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PROFESSIONAL ENGLISH FOR ENGINEERING STUDENTS: RELEVANCE AND IMPORTANCE OF THE COURSE

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Today the introduction of the course "Professional English" or "English for specific purposes" into the academic curriculum for non-linguistic major students is considered more relevant than ever ago. This tendency can be explained by numerous job requirements that can be found and analyzed in various professional standards. The knowledge of professional English among necessary skills of different job functions is analyzed in this research. It's worth mentioning that the knowledge of technical English is required for performing many tasks and activities one way or another in the sphere of engineering today. This paper focuses on the study of the readiness to use English in a professional sphere which enables young specialists to become innovative creators, effective communicators, decision-makers and problem-solvers. The ability to become a part of the international society, developing new progressive and advanced technology is the goal of any engineering industry.

Keywords: professional sphere, job function, communicative approach, educational programme, professional competence.

Problem setting. As practice shows most engineering students do not quite realize the necessity of studying professional English or even English as a foreign language at all. They either do not see how English can be really useful in their professional sphere or they simply do not know how it can be introduced in their professional sphere. The lack of knowledge leads to negative results as we already know. Thus, first and foremost task for English teachers is to explain why studying English plays an important role in acquiring any other skills related to a professional sphere [5]. When teachers get their students motivated and full of enthusiasm, it will be much easier to reach the necessary goal. Without the proper understanding there will be no right attitude [8]. Teachers are responsible for building that favourable atmosphere that will be the first big step. So, finding the right approach is not an easy matter. This approach should be based on the nature of studying subject. English classes should have something in common with the professional sphere of students. For example, activities, tasks, terms in use. In other words, learning English is not quite a goal here though we still study its grammar and language itself for the sake of a language and communication, but the point is that we need to focus on English being a kind

of means which is supposed to help students practice their professional knowledge once again [11]. English should be used to discuss professionally-oriented articles, notes, researches, studies; to solve various problems and technical issues that can occur within the professional sphere; to negotiate and lead effective communication with colleagues and partners [23, 37, 43]. Students should be able to react in English and use it while at work. One of the approaches in order to introduce English into the professional sphere could be a communication-oriented approach, which is a subject of study of many researchers who publish results of their scientific work: V.V. Bakharev, R.R. Mukminov, N.N. Fi-A.P. Beketova, G.Ya. Stratonova, N.E. Bobrova, G.R. Abirova, N.V. Kovalchuk, R.F. Azmitova, L.A. Milanova, S.V. Gridneva, D.A. Omarova, N.V. Kuzmenko, L.P. Danilenko and many others. The value of communicationoriented approach is that it is focused on the development of skills needed in various communicative situations within a foreign environment. Different strategic tasks related to a professional sphere can also be solved by means of problemoriented training. This approach is quite popular and in demand today. Many authors studied this approach: I.A. Cheresmina-Harrer, S.A. Zolota-

reva, T.A. Logunov, N.N. Nikolaeva, G.A. Petrova, N.E. Barabanova, T.I. Vorobyeva, V.V. Sibul, I.V. Smirnova and others.

Of course there are a lot of things that we should take into consideration and study before we make all these mentioned ideas and suggestions possible.

Professional standards of engineering majors identify the knowledge of English among necessary skills and abilities related to different job functions [13]. Still to be more precise we need to find out the situation as it is in reality, that is, what university professors think about English being used for in engineering and technical studies. It will help us identify the exact direction we need to work on. Also it will be of great use to find out any difficulties engineers face when studying professional English and English in general.

The survey that has been carried out shows the opinion of professors of technical majors involved in different international activities of a university struggling to make the process of internationalization in higher education possible [21]. These professors recognize the value of being effective English communicators in the professional sphere today. University professors answered what they thought about the importance of English in the professional sphere. These are the most common answers:

- technical English is of great help when dealing with many issues at work;
- not enough attention is paid to the study of foreign languages;
- knowledge of English improves professional development;
- students do not realize the value of studying English;
- no progress is possible without establishing one common language;
- English is the language of science and technology;
 - English is also the language of the Internet;
- learning a foreign language helps to develop communication skills;
- it is a crucial skill to speak another language in our globalized society.

Professors of engineering majors are aware of the fact that the knowledge of English is one of the key components in building industry and everything that concerns an engineering sphere [15].

There are many researches dedicated to the problem of teaching English to non-linguistic major students and to the problem of the intro-

duction of the course of professional English as well [3, 9, 11, 15, 16, 17, 19]. The authors say that with the introduction of professional standards there are some complications concerning the process of employment of future graduates. The process of correcting professional standards that have already been adopted is never fully finished. There is always something which is left to be changed. New versions regularly appear and one can see changes in the requirements for the professional training of employees. As for the academic curriculum, it does not change so quickly. The authors are sure that the adaptation of a basic educational program to professional standards should be conducted in a different direction. Thus, a careful analysis of requested job functions, skills, knowledge along with the situation of adaptation of educational programmes for professional standards leads to the conclusion that we need to work on one particular specific programme depending on a major of students in order to manage the gap between the sphere of education and real requirements for a professional activity [13].

When some scientists talk about the ability to perform a job function, they mean the professional competence which is understood by a skill that is needed in a particular job or for a particular task. Thus, we need to study the topic of professional competence as a necessary condition for the successful performance of job functions [4, 8, 13]. If we find out the nature of a professional competence and identify its key components and aspects, we could acquire necessary skills that would be enough to perform a job function successfully [36].

From the point of view of different scientists, the term professionalism is connected with the term competence. One of the components of professionalism is professional competence which is a combination of personal qualities and good training [13].

The analysis of scientific literature also allows us to identify some of the professional tasks of an engineer in which knowledge of English is required [5, 10, 14, 21, 22]. Some authors think that in the structure of the main goal of teaching foreign languages there are three components to distinguish: communicative activity, self-education and professional activity (practical knowledge of a foreign language which allows using it effectively when studying foreign literature, scientific and technical documentation; interaction with colleagues at international confe-

rences). Professional activity in English presupposes such skills as technical translation, use of technical vocabulary, writing and speaking skills [16, 17].

Many researches are dedicated to the study of a current situation when the knowledge of English is considered among the most important skills of a modern engineer [45]. The system of training future engineers has been changed recently especially if we talk about the study of foreign languages. Today a modern engineer needs not only the knowledge of a foreign language, but also the ability to participate in various types of conferences to exchange experience and get new useful information in a professional field [29, 38, 39, 43, 45, 46]. Now in conditions of intense competition, specialists are required who are able to communicate in the professional sphere at various levels [46]. Thus, the ability to translate professionally oriented texts becomes an important component of a professional competence of an engineer [28]. Professors of engineering departments recommend working on translation skills and study latest significant foreign publications related to the professional field of students [40]. Such skills will be useful in further research work of students and will help them get better understanding of some professional concepts, innovations and problems.

Researches also try to highlight the absolute inevitable importance of English for professional communication [10]. English being one of the global languages can serve as one common language of professional communication for engineers. We need one common language which will provide understanding and allow interaction to facilitate the global production and the entire engineering industry to help us build a new community [3]. Communication is one of the basic and main skills of any profession [39]. Communication is responsible for success in a professional field. English is the language which gives engineering students an opportunity to become a part of a world-class research [4]. Technology changes very quickly, so, there is a need for engineers who can be a part of science and research [5,17, 19, 38].

Thus, we can make a conclusion that scientists know the value and importance of English being taught to future engineers. As it turns out, it has a lot to do with an engineering sphere; the knowledge of English even defines its success. Future specialists are faced with new requirements to their professional sphere. Our

changing society is the reason for many innovations including new educational programmes for non-linguistic major students. The problem of teaching professional English has become urgent nowadays. Non-linguistic major students are left with numerous language learning difficulties, the majority of them are totally unprepared to any language learning activities. Such students cannot find the ways to deal with language learning problems they experience, which means they are not ready to perceive a foreign language as a part of their professional future. We need to find the right approach to the introduction of an effective "English for specific purposes" course and we need to explore all the directions it has to offer.

Readiness to use English in a professional sphere. Before finding a solution to the problem of the introduction of a professional English course to the educational programme we need to analyze and define an aspect that we are going to work on introducing a course of English. This aspect includes some kind of result that is expected from the course. So, the readiness to use English in a professional sphere is the key aspect that needs to be studied [27]. It will show us qualities that we are aiming to develop with the help of the course.

To begin with we need to define the term readiness itself and the things it implies. It obviously includes such things as:

- being prepared and willing to do something.
- being able to carry out a planned sequence of actions,
 - being able to act immediately,
- being aware of what needs to be done or changed,
 - being able to perform a specific skill,
- being able to develop new required skills and attitude.

The nature of readiness includes such components or stages as:

- a set of attitudes and fixed ideas,
- motivation that explains particular behavior,
- self-actualization that allows using skills to achieve the desired.

Thus, in order to be ready to do some sort of activity you work on your attitude towards an activity which allows you to perceive and accept the environment you are in. The right set of attitude is what enables you to think, analyze, predict, compare, come up with ideas, choose ade-

quate means and methods and control the entire process. Motivation helps you move towards your goal until you achieve it. Positive results allow motivation to grow and develop. Being motivated you are willing to participate in different types of activities and try every technique which can turn out to be useful [1]. The source of motivation can differ from person to person. The favourable environment though is always of great help. Having realized the importance of your work you yourself are responsible for your motivation. But when it comes to students, it is necessary to teach them how motivation can be found. It can be done through various sets of activities and tasks developed to show the power of motivation and its influence on one's work. So, when you are fully motivated, you can perform any work and take part in any activity.

As we can see, readiness is quite a peculiar characteristic which is supposed to be developed personally. There seems to be no algorithm or set of rules that must be followed in order to be ready for an activity [2]. But you can still follow some successful examples that provoke the necessary feedback. There must be some pattern developed for students that helps to build the stages of readiness in order to participate and react.

The state of readiness is defined by the professional activity you are engaged in. The professional activity has its own requirements, rules and definitions of readiness. It simply means that you need to be ready to fulfill the requirements of your professional sphere. You need to perform particular job functions that vary from profession to profession. As for English skills, they are universal for all professions, but the goals can be different. We characterize and identify the professional sphere from the point of view of the use

of English by finding out what aspects of English appear to be absolutely necessary there.

Figure 1 shows key professional tasks for the performance of which, directly or indirectly, knowledge of English is necessary according to work experience of university professors working in an engineering sphere.

We can definitely say that all the mentioned tasks are really big ones. They are all about the ability to communicate effectively in a written or spoken form. This means we need to focus on teaching communication skills which seems to be easier said than done. The point is we need to find out how to teach speaking within the professional context.

Methods. One of the main points of developing a teaching strategy is to identify the most difficult things that students come across when studying a foreign language. Identifying these difficulties will help us come up with solutions and suggestions.

Based on one students' survey we can talk about such problems when studying a foreign language:

- insufficient vocabulary (both general and technical vocabulary),
- insufficient knowledge of professional terms.
 - lack of communication skills,
 - absence of practice,
- psychological difficulties of learning another language (a new mindset).

All these difficulties could easily be predicted, they are common and natural. Perhaps, coming across these difficulties means that a student is already working on them, because they are a part of a process. If a student can define a problem, he or she will soon work it out. We as teachers should develop a strategy towards solving

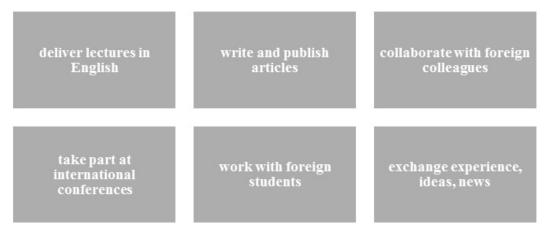


Fig. 1. Key professional tasks that require the knowledge of English

at least these common problems, and in the future it will help us to deal with other problems that students do not mention now.

We need to understand why students keep facing these problems all over again and simply cannot deal with them. What stops them? We can assume that it is all about an education programme that everyone should follow. As it has been mentioned earlier, sometimes educational programmes do not really correspond to requirements in professional standards. But still a standard educational programme presupposes the development of all basic language skills: listening, writing, reading, speaking. Why is not it effective enough? Something seems to be left out. If we teaching a course of professional English are going to focus only on the development of basic language skills, we will be ignoring the first and foremost goal of introducing English into the professional sphere of students. If this core concept is missing, students will be still left with the insufficient knowledge of English having no idea what they can do with such language skills at their future work. Without any realization of value and purpose our students are left discouraged and indifferent to the entire studying process. There is no idea why it is useful because as we see it does not lead to anything. The absence of a firm idea means that no motivation can occur. If it does not happen, students are not going to put any effort to try to acquire new skills. As the result, we have students who are not ready to work on their language skills and moreover to use them in their professional future. Thus, we do not have any key aspect that we need to work on. Our key aspect is the readiness to use English in the professional sphere.

This analysis of possible reasons why a standard course of English leaves much to be desired

leads to the conclusion that first we need to build a necessary environment which could contribute to the formation and development of students' readiness to become active learners. We can assume that when students are finally ready and willing to perceive new information, we can start implementing English to their professional activity or at least introducing and explaining it [25]. How to build a favourable learning environment is not a new question and there have been developed many ways to do it leaving teachers with a choice. We think that all you need to do is just to choose the right approach. What is the right approach for your students? The approach should be based on their personal needs and preferences. There is no universal approach that will work for any group of students. Students need to choose by themselves what is best for them and what they are willing to explore [42]. Perhaps, they are not going to choose the best option at first. But it is something to start with. When students become more confident learners in something they choose to do, they can be offered to explore something more. In this case judging by their positive experience they are likely to take part in different activities which earlier seemed to be difficult and impossible for them [22]. So, this way we get our students motivated and encouraged and this means they are open and ready to learn. If students are forced to do something they are not willing to, it kills their motivation in the first place because they start an activity with a wrong set of attitude. Students can be asked what sort of activities and tasks are their favouriteones or they think are the most effective ones which they eventually want to be good at. In figure 2 one can see some activities that students in our groups think are among the most important ones and should be studied hard.

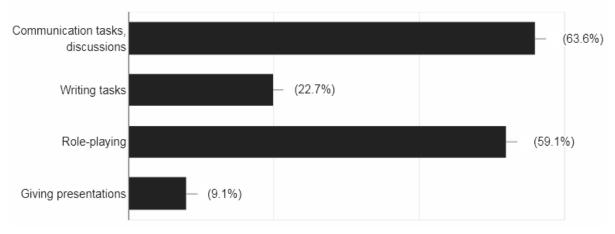


Fig. 2. Activities that students enjoy the most

As we can see, all the chosen activities are communicative ones. Students understand that in order to be able to use English in their professional sphere they need to be effective communicators [32]. All these activities can really help in achieving the goal.

Results. So, we need to decide how we are going to introduce these types of tasks to our programme. Before developing the programme itself we need to focus on its main aspects or concepts what will be a basis for the programme. It is something that is supposed to make our programme different from others and effective enough. This basis should be worked out according to students' preferences. This means that all these communicative activities that students enjoy the most should be easily realized within the programme [29]. There can be distinguished a few directions that can integrate and combine the mentioned communicative activities.

- We introduce the blended learning approach that involves interconnection of online digital media and traditional classroom methods [7, 24, 26, 34]. An online English course needs to be developed [6]. In order to be useful it needs to contain something that has not been used during classes. Making the course authentic will help grasp students' attention [44]. Additional video and audio content will always be of great use [31]. Pronunciation practice is an undeniable component of effective listening. Mastering listening skills brings a language to life. When you see how a language is really used, you start understanding the core essence of this language which eventually leads to the ability to express your own ideas using this language and you become ready to start speaking.
- We develop a professionally oriented course which involves the study of professional vocabulary and grammar in a professional context. The study of professional vocabulary should be done in a context of the mentioned communicative activities [14]. Students should study vocabulary doing other activities [30]. As for revising and practicing grammar in context, it gives the opportunity to show professional English in use [41]. Students can see this or that grammar phenomenon in the actual language, for example, through modern articles, latest researches and communication situations that can occur at a workplace, a meeting, a conference and so on [35].
- We try to implement the simulation practice when discussing and dealing with professional issues [33]. This can be done with the help

of a project method, role playing, preparation of presentations and giving speeches [12, 20]. This approach combines the practice of all language skills and fully integrates with the professional sphere. Moreover, it is also a way to practice a great range of such transferable skills which are important regardless of any profession, for example, skills of public speaking, teamwork, translation skills, negotiating skills and so on [18].

As one can see, all these directions that are intended to become a basis for the education programme aim to develop communication skills through various patterns. At any level communication should be established using English as a means to interact. If it is done this way, it allows studying not only basic aspects of the language, but it allows exploring the language in use. In our case it will be within the professional sphere of engineering [19].

Conclusion. In order to become useful and effective the introduction of the course "Professional English" into the academic curriculum for engineering students should be done taking into account a few steps:

- the course needs to be developed the way students would recognize its practical value which can be done through a communicative approach when the language is brought to life and can be actually used;
- students should be kept motivated and encouraged throughout the course when they are allowed to make their own decisions about activities and tasks they perform;
- we should try to master all language skills through speaking and communication, all activities should correspond to a professional context.

We can definitely make a conclusion about professional English being relevant and absolutely important nowadays. Being confident English speakers future engineers have a possibility to take part in a world-class research, technology and innovation. Using English in the professional sphere can also provide students with an opportunity to see some of their professional concepts or problems differently, from another perspective. A different language is a new way of perceiving things which can definitely tell something new about a well-known subject. Thus, perhaps, using English in the professional sphere is one of the ways to study some of the professional concepts again and as the result to get better understanding of how things work and to come up with absolutely new ideas and methods.

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ПРОФЕССИОНАЛЬНЫЙ АНГЛИЙСКИЙ ДЛЯ СТУДЕНТОВ ИНЖЕНЕРНЫХ СПЕЦИАЛЬНОСТЕЙ: АКТУАЛЬНОСТЬ И ВОСТРЕБОВАННОСТЬ КУРСА

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Сегодня все более актуальным становится введение курса «Профессиональный английский язык» или «Английский для специальных целей» в учебный план студентов нелингвистических специальностей. Такая закономерность может быть обусловлена многочисленными требованиями к той или иной трудовой деятельности, что может быть изучено и проанализировано в различных трудовых стандартах. В данном исследовании представлен анализ знания профессионального английского языка среди необходимых знаний и умений различных трудовых функций. Стоит отметить, что знание технического английского языка прямым или косвенным образом необходимо для выполнения различных видов деятельности в инженерной сфере. В статье представлен обзор понятия готовности использования английского языка в профессиональной сфере студентами технических специальностей. Возможность стать частью международного сообщества, работая над созданием новых технологий, является целью сотрудников инженерной промышленности.

Ключевые слова: профессиональная сфера, трудовая функция, коммуникативный подход, образовательная программа, профессиональная компетенция.

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