

Inga Rozgienė

Vilnius University
Institute of Foreign Languages
Universiteto g. 5, LT-01513 Vilnius, Lietuva
Tel. +370 5 268 72 68
E-mail: ingarozgiene@hotmail.com
Research interests: foreign language
didactics, ESP

Albina Trečiokaitė

Vilnius University
Institute of Foreign Languages
Universiteto g. 5, LT-01513 Vilnius, Lietuva
Tel. +370 5 268 72 68
E-mail: albina@takas.lt
Research interests: ESP, foreign language
didactics

SURVEY OF THE ENGLISH LANGUAGE NEEDS OF THE SENIOR STUDENTS OF PHYSICAL AND BIOMEDICAL SCIENCES

The new generation of students with a different mindset and completely changed possibilities and opportunities offered by the rapid development of IT in the changing globalized world need more specific English language skills at different stages of their studies. Most of the programmes at Vilnius University include English for Specific Purposes during the first 2–4 semesters of studies, however, specific future speciality-related subjects are usually studied in the later years; senior students become involved in academic research and communication, and it is then that the need for certain English language skills arises.

In order to meet the students' new language needs, teachers of the Department of English for Physical and Biomedical Sciences of the Institute of Foreign Languages of Vilnius University carried out a survey at the Faculties of Chemistry, Mathematics and Informatics, Medicine, Natural Sciences, and Physics. The study was conducted by means of an anonymous questionnaire covering students of senior years (those who have already completed the English language course and passed the final examination) as the target group.

The aim of this paper is to present the results of the above multi-purpose survey: to obtain a retrospective feedback on the ESP taught, identify the dynamics in the students' needs at higher levels of tuition as well as gain some insights into the possible gaps/lacks in the present scheme of the delivery of ESP which may have some implications for improvement / modifications in the further process of teaching ESP, thus contributing to the refinement of the quality of the course.

KEY WORDS: ESP, students' needs, language skills, syllabus.

Introduction

In modern language teaching, needs analysis is widely recognized to stand at the core of the entire ESP course. In contrast to students of General English (GE), students of English for Specific Purposes (ESP) may

have a closely identified goal for learning. They might need a form of ESP referred to as English for Academic Purposes (EAP) in which there is a concentration on writing academic essays, taking notes from oral lectures, perfecting reference skills in

English, etc. If they are going to become scientists or engineers, on the other hand, they might be learning English for Science and Technology (EST), in which case their teacher might have them improving on their ability to consult or design manuals amongst other things (Hammer 2001). Hutchinson and Waters specify that “ESP, then, is an approach to language teaching in which all decisions as to content and method are based on the learner’s reason for learning [...] What distinguishes ESP from GE is not the *existence* of the need as such but rather an *awareness* of the need” (Hutchinson & Waters 1987, p. 53). At first sight it may seem very simple to design a customized ESP course for a particular group of students (based on the faculty and speciality). Identification of the needs, however, turns out to be a rather complex issue as it involves a variety of players (administrative staff, teachers, and students with different backgrounds) with awareness of the needs differing dramatically among them.

It should also be taken into account “that learning a language is a matter of horizontal as well as vertical progress as learners acquire the proficiency to perform in a wider range of communicative activities. Progress is not merely a question of moving up a vertical scale. [...] They [learners] may make lateral progress (from a neighbouring category) by broadening their performance capabilities rather than increasing their proficiency in terms of the same category” (CEFR 2002).

A report on the survey conducted by QALSPELL project in May 2002 among the second and third-year students from three Lithuanian universities concluded that “there is no rationale for focusing on *specific discipline-based genre differences*

in the language courses taught to students at the beginning of their studies. The focus on specific genres is more likely to be necessary in post-experience or in-service ESP courses, whereas the contents of the modules taught to students in their 1st and 2nd year should be concerned with General Academic English, i.e. the development of language skills related with study activities (listening to lectures, participating in seminars, reading different reading materials, writing essays, etc.)” (QALSPELL).

A Survey of English Language Teaching in Lithuania (2003–2004) revealed a diversity of institutional practices of teaching ESP at tertiary level and noted that some universities have designed language syllabi that combine general English, ESP and EAP together (Thomas 2005).

The ESP syllabi at the Institute of Foreign Languages of Vilnius University also represent a compilation of GE, ESP and EAP aspects in an attempt to satisfy the target needs: the so-called *necessities*, *lacks* and *wants* (Hutchinson 1987). The syllabi, therefore, must reconcile quite a number of counteracting factors such as the scope of potential target situations; students’ lack of professional experience or specific knowledge; different levels of proficiency on admission and so on.

The aim of this paper is to present the results of a multi-purpose survey carried out by the Department of English for Physical and Biomedical Sciences of the Institute of Foreign Languages of Vilnius University in order to obtain a retrospective feedback on the ESP taught, identify the dynamics in the students’ needs at higher levels of tuition as well as to gain some insights into the possible gaps/lacks in the present scheme of the delivery of ESP which may have some im-

plications for improvement/modifications in the further process of teaching ESP, thus contributing to the refinement of the quality of the courses offered at the University.

Method

The survey was conducted in the spring semester of 2011 by means of an anonymous questionnaire and covered the five faculties where ESP course is provided by the staff of the Department of English for Physical and Biomedical Sciences of the Institute of Foreign Languages: the Faculty of Chemistry (FCh), the Faculty of Physics (FPh), the Faculty of Mathematics and Informatics (FMI), the Faculty of Medicine (FM), and the Faculty of Natural Sciences (FNSc). The questionnaire was to be completed on paper or electronically.

The questionnaire included 13 questions which focused on a wide range of aspects of the English course offered at the University: they enquired whether the contents, length, and the structure of the course meet the students' needs, whether the skills acquired are used in practice, what particular English language skills the students consider to be lacking and would like to practise, consolidate or acquire in the later phase of their studies, i.e. at the end of BA programme or during MA/residency studies. The first 2 questions were of a general character asking the students' opinion on the need of English in the later years of studies in general. The 3rd question aimed to identify the target skills for further development. The 4–8th questions analysed to what extent the reading, writing, speaking and listening skills acquired through the course found their application in the current studies. The 9th question asked to specify whether the English course

they had was the 1st or 2nd foreign language and indicate what (if any) other language learning experiences the students had had, while question 10 concentrated on the duration of the English language course at the faculties surveyed. Questions 11 and 12 sought the students' opinion with regard to sufficiency of and satisfaction with the skills acquired, whereas question 13 asked about the specific skills the respondents felt they lacked most at the current stage of studies.

In total, 276 students took part in the survey: 57 students of the FCh, 19 students of the FMI, 122 students of the FM, 35 students of the FNSc, and 43 students of the FPh.

The findings

The major share of answers to the first question "*In your opinion, is there a need to have an English course at the end of the BA studies?*" was positive (Diagram 1).

Nearly half of the respondents (42%) stated that a course of English would be useful, over a third (37%) expressed some doubt answering "perhaps", and only a fourth of the students answered negatively (26%). Similar trends are observed in the replies to Question 2 "*In your opinion, is*

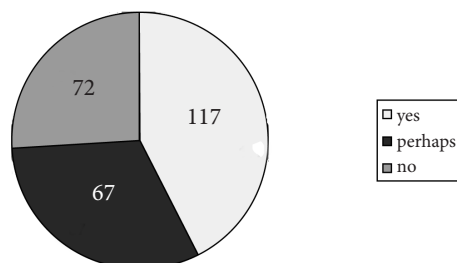
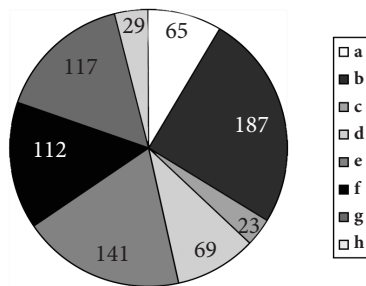


Diagram 1. Need of English at the end of the BA studies

there a need to have an English course during MA/residency studies?": 45% answered positively, 21% expressed doubt, and 26% did not think the ESP course to be necessary. The needs of students in all the faculties are very similar, with a slight increase in positive choices from 42% in BA studies to 44% in MA studies.

The 3rd question "What type of repetitive/specialized English language course would you need at the end of BA studies or during your MA/Residency studies?" provided a list of 8 options (academic English; professional English; business English; general English; writing articles/essays; delivering presentations; discussing/debating; listening to/taking notes of lectures) to choose from.

Over two thirds of all the respondents (68%) selected professional English as their priority, followed by over a half (51%) with article/essay writing choice; 42% opted for discussing/debating skills, 40% chose delivering presentations. It seems logical



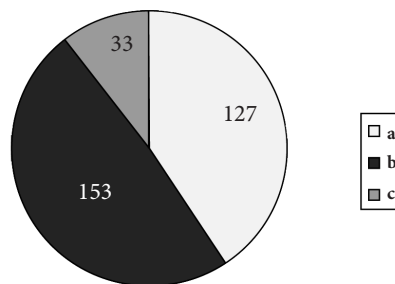
a – academic English; b – professional English; c – business English; d – general English; e – writing articles/essays; f – delivering presentations; g – discussing/debating; h – listening to / taking notes of lectures

Diagram 2. Prioritizing the need for specific linguistic competencies

that business English was selected by a very limited number of respondents (about 8%) as it was students of physical and biomedical sciences who took part in the survey. It should also be noted that a greater number of respondents selected more than one choice, e.g. professional English and delivering presentations, therefore, the total number of choices exceeds the number of survey participants by almost three times (Diagram 2).

Answers to the question "Do you read speciality literature in English?" divided in the following way: 46% of respondents read the main textbooks in English, 55% read additional literature, while 11% do not read in English at all. The overall number of answers is higher than that of the survey participants since about 13% of respondents answered reading both the main textbooks and additional literature (Diagram 3).

While dealing with reading at separate faculties, students of FM, FNSc and FPH read additional literature in English most, whereas students of FCh predominantly read the main textbooks in English, a slightly smaller number of them read ad-



a – the main speciality textbooks; b – additional literature; c – do not read

Diagram 3. Reading skills used by senior students

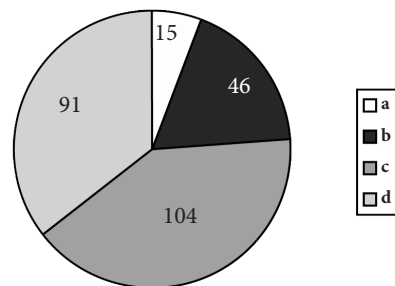
ditional literature. The 4th year students of physics answered that they mostly read the main textbooks. The most frequent reason of positive answers in the FNSc was “the more updated literature”, while students of molecular biology emphasized that “literature in Lithuanian does not exist”. The proportion of those who said they did not read in English corresponds to that of the students who learned it as the second language: the most common explanation was its difficulty. The duration of the course is clearly not sufficient to master this skill. Thus, the answers obviously suggest that the skills of reading academic/speciality literature in English acquired during the initial ESP course are needed and actively applied in the later stages of studies.

The following three questions “*Do you listen to speciality lectures in English?*”, “*Do you write or have written a course/diploma paper in English?*” and “*Do you write or have written articles to professional publications in English?*” will be discussed jointly since the results obtained present quite a similar picture both in general and in dealing with separate faculties: two thirds of the respondents (67%) answered negatively concerning listening by presenting an explanation that there were no such lectures or “all the lectures were in Lithuanian”, some had studied German/French as the first foreign language and lacked skills. Over 70% stated that they did not write course/final papers or abstracts because “there was no such need yet; such papers are written only in Lithuanian.” One more question focusing on writing skills yielded the following answers: 5% of respondents answered that they wrote themselves, 3% wrote with the help of a translator or editor, while 85% did not write at all as “there

was no need or chance so far; they would lack skills”.

With regard to practising speaking skills “*Do you take part in seminars, conferences, discussions, etc. in English?*” the respondents had four alternatives to choose from. Most of the respondents (38%) said they did not, 33% took part only as listeners, 17% could deliver a presentation but lacked the skills to take part in discussions, and only 5% delivered presentations and expressed their opinion fluently (Diagram 4).

The greatest number of respondents (70%) did not present any explanation for not attending seminars, conferences, etc., however, it may be assumed that students are short of time, lack communicative skills or have no opportunities to attend events of this kind. This correlates well with the answers to Question 5, where the students had to say whether they attended lectures on their speciality delivered in English: as most of the lectures are in Lithuanian, there is no motivation to improve listening / note-taking skills.



a – I deliver presentations and express my opinion fluently; b – I can deliver a presentation but lack discussion skills; c – I take part only as a listener; d – I do not participate

Diagram 4. **Participation in seminars, conferences, discussions in English**

In general, about 10% of respondents ignored questions 4–8 or did not present any explanations.

Question 9 identified the profile of the students with regard to language learning experience. The overwhelming majority of the respondents indicated that English was their first foreign language, 12% stated that they started English from scratch at the University (second foreign language). Very few mentioned they had done English courses outside the University (attended courses or took private lessons) or worked on their own.

In Question 10, students specified the number of semesters their English course lasted. The majority (91%) of the respondents from the FCh had English for 4 semesters, 4 students indicated 1 semester as the second foreign language. 4th year students of the FPh had English for 4 semesters, whereas the 3rd year respondents' course lasted 2 semesters (after reduction). 80% of the respondents from the FNSc studied English for 4 semesters, the rest – for 2 semesters. 11 students in the Program Systems programme from the FMI learned English for 3 semesters, 8 respondents from the Statistics Study Programme learned longer – 4 semesters.

Questions 11 and 12 sought the respondents' general retrospective feedback concerning the completed English course. In Q11, students were to choose between two options: *the course is sufficient/insufficient* and provide reasons for the choice.

A comparison of the answers reveals that slightly over half (the range between 51 % and 65 %) of the respondents tend to think that the course is sufficient. In the case of the FM, the picture is quite the opposite: only 24% of the students believe that the English

course is sufficient and 64% consider it insufficient. This could be explained by the fact that most of the respondents from the FM had the shortest English course (2 semesters), and this duration, obviously, is not sufficient to achieve high level of proficiency in Medical English. In addition to pointing to the shortness of the course, respondents specified concrete gaps the course failed to fill in: they said they did not manage to learn professional vocabulary more profoundly and had no time to practise writing articles / academic papers; many indicated a lack of time to develop speaking skills.

Question 12 looked at the English course from another perspective: students were asked to state if the course matched their expectations.

The proportion of those whose expectations were fulfilled ranges from 45% in the FM to 74% in the FNSc, which can be regarded as positive evaluation of the courses provided. The respondents admit that they learned professional vocabulary, revised and updated their grammar and practised presentation skills. This, however, is not considered to be sufficient for those who answered that the English course fell short of their expectations. The reasons for disillusionment vary: some indicated that the course was too easy; others claimed it was extremely difficult, thus calling for streaming. Some respondents missed grammar; others complained about lack of practice of certain skills, some felt they had made little progress. The comments also reflect a controversy in the respondents' attitudes with regard to what English – General or Speciality English – should prevail. The respondents from the FM recognize a transformation in their attitudes towards English: "...at that time I thought it was

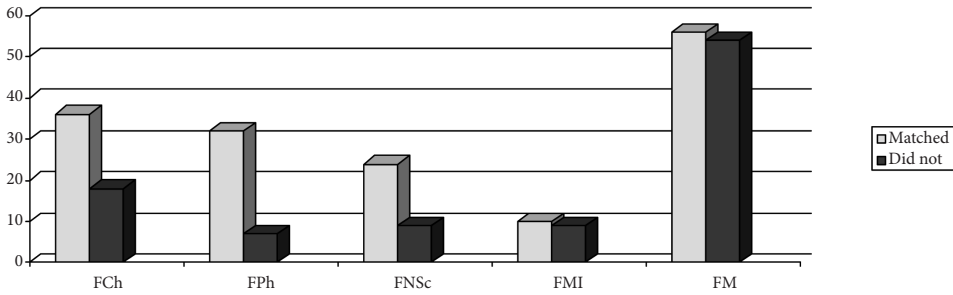


Diagram 5. Matching students' expectations

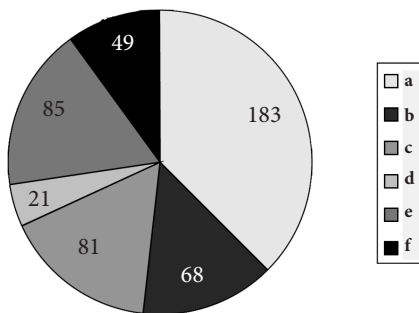
enough to learn what we learned, I don't think so now". Their typical comments are: "the course is too short; it is too early (little professional knowledge); it cannot prepare to read special literature in such a short time; too much material in a short time; streaming is necessary; learning should be continued throughout the studies/later; we did not gain enough knowledge" etc. (Diagram 5).

An attempt to identify senior students' immediate wants was made in the last part of the questionnaire. Question 13 asked to indicate the skills the respondents felt they were lacking most and would like to develop (Diagram 6). The students could select more than one option. The findings may be summarized as follows: respondents lack speak-

ing skills most (66%), followed by grammar (31%), and writing (29%). The students maintain that they lack reading skills least of all (8%). This could be explained by the fact that reading skills are kept operational by most of the students during their studies (Cf. Diagram 3).

Conclusions

The results of the survey imply that a large proportion of senior students surveyed do not consider the academic and professional English language skills acquired during the first years of studies sufficient to study and communicate in the professional environment successfully and believe the studies have to be extended further in the later years of the study programme. This corroborates the findings of the previous needs analysis carried out at the FM and FNSc that "the senior the student the greater the demand and understanding of the need for professional language, i.e. ESP" (Chodzkiene et al. 2005, p. 166). Conversely, the survey also reveals that the courses of English delivered are well-balanced and satisfy the needs of the majority of the respondents. This is especially true of the reading skills (the main academic skills) which have been acquired and applied practically by most respondents.



a – speaking; b – listening; c – writing; d – reading; e – grammar; f – translation.

Diagram 6. Lack of specific skills

The findings also suggest that the need to communicate in professional environment (both orally and in writing) emerges far later, when the course of English is already completed. The respondents showed their preferences for developing productive skills, such as writing articles, participating in academic discussions and conferences, which certainly involves not only linguistic competences but also sociocultural (culture of the academic community) and subject-

specific knowledge and, without doubt, mastery of communicative production and interaction strategies. Due to the complexity of the nature of the above skills, their development seems to be more appropriate in the later years of study when the learners' awareness of the need has been built (as proven by Diagram 6). It is therefore recommended to offer modules of English to senior students specially designed to meet their changing needs.

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Inga Rozgienė

Vilniaus universitetas, Lietuva

Moksliniai interesai: svetimųjų kalbų didaktika, profesinės anglų kalbos mokymas

Inga Rozgienė

Vilnius University, Lithuania

Research interests: foreign language didactics; ESP

Albina Trečiokaitė

Vilniaus universitetas, Lietuva

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Albina Trečiokaitė

Vilnius University, Lithuania

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FIZINIŲ IR BIOMEDICINOS MOKSLŲ
FAKULTETŲ VYRESNIŲJŲ KURSŲ
STUDENTŲ ANGLŲ KALBOS POREIKIŲ
TYRIMAS

Santrauka

Straipsnyje pateikiami tyrimo, kurį atliko Vilniaus universiteto Užsienio kalbų instituto Fizinių ir bi-

SURVEY OF THE ENGLISH LANGUAGE
NEEDS OF THE SENIOR STUDENTS OF
PHYSICAL AND BIOMEDICAL SCIEN-
CES

Summary

The article presents the results of a survey carried out by teachers of the Department of English for

omedicinos mokslų anglų kalbos katedros darbuotojai, rezultatai. Tyrimui atlikti naudota anoniminė anketa, o tikslinė respondentų grupė – vyresniųjų kursų Chemijos, Gamtos mokslų, Fizikos, Matematikos ir informatikos bei Medicinos fakultetų studentai, jau baigę profesinės anglų kalbos kursą ir išlaikę egzaminą.

Tyrimo tikslas – pateikti daugiaplanės apžvalgos rezultatus, kuriais remiantis būtų išsiaiškinta retrospektyvinė studentų nuomonė apie dėstytojų profesinę anglų kalbą, nustatyta studentų poreikių vyresniuose kursuose dinamika ir suformuotos įžvalgos, kuriomis remiantis būtų teikiamos rekomendacijos, kaip kokybiškai derėtų papildyti ar pakeisti dėstomą profesinės anglų kalbos kursą, kad būtų tenkinami naujai atsirandantys specifiniai vyresniųjų kursų studentų poreikiai.

Tyrimo rezultatai leidžia daryti išvadą, jog didelė tiriama dalyvavusių vyresniųjų kursų studentų dalis mano, kad pirmaisiais studijų metais įgyti akademinės ir profesinės anglų kalbos įgūdžiai nėra pakankami sėkmingai studijuoti ir bendrauti profesinėje srityje, todėl pageidautinas pakartotinis ar specializuotas anglų kalbos kursas bakalauro studijų pabaigoje, magistratūros ar rezidentūros metu. Atsakymai taip pat rodo, jog šiuo metu dėstomas profesinės anglų kalbos kursas yra tinkamas ir tenkina daugelio respondentų poreikius. Tai ypač pasakytina apie skaitymo įgūdžius, kurie yra pagrindiniai akademiniai įgūdžiai. Juos dauguma studentų suformavo ir taiko praktikoje.

Rezultatai taip pat atskleidžia, kad poreikis bendrauti tiek žodžiu, tiek raštu profesinėje srityje iškyla kur kas vėliau, jau baigus anglų kalbos kursą. Todėl siūloma teikti vyresniųjų kursų studentams specializuotus anglų kalbos modulius, kurie atitiktų besikeičiančius jų poreikius.

REIKŠMINIAI ŽODŽIAI: profesinė anglų kalba, studentų poreikiai, kalbiniai gebėjimai, mokymo programa.

Physical and Biomedical Sciences of the Institute of Foreign Languages of Vilnius University at the Faculties of Chemistry, Mathematics and Informatics, Medicine, Natural Sciences and Physics. An anonymous questionnaire was used as an instrument for that purpose, and students of senior years who have already completed the English language course and passed the final examination served as the target group.

The aim of the study is to present the results of the above multi-purpose survey: to obtain a retrospective feedback on the ESP taught, identify the dynamics in the students needs at higher levels of tuition as well as to gain some insights into the possible gaps/lacks in the present scheme of the delivery of ESP which may have some implications for improvement/modifications in the further process of teaching ESP thus contributing to the refinement of the quality of the course.

The results of the survey imply that a large proportion of the senior students surveyed do not consider the academic and professional English language skills acquired during the first years of studies sufficient to study and communicate in the professional environment successfully and believe that the studies have to be extended further in the later years of the study programme. The survey also reveals that the courses of English delivered are well-balanced and satisfy the needs of the majority of the respondents. This is especially true of the reading skills (the main academic skills) which have been acquired and applied practically by most respondents.

The findings also suggest that the need to communicate in professional environment (both orally and in writing) emerges far later, when the course of English is already completed. It is therefore recommended to offer modules of English to senior students specially designed to meet their changing needs.

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