered appropriate. 79% answered that they consider English useful for their future professional life and 47% consider it an important contribution to their university education (see Figure 1); 16% admit taking the course because of the number of credits it has.

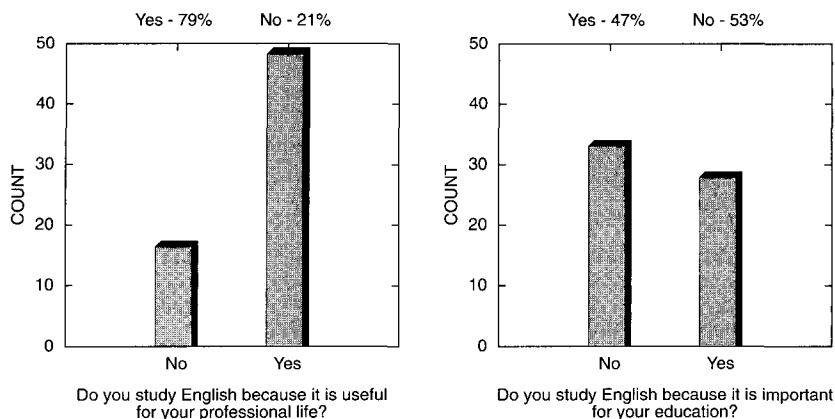


Figure 1. Why are students taking the course?

² We say *in principle* because, after spending some time with the group, one can clearly identify two levels in the classroom.

These students think that their most immediate needs in their ESP course are the following (given in order of importance)³: a) be able to understand specialized texts published in English (90%), b) pass the subject (89%), c) write in English (60%) and d) reach a good level of English so that they can consider the possibility of spending time in an overseas laboratory (45%). These results appear in Figure 2.

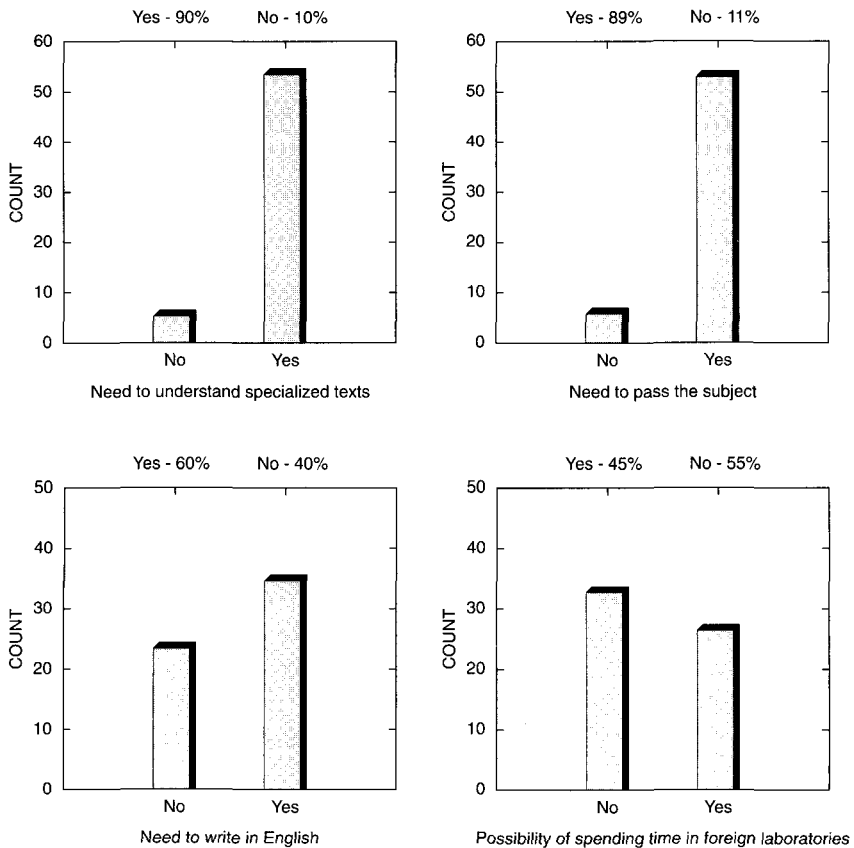


Figure 2. Students' most immediate needs in the ESP course

3 Ten options were given and students could choose as many as they thought were relevant.

It should also be mentioned that the need to learn English to apply for scholarships and pursue graduate studies overseas seemed to be not so important for these students: only 22% answered positively to that question. However, students are well aware of how important it is for them to have a good knowledge of English both now, as students, and for their future professional life. We can also observe that these results clearly parallel the ones obtained in the interviews with specialists: both students and professors emphasize the importance of *reading* and *writing* skills, although (for obvious reasons) the former consider to pass the subject extremely important. The priority students give to reading and writing skills is also supported by their answers to what kind of foreign language activities they consider necessary for their professional life. Students could choose as many options as they deemed important out of the 12 provided. Their relevant answers were as follows:

- | | |
|---|-----|
| a) reading scientific articles related to my speciality | 87% |
| b) understand lectures on pharmacy, dietetics | 87% |
| c) understand instructions of lab equipment | 69% |
| d) be able to take notes in lectures related to my field | 58% |
| e) write letters to foreign universities and laboratories | 53% |
| f) to have conversations on subject-related topics | 48% |

Here we observe that students want to work on activities that develop their reading and writing skills but listening and speaking skills play a very important role for them as well. This could be due to the increasing number of students travelling abroad during the summer for all types of personal and study purposes. We need to point out that some very interesting material about the latest developments in some of the students' specialities is available in video cassettes in English. This allows students to experience at firsthand how important this language is for them.

As it has already been pointed out, these Pharmacy students know well that English is very important for them. However, they do not think that ESP should be a compulsory subject (52% answered *no* to that question, whereas 29% answered *yes*. The remaining provided no answer). They overwhelmingly consider that it should be an optional course (98%) and that it should be taught

in two academic years, not in one as it is now being done. If they realize that English is so important, how is it, then, that 27% of students answer that their class attendance is low or null (24% low, 3% null)? What are the reasons that lead them to miss classes? Out of 11 choices provided, students chose as main reasons to miss class the following:

- | | |
|---|-----|
| a) English class timetable | 74% |
| b) The English class timetable clashes with timetable of compulsory laboratory work | 50% |
| c) Different levels in the classroom | 18% |

The first reason students give relates to the fact that English is taught either from nine to ten in the morning or from one to two in the afternoon. The first period seems to be a little bit early for these students and the second too late. Although we do not agree with their complaints about the first period of time, we certainly understand that, if they attend the second period, they will not have enough time between the English class and their compulsory laboratory work. The second reason they mention is certainly the main problem we have to deal with in the College of Pharmacy. Some of the students have personally told us that they want to attend the class but this is impossible for them because their laboratory work is compulsory. This is, however, a topic we need to discuss with the corresponding academic authorities. As for the third reason, students want to be grouped according to their level of English (85%). This has already been put into practice in the 1994-1995 academic year with good results. Finally, we are glad to report that 92% of students consider that the materials we use in class have a high-medium level of adequacy, although 63% consider that those materials have a medium degree of adequacy for their professional life. This aspect is being improved upon thanks to some team-teaching activities.

4.2 Some Comments on Syllabus Design

In our case, the design of the syllabus for the ESP course in the College of Pharmacy did not follow the established sequence from needs analysis to pedagogic specifications. Instead, a preliminary syllabus had to be designed because the academic year had already begun. After collecting and analyzing

all the information from subject-area specialists and students (the first stage of our needs analysis project), we devised another syllabus for the ESP course. We decided that the four linguistic skills (writing, reading, listening and speaking) should be worked on, although, due to the constraints already mentioned (hours assigned to ESP, timetable clashes with other subject-area classes...), not all of them would be given the same importance. We chose an analytic approach to syllabus design (Yalden 1983). That is, our starting point was not a set of linguistic items to be learned but, rather, linguistic and extralinguistic behaviours needed to achieve the goal of communicative competence. We also adopted a content-based approach to syllabus design, an approach that uses the content of the students' specialist study⁴. This type of syllabus aims to teach content and to improve overall English proficiency, in addition to teaching particular language skills required for understanding content. In Yalden's words (1983:37):

We view each of the language skills as being interrelated and a continuum in the totality of the language program. Language, as a living phenomenon, must provide the student with the facility to express himself in real life situations. A thematic approach to curriculum facilitates this premise and makes it applicable to all levels of instruction.

Briefly, we might add that students work with authentic materials (see Robinson, 1991:54ff for a discussion on the concept of authenticity) in groups or pairs depending on the nature of the activity. Special emphasis is given to developing the different *reading techniques* (inference, reference, linking devices, predicting, skimming, scanning...) that will allow them to assess the information conveyed in the texts and to the combination of *reading and writing skills* (summary writing, note taking in lectures and video sessions...). Video and tapes on pharmaceutical topics, food technology and health news are also used to improve the students' *aural and oral comprehension skills*. We also devote some time at the end of the academic year to the teaching of some "genre skills"; students need to be knowledgeable about the specific communicative conventions of their discourse communities

4 Content syllabuses are another realization of the analytic approach to syllabus design (Nunan 1988:48). Mohan (1986:ii) argues for content-based syllabuses on the grounds that they facilitate learning not merely *through* language but *with* language.

in order to produce successful textual products. Unfamiliarity with rhetorical conventions/text structure may impede processing of specialist texts⁵.

5. Conclusion

This article has shown how important a detailed needs analysis study is for ESP syllabus design. In our particular situation some external factors, such as the fact that the academic year had already began when we were assigned to teach this ESP course, meant that a preliminary syllabus had to be devised. The first stage of a detailed needs analysis study (still being carried out) produced additional and basic information about the types of materials needed. We learnt from the interviews that specialists gave the highest priority to the improvement of students' reading and writing skills (reading of specialized texts, analysis of the structure of technical abstracts in international journals and production of those abstracts...), whereas the answers provided by the students in the questionnaire showed that they were interested in improving not only their reading and writing skills but also listening and speaking skills. Section 4.1 summarized some other interesting results obtained from the answers given in the questionnaire. The idea that we should keep in mind is that needs analysis is, as Hutchinson and Waters point out (1987:63), a complex process in which both target and learning needs must be taken into account, a process which constitutes "the most characteristic feature of ESP course design."

⁵ There is a growing trend toward the incorporation of different syllabus elements into one teaching programme. We could say that the syllabus that we are currently using is a combination of elements from three types of syllabuses: content-based, skills-based and task-based. We adopt a "weak" view on the role of tasks in ESP, though: tasks are simply one component of the ESP methodology (vs. the "strong" view in which a series of graded tasks replaces the syllabus). Although we recognize the advantages of a task-based syllabus for ESP (face validity, motivation, lowering of affective filter...), it would be very difficult to monitor tasks or to provide feedback on performance in large classes.

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