

English Language Skills for Effective Professional Communication and Academic Mobility

Nailya F. Plotnikova

Kazan (Volga Region) Federal University
plotnikova.nailya@list.ru

Irina G. Kondrateva

Kazan (Volga Region) Federal University

Natalia G. Sigal

Kazan (Volga Region) Federal University

Abstract—We discuss some features of the English vocabulary whose identification is essential throughout the process of learning the language at the higher-education level as a means for achieving special purposes in communicative and competence approaches. The motivational approach is the basis for learning any foreign language. Its implementation provides future graduates with a basis for studying foreign scientific literature, familiarizing themselves with the latest scientific achievements from all over the world, and participating in educational, professional, and scientific events, such as international seminars, conferences, forums, and academic mobility programs. The present research brings forward tasks associated with the identification of specific features of the English language and the implementation of exercises aimed at the acquisition of professional language skills.

Keywords—*language, learning, student, English, special purposes*

I. INTRODUCTION

At present, the English language has become a sort of *lingua franca* in professional communication, exchange of knowledge and experience, and professional mobility in many fields. No doubt that academic mobility plays an essential role for students motivated for future professional success. This success can be regarded as a “complex and multidimensional process of intellectual development, exchange of scientific potential and culture heritage, resources and technologies, which allows acquiring a professionally structured base” [1 p.348]. Whether academic mobility can be considered as an option by an individual depends not only on their professional skills but also on their knowledge of English. This determines why the implementation of profession-oriented, competence-based and communicative approaches to language instruction in higher education is quite relevant.

The issues associated with English language instruction at university level are a primary concern. The study of the language is aimed at using English speaking skills for

students’ continuous self-development, social, professional, and personal communication.

There are several aspects why academic mobility is developing and has become quite important all over the world and, especially, at Kazan (Volga Region) Federal University (KFU). Firstly, academic mobility in Europe is associated with the development of the Bologna Process. According to Joldanova, Kruzhkova *et al.*, we can speak of two types of academic mobility: vertical mobility, which “implies full student training for a degree at a foreign higher-education institution”, and horizontal mobility, which means “training at a foreign university for a limited period (semester, academic year)” [2, p. 69].

If we consider KFU, academic mobility has an exceptional importance due to the participation of the university in the 5-Top100 Program, an academic excellence project intended for the financial support of the best Russian universities [3]. One of the indicators considered for the evaluation of universities under this program is academic mobility, namely the number of foreign students and lecturers at a university and the number of students and lecturers thereof involved in training courses abroad.

It should be noted that many scientists show a genuine interest in the Russian higher-education system and support its integration into European education because of its fundamental character, qualified teaching staff, and manifold educational programs [4, 5].

There are many works dealing with the interconnection between language level and academic mobility development. Fedorenko and Avvakumov consider personal features of students, their psychological and physiological condition, and level of motivation for learning English and participating in academic mobility. According to Fedorenko and Avvakumov, from a psychological point of view, students of humanities are more prepared for academic mobility projects than natural science students [6].

It should also be pointed out that educational media technologies play an essential role in the development of the academic mobility of future teachers of English language [7].

II. METHODS AND MATERIALS

Forming the necessary competences and soft skills in higher-education students requires the use of the main ideas of the methodology of English language for special purposes (ESP). According to T. Hutchinson and A. Waters, ESP methodology is based on an approach in which motivation has exceptional importance [8]. That means that students acquire profession-oriented knowledge while studying. Hutchinson and Waters uphold three concepts that establish the basis for ESP, namely the principle of integrity of the academic educational network, the principle of professional orientation, and the principle of stimulation of students' motivation and interest toward the learning process.

III. RESULTS

Motivation is a driving factor for the active participation of students in the process of learning the English language. It can be regarded as an impulse, motive, intention, and goal [9]. Motivation can also be defined as the process whereby a goal-directed activity is instigated and sustained [10]. In the first stage of our research, we determine the aims of ESP. Three groups of students (totaling 90 individuals) of 2nd, 3rd, and 4th years of Bachelor's courses and 1st and 2nd years of Master's courses, from different KFU institutes (Institute of Ecology and Environmental Management, Institute of International Relations, and Institute of Fundamental Medicine and Biology) took part in the survey.

TABLE I. RELEVANCE OF ENGLISH LANGUAGE LEARNING FOR STUDENTS

What do you need the English language for? (Answer according to your priorities)	1 For academic mobility, professional communication, and development	2 For social communication and development	3 For tourism and self-education
90 students	62%	55%	74%

TABLE II. USING FOREIGN EDUCATIONAL AND SCIENTIFIC RESOURCES IN EDUCATION AND DEVELOPMENT

Bachelor's courses, 2 nd year	Bachelor's courses, 3 rd year	Bachelor's courses, 4 th year	Master's courses
37%	44%	69%	83%

TABLE III. DIFFICULTIES IN LEARNING ESP

Communicative skills	Grammar	Vocabulary	Listening skills
63 %	32%	21%	57%

According to the results of the survey, we can assert the following:

1. Learning English is a promising activity for students due to two factors: the dynamic character of development of scientific knowledge in their field of specialization (Medicine, Biology, Ecology, Humanities) and globalization, which implies communication and exchange of experience and knowledge [11].

English language skills offer specialists an opportunity to be aware and come across the latest research in their specialization fields. The English language becomes necessary to be able to properly evaluate the results of scientific works published in authoritative journals and science metrics bases, such as the Russian Science Citation Index, Web of Science Core Collection, Scopus, Derwent Innovations Index, etc.

Another factor that increases the popularity of the English language is a large number of exchange programs and grants available. KFU data on exchange programs confirm the involvement of students in academic mobility and thus their interest in learning English. From 2013 to 2019, 16 students from the Institute of Fundamental Medicine and Biology took part in several grant and exchange programs: ISTernship Summer Program (Austria), Ph.D. programs in France, Master's courses in Germany. The most popular academic mobility directions among KFU students are Germany, Czech Republic, Switzerland, France, Austria, Japan, USA, and Saudi Arabia [12].

Russian scientific centers are popular among students too. Two students of the same Institute are taking part in Master's degree programs at Skoltech (Skolkovo Institute of Science and Technology). It should be noted that the English language level of students that participate in the mentioned programs can be assessed as intermediate and upper-intermediate, which proves the connection between language level and motivation for academic mobility programs.

2. English language teaching is associated with the necessity to develop intercultural skills in students and convey knowledge about etiquette, traditions, customs, and culture. Intercultural competence includes knowledge of all culture is made of: conditions and culture of communication, rules of etiquette, nonverbal forms of expression (facial expression, gestures, visual contact, etc.), physical conditions of life, nature, climate, foreign lifestyle, systems of values, mentality, national character, and relations between people.

3. English language speaking skills give students opportunities to participate in international scientific conferences and seminars in which they can show not only knowledge in their own scientific field but also their English language skills.

4. Lexical and grammatical base, reading, writing, listening, and speaking skills, as well as professional communication skills, allow students to access and assimilate information published in foreign sources, study it, carry out research and follow the latest achievements in their fields of study [13]. The use of such sources of information helps students to increase their expertise, develop and improve their language skills.

All the above leads us to identify the main grammatical and lexical features that should be given special attention when teaching English for effective communication and academic mobility success:

1. Usage of the present simple and past simple tenses when describing scientific processes:

- At present, the biosphere includes vast numbers of plants, animals, life-forms of our planet. The abiotic portion consists of the lithosphere, the hydrosphere, and the atmosphere.
- Water vapor combines with sulphur dioxide to form sulphuric acid and with nitrogen monoxide to form nitric acid. As you know, acids irritate the lungs.

Interrogative forms in these tenses:

- What role do soil animals play in decomposition? How does this role differ between protozoans and earthworms?
- Why do decomposer organisms secrete enzymes into the soil rather than breaking down dead organic matter inside their bodies?
- What chemical traits determine the quality of soil organic matter?

2. Usage of the present perfect tense to express past events that have present consequences:

- It is a fact that the combustion of fossil fuels has released large quantities of nitrogen to the atmosphere and increased their inputs to ecosystems [14].

3. Usage of the passive voice:

- These nutrients are then drawn out of storage at times when the demands for growth exceed uptake from the soil.

4. Usage of abbreviation forms:

- GEF – Global Environmental Facility
- IFAW – International Fund for Animal Welfare

5. Usage of chemical forms:

- NaCl [en eI sI `eI]
- Cl, N₂, O₂, CO₂, O₃, N₂O, CH₄, 2H₂ + O₂ = 2H₂O.

6. Usage of international words:

- air, atmosphere, biosphere, billion, comfortable, concept, complex, cycling, metal, matter, etc.

7. Usage of phrasal verbs:

- to get rid of wastes
- to put back nutrients throughout the body
- to fill up with blood

8. Predominance of noun names over verbs. Many nouns have Greek and Latin origins; this fact leads to changes in the plural form of nouns:

- crisis – crises, phenomenon – phenomena, bacterium – bacteria.

9. Professional terminology is introduced through context, or reading and analyzing profession-oriented texts that allow students to become acquainted with word-formation rules, word usage, phrases, and grammatical constructions [15]. The introduction of new vocabulary may be done in different manners, including direct translation, using various media, such as photos, defining synonyms, antonyms, linked terms, etc. The following tasks may be helpful for this purpose:

1. What does the author say about the term “acid rain”?

- a) Natural resources are badly affected by acid rain.
- b) Acid rain has become an internationally important issue.
- c) Britain was the first nation to coin the term “acid rain”.
- d) Atmospheric pollutants cause acid rain.

2. The word “coin” in paragraph 1 is closest in meaning to...

- a) work out
- b) invent
- c) carry out
- d) develop.

In some tasks, search for lexical units is used for translation purposes:

- acid rain, rain, mist, snow, solid particles
- All rain is slightly acid, but “acid rain” is a term used today to describe three ways in which pollutants may be deposited. Rain and snow may carry acids; dissolved acids may be carried in mists, moistening surfaces with which the mist comes into contact; (possibly the most harmful of all) solid particles carried in dry air may adhere to surfaces.

3. The aim of the following exercise is to choose the right Russian equivalent:

1. thin air;
2. to absorb UV radiation;
3. chlorofluorocarbons;
4. to contribute to the greenhouse effect;
5. irreversible environmental crisis

The examples given above assume the fact that teaching English for effective communication or English for special purposes has features that may contribute to the improvement of English language skills.

IV. CONCLUSION

English for special purposes is an effective and reasonable language training program that meets students' needs. It has specific features and should be developed taking into account lexical and grammatical peculiarities. It develops students' language skills and helps to integrate the English language into their future professions. By introducing creative tasks into the learning process, ESP boosts students' motivation for learning and speaking English, develops their vocabulary and communicative skills, thereby making them highly qualified specialists prepared for the challenges posed by the modern world.

Our research confirms that there is indeed a connection between motivation for learning English and academic mobility. Students with a higher English language level are more motivated to take part in academic mobility programs, and conversely, the opportunity to participate in such programs motivates students to learn English.

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