

## The Needs of Students in Teaching English for Specific Purposes

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**Abstract:** This article presents the design process, challenge, and evaluation of an English for Specific Purposes (ESP) course addressed to chemistry students at Samarkand State University. The present research goals at management a Needs Analysis to examine both teachers' and students' awareness of ESP teaching and learning at the Faculty of Chemistry. The result of this needs analysis will serve as a basis for the design of a course for Bachelor's students. This process required a needs analysis to assess the students' academic and professional needs, wants and lacks in order to create a course that included the four macro skills: speaking, listening, reading, and writing. This article presents the findings of the needs analysis. In addition, a set of learning strategies were considered in the design process (paraphrasing, negotiation of meaning, predicting, scanning, among others) to fit the students' reported needs. Based on the findings of the needs analysis, Chemical Course was designed to respond to students' needs, wants, and lacks.

**Keywords:** questionnaire, identifying their needs, predicting, design of new ESP course, analysis, resources.

### INTRODUCTION

#### The needs of students in teaching English for Specific Purposes

The present research goals at management a Needs Analysis to examine both teachers and students' awareness of ESP teaching and learning at the Department of Chemistry. The result of this needs analysis will serve as a basis for the design of a course for Bachelor's students. To control this research, the strategy of "triangulation" has been used. Triangulation is a key step in needs analysis. This strategy was a good choice for the research because it allowed the researcher to cross-check the information for validation of the "Needs Analysis". In this regard, Long (2005) has stressed the importance of cross-checking of data provided by at least three of the resources, as it adds to the reality of the needs analysis. Three tools namely, a structured interview and questionnaire for the students, a structured interview for the teachers. In addition, a test at the beginning of the semester (Diagnostic test), was used in the present research for two reasons: First, to identify the students' level before the course and compare it once the course is completed. Second, to select students with different scores to take part in the interview. Designing a new ESP course involves issues such as 'what to teach', 'how to teach' and 'where to start'. Based on main part of the teaching aims' approach to course design, this research work suggests a sample ESP course framework for First-year Bachelor's students in the field of 'Methods of teaching Chemistry' in the Faculty of Chemistry, at Samarkand State University and uses the main components of ESP course design: needs analysis, course goals, and objectives, course contents, substance, materials design, and finally assessment and evaluation. Needs analysis appears to be effectively used to gather sufficient factual information about the expected English language learning needs of

students before starting an English course. Observation through questionnaires and interviews can also serve as a guide for adapting teaching materials to the real needs of horseshoe-forming for the teaching of a particular language in their area of specialization that relates to chemistry. This dissertation is a hands-on research work divided into three phases. The first step is a needs analysis based on the following research tools: questionnaire (see Appendix 1) and structured interviews for students (see Appendix 2); structured interviews for teachers (Appendix 3); and a pre - test for students (see Appendix 4) to determine their level before starting ESP courses. The second step is to create a course based on the analysis of wants and needs. The final stage is the assessment of the level of students at the end of the courses (see Appendix 5) and the assessment of the designed course using the student feedback questionnaire (see Appendix 6). Sample population - first-year students of the Faculty of Chemistry of Samarkand State University. The study involved teachers of foreign languages and subject students of the faculty of chemistry, and teachers from English Department respectively.

English language skills are required in most specific Chemistry contexts worldwide. Coherent with the purpose of ESP education at the scheme level, ESP courses should be designed to equip students with adequate English ability to meet their needs and to measure their weaknesses. It is necessary to understand the expectations of both students and teachers as well as students' wants, needs and difficulties before fulfilling ESP courses.

The present research aims at exploring the students' perceptions towards their ESP courses at the Faculty of Chemistry in relation to the following goals:

- 1) To undertake an analysis of the objective wants, needs
- 2) To examine students' learning wants, needs
- 3) To design relevant materials, vocabularies
- 4) To assess students' ability and increase in the purpose situations
- 5) To evaluate the efficiency of the suggested ESP courses

Based on the above-mentioned objectives, four research questions are formulated:

1-What specific needs do the Bachelor's students in the Chemistry Faculty regard as most important in their English course considering their lacks and wants in terms of language functions, language skills, language structures and rhetorical categories?

2-Which teaching method/approach best suits their wants, needs?

3-What type of teaching materials is most appropriate for them?

4-What are the elements needed to effectively estimate the students' input on the one hand, and to pedagogically evaluate the course on the other?

The upward questions lead to the following hypotheses:

1.Effective language learning and teaching maybe improved after identifying the students' needs and interests.

2.A comprehensive method/approach seems to be the proper one for both teachers and students.

3.Needs analysis is an important step for the course designer and teacher too, in order to develop teaching materials including course elaboration, organization, use of visual aids and authentic material.

4.Students' progress and feedback are main and beneficial sources of information to evaluate course efficiency.

This research work is divided into four chapters. The first chapter examines the relevant literature in the field of extrasensory perception. Some definitions are given and then an overview of the history of ESP is provided. At the tertiary level, the researcher found it necessary to draw attention to the difference between ESP and GE, taking into account the roles (old and new) that the teacher plays in the classroom within the GTM system and in the context of ESP. This part of the dissertation also covered materials and course design.

### **Participants**

The participants in this study are 23 first-year Bachelor's students from the Faculty of Chemistry, and three teachers; one is a language specialist from the department of English and two subject specialists from the Department of Chemistry. These first-year Bachelor's students were registered in their academic programs during the first semester of the 2020-2021 academic year since it is the only semester in which the English courses are scheduled. They are studying in a specific field of research which is "Methods of teaching Chemistry". They were another one group; one consisted of 25 students and the other had 27 students but for the purpose of the study they were gathered in one class for one session per week.

### **Instruments**

Both qualitative and quantitative data were collected for this study. Data involved a pre-test for the purpose of associating the level and interview with students for the reason of preparing a questionnaire in order to identify their needs in terms of linguistic competence, lacks and wants. Another interview with the teachers was organized for the goal of analyzing the overall situation in the Faculty of Chemistry. Before collecting the data, the researcher distinguished and explained the purpose of the study to the participants and their particular roles.

### **Pre-Course Test (Diagnostic Test)**

This statement was a Diagnostic test that consists of two parts: Part A includes General English test and Part B supplies with scientific English test. (See appendix4). Each part is characterized in details in chapter four (see 4.2.1.1) The aim of the first part was to identify the respondents' level of skillfulness in English. Furthermore, the test was used to verify or correct the self-assessment they had provided in the questionnaire regarding their level of English proficiency. The test had ten grammar items that collected from very beginners to advanced levels of difficulty; ten reading comprehension articles in three reading passages that ranged from beginners to advanced levels of proficiency. The items were all multiple choice with four options to choose from. They were not able to pass an oral exam test since they asked the researcher to translate most of the questions in the oral interview. This affirms their low level of speaking English proficiency.

The second part of the test (Part B in Appendix 4) was to define the participants' knowledge of scientific English vocabulary, understanding of texts in chemistry and their ability to summarize and translate small passages about topics in their specific sphere of research. The test had ten chapters with multiple choice and questions for which answerers had to choose between various options. The scores obtained through this test were analyzed in order to evaluate their English language proficiency. The test was administered to the first-year Bachelor's students at the beginning of the semester before the starting of the courses. It was

done at the Faculty of Chemistry, supervised by three teachers (language teachers and subject specialists), and continued two hours for each part.

The analysis of the data collection from part D of the questionnaire has given answers to one main question in this research. It intentions at knowing the awareness's of the first-year Bachelor's students of the Faculty of Chemistry about their English-language needs in connection to their proposed-future ESP course content of Faculty of Chemistry, Department of English. This section is divided into four main parts: Language functions, rhetorical categories, language structure, and language skills; the analysis of these four aspects of the language will be used for the design of the new ESP course available on the students' English language needs. The periodicity distributions of the students' responses to the 54 parts from chapter D of the research questionnaire is presented in Appendix 5. Moreover, the tabulated frequencies and percentages of students' answers to combined categories of "Very Important" (VI) and "Modestly Important" (MI) are shown in Tables 2.D-1 through 2.D-4 and the classification data in every table are shown in falling order.

### **Language structure (paragraph 1 to 6)**

The ranking data (as showed in Table 2.D-1) present obviously that five out of an overall of six paragraphs of Language Structures were comprehended to be very important to learn in their English courses as pointed out by very high percentages from the integrated categories: "Very Important" and "Modestly Important", ranged from 50% to 85%. Two paragraphs with highest percentages of responses frequencies ranking from 75% to 85% are Item 3 (Glossology, terminology in your area of specialization), Chapter 1(Terminology, glossology used in scientific text) accordingly. Complementary three paragraphs with more than half of the informants' frequency answers ranged from 50% to 57.5% are chapter 2 (General terms used in scientific texts), chapter 4 (Word structures, affixation, nominalization), and chapter 5 (Grammatical structures used in scientific discourse, e.g. present participles, passives, conditionals, etc.), accordingly. Only one item as received by these Chemist students to be less important to learn in their first- year Bachelor English courses is chapter 6 (Signaling syntactic boundaries using punctuation marks); they felt that this point has already been obtained in the secondary school. This result is claimed by a lower percentage of students' answers (40%) received from these two categories

<b>Responses to the First Two Levels of Importance</b>			
<b>Language Structures</b>	<b>Item No</b>	<b>Count</b>	<b>Percentage</b>
<b>Glossology, terminology used in scientific texts</b>	1	34	85%
<b>Glossology, terminology used in area of specialization</b>	3	30	75%
<b>Grammatical structures used in scientific discourse</b>	5	23	57.50%
<b>Word structures</b>	4	21	52.50%
<b>General terms used in scientific texts</b>	2	20	50 %
<b>Signaling syntactic boundaries using punctuation marks</b>	6	16	40%

### Two Levels of Importance are “Very Important” (VI) and “Modestly Important” (MI)

The 23 paragraphs in this part move around one key question which was “What most important skills from each of the four language skills do they suppose important in these English courses?” The frequency data represent that these chemist informants received all the chapters for Listening, Speaking, Reading and Writing to be significant in their first- year Bachelor’s English courses. The results are shown by average to very high percentages of students’ responses of those 23 chapters (52.5% to 75%). As can be resulted from Table 2.D-4 through 2.D-7, five chapters these informants most likely measured less necessary to focus on in their English courses. These five chapters are Chapter 1 of Reading Skills (50%), Chapter 13 of Writing Skills (40%), Chapter 18 and 19 of Speaking Skills (45%) and (40%) respectively and Chapter 20 of Listening Skills (42.5%) as shown in Tables 2.D-4 to 2.D-7, accordingly. These chapters are Reading textbooks, writing e-mails, speaking to foreign visitors, small talk and following lectures.

#### Responses to the First Two Levels of Importance

Reading Skill	Item No	Count	Percentage
Reading text on Chemistry	4	29	72.50%
Reading specialized articles	2	28	70%
Reading instructions for laboratory	5	25	62.50%
Reading course handouts	3	23	57.50%
Reading study notes	6	21	52.50%
Reading textbooks	1	20	50%
<b>Two Levels of Importance are “Very Important” (VI) and “Modestly Important”(MI)</b>			

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