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### PROFESSIONALLY-ORIENTED TEACHING OF A FOREIGN LANGUAGE AT A TECHNICAL UNIVERSITY

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#### Abstract

This article considers the need for a major upgrade of the Russian technical education to prepare specialists capable of carrying out professional contacts in a foreign language in different areas and situations. It indicates the purpose of teaching foreign languages in technical universities which is to achieve a level sufficient for practical use of a foreign language in the professional activity later in life. To improve the efficiency of the teaching process, teachers should develop new organizational forms and methodical techniques. The emphasis is made on a dual-focused educational approach. In addition, two approaches, English for Specific Purposes and Content Language Integrated Learning, are analyzed. The article presents possible ways to optimize and modernize the methodology of teaching foreign languages, and also describes the importance of the process of integrating foreign language and professional components necessary for the formation of a competitive model of a graduate-specialist in the world labor market. A new approach to the selection of learning content is involved in professionally oriented teaching of foreign language. A detailed description of all the aspects of professionally oriented foreign language teaching is described in the article.

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## 1. Introduction

The main goal of higher education is to grow a multidimensional creative personality, integrally perceiving the world, capable of taking part in professional and social spheres actively, ensuring the dynamic and sustainable development of mankind and as opposed to narrow-minded specialists.

The expansion of international relations between industries and individual enterprises, the increasing use of imported equipment and foreign technologies in the practice of enterprises allows us to speak about the growing role of linguistic training in the process of forming a specialist. There is an unprecedented precedent of an increase in interest in learning a foreign language, due to the need to study it as a means of improving and accelerating integration into the world community, expanding contacts with foreign companies, using know-how, establishing personal contacts and striving for convertibility of diplomas. Specialists of all levels should be professionally mobile, possessing, on the one hand, deep professional knowledge, and on the other hand, aware of the need to constantly improve their professional knowledge. The preparedness of specialists for effective professional activity is one of the complex characteristics of the quality of their training, which includes the ability to quickly adapt, possession of professional skills, the ability to use the knowledge gained in solving professional problems, as well as sustainable motivation for successful professional activity.

It requires the training of specialists who possess not only special knowledge, but also additional knowledge, which in the current conditions of the development of society are becoming general cultural. It ensures his/her competitiveness in the labor market, an opportunity to take a prestigious and well-paid position. Therefore, one of the requirements for a graduate of a vocational school of any level is the availability of special foreign language training – his/her knowledge of a foreign language within the limits determined by the communicative needs of his future professional activity. If students master a foreign language as a means of general culture, then they master the language faster and more effectively as a means of professional culture.

The main task of foreign language training of a specialist in a professional school is the development of his/her communicative ability, that is, teaching the language as a real means of intercultural communication, and communication both in writing and in the form of direct oral contacts. The goal of foreign language training of students is two-sided: on the one hand, it is the general cultural development of the personality, and on the other hand, it is professional development, so that the student can become a professional. A future specialist, regardless of the peculiarities of his specialty, must be able to correctly understand and use any type of information, whether it be competent paperwork or familiarization with certain technical features of equipment, its installation and operation. Accordingly, the university should carry out the tasks of training specialists capable of effectively solving problems related to knowledge of a foreign language in professional activities. This depends on the level of training of the specialist, on the establishment of optimal links between the subjects of the professional and humanitarian cycle.

Educational institutions are reorienting themselves to training personnel to meet the needs of the regions where they are located, implementing the principle of regionalization of vocational education, which means for them, first of all, the transition from training qualified personnel of a relatively narrow range of specialties to training specialists with professional mobility, ensuring the ability to rapid adaptation in conditions of continuous information flow, constant updating of equipment and technology, widespread

computerization of production, improvement of labor organization and development of the social and cultural sphere. It is supposed to make certain adjustments in the teaching of the subjects of the language cycle. Taking these changes into account is necessary both to increase the effectiveness of the linguistic training of students, and to implement educational, upbringing and developmental teaching ideas.

The new work programs of the subjects of the language cycle, drawn up in accordance with the State Educational Standard (Ministry of Education of the Russian Federation, 2000), reflect the general goals and objectives of the subjects, with special emphasis on interdisciplinary connections in the study of the language, its connection with the future specialty of students.

## **2. Problem Statement**

The purpose of teaching foreign languages in technical universities is to achieve a high level for the practical use of them in the future professional activities.

Mastering of a foreign language is only one aspect of professionally directed teaching of the subject. A foreign language expands the concept of professional orientation providing a professional focus on the content of teaching materials, and activities that include methods that form professional skills. The professional orientation of the activity requires:

- 1) the integration of the discipline of Foreign Language with profiling disciplines;
- 2) the teacher of a foreign language faces the task of teaching a future specialist on the basis of interdisciplinary links;
- 3) it suggests the use of methods of instruction (Galskova, 2000).

The active participation of Russia in the life of the world community, the emergence of various international modern scientific projects and programs objectively puts forward fluency and practical application, both in everyday and in professional activities, in at least one foreign language as a priority area for improving the education of a modern specialist. Taking into account the peculiarities of the development of computer technology and the global Internet, it should be recognized that the dominant role among others is confidently retained by the English language.

In addition to deep knowledge in special disciplines, modern technical specialists need computer experience, developed communication skills, and a high level of foreign language proficiency. The realization of the educational function of a foreign language in a higher technical school opens up the opportunity for future engineers to receive the necessary professional information not only from domestic, but also foreign sources, which is especially important for the formation of their professional competence.

A foreign language also has significant opportunities for the development of perception, memory, will, etc.

Currently, due to the emergence of new carriers of international information and methods of its processing, specialists in various fields have to optimize the ratio between domestic and foreign information flows in terms of economic and energy indicators. Tasks of this type are the basis for the development of foreign language speech activity of graduates of any non-linguistic university.

It follows that the priority direction of the system of improving education is currently associated with the development of theoretical and methodological foundations for the design of teaching technologies that ensure the diversified development of foreign language communication skills of students, as well as

their ability to quickly and efficiently process foreign language information in effective ways and means. All this determines the upbringing of new personal qualities, active life positions, a rational attitude to the surrounding world, the development of both communicative competence and professional thinking and worldview of students.

Communicative competence is a measure of a person's involvement in communicative activity. With this approach, a new paradigm of higher education is accepted as a culture-developing, cultural-creative process.

With the culture-centric approach, the key principles in the training of a specialist are the principles of humanitarization, complexity, integrity and integration. It should be especially emphasized the importance of the general culture of the individual, which, in our deep conviction, is the professional basis for the training of any specialist.

### **3. Research Questions**

In response to new challenges, our university has revised the traditional approach to language teaching. Active proficiency in a professional foreign language is considered as a full-fledged component of the professional training of future specialists, an integrated part of their qualifications, aimed at forming professional and universal competencies of a specialist. The emphasis in training is focused on the level of practical knowledge of it as a means of intercultural communication, ensuring the possibility of continuing education and professional activity in a foreign language environment. The realization of this goal sets very high standards in mastering a professionally oriented foreign language and requires taking into account a number of aspects. The first is that a professional specialist striving for effective professional communication in a foreign language must master special professional terminology. The essence of the second aspect is that a professional specialist must master the linguistic means that make it possible to actually carry out business communication. The third aspect is that in the learning process, skills and research skills should be developed and improved.

Analysis of the tasks of the professional activity of the future engineer allowed us to build a scheme for teaching a foreign language, taking into consideration the following provisions:

- determination of communicative features for most types of texts in the specialty and means of expressing these features, i.e. communication models;
- determination of communicative signs of oral speech and means of expressing these signs;
- comparison of these means of expression and selection of models for their passive and active training;
- determination of the most complete list of communicative features and models of oral speech in the studied specialty and development of a system of exercises for their active training;
- analysis of various communication-oriented types of texts in the specialty, selection of certain types of texts for educational purposes, determination of their main communicative features, models and development of an effective system of exercises for training selected structural units;
- creation of a "base of preliminary knowledge" for the development of speech skills and abilities, that is, selection and training of word-formation, lexical and grammatical structures necessary for reading, listening and speaking;

- oral communication from a monologue to a dialogue and, conversely, using problems and games of a problem-seeking nature.

When developing the skills of oral speech in a foreign language in a specialty, it is necessary to remember that its monological element is not inferior to the dialogical element. Therefore, when teaching, one should go to increase the volume of monologue replica in dialogue and later to purely monologic forms of oral speech.

When working on a text, as the main educational unit in teaching a foreign language, it is necessary to teach students to determine the main topic of the text and its logical structure, that is, the distribution of the elements "topic-topic", which is the basis of the act of communication in the specialty. The main thing is to be able to correctly ask a question later (logically and grammatically) and answer the question posed, that is, to catch and support the conversation, remember the main problems and the logic of their presentation.

The formation of communicative competence is facilitated by the use of communicative events in foreign language lessons, the effectiveness of which is based on the fact that students are placed in conditions under which they are forced to communicate and exchange opinions on a given topic here and now, and then in situations of real communication. To do this, in the learning process, it is necessary to use techniques that provide real communication in a learning environment: solving problem tasks, discussions, storytelling, role-playing games, project work.

An integral part are lecture courses in a foreign language in special disciplines, developed by teachers of foreign language departments in conjunction with teachers of graduating departments, as well as teaching aids that facilitate the organization of the educational process in the preparation of professional specialists.

The involvement of teachers from specialized departments of the university in teaching a professional foreign language is one of the main components. In this case, it is easier for students to master special terms that our linguists may not know. It is important to observe one principle here: a professional linguist knows how to say correctly, and a technical discipline teacher knows what to say. A student in such classes feels comfortable, the main thing is that everything is clear to him and all his questions are answered. The pedagogical activity of teachers working together concerns the preparation, planning, organization, management and control of the educational process. In classroom time, a model of teamwork is implemented with separate teaching of the discipline. Teachers closely interact at all stages of student education, from preparatory (setting goals, determining content, choosing methods and techniques, developing educational and methodological support, etc.) and ending with a test or exam. Teaching a foreign language in pedagogical interaction requires additional theoretical knowledge from its members, since the main feature of the pedagogical qualifications of teachers participating in the joint training of students is not only knowledge of their subject, but also the proficiency of a foreign language by the teacher of the profiling department and the presence of a certain understanding of the subject of a special disciplines for teachers of the language department. It is necessary to organize additional methodological and language training for teachers of a foreign language and teachers of special disciplines.

With this approach, the content of teaching a foreign language is designed not as an academic subject, but as a subject of educational activity, which is consistently transformed into the subject of

professional activity. The system of professionally similar situations used in this approach allows the development of the content of training by means of a foreign language in dynamics, creates the possibility of integrating knowledge of various subject areas.

We see further work in this direction as the development of forms, methods, techniques and means for the development of professionally significant qualities in English lessons based on the implementation of interdisciplinary connections in special disciplines, modeling possible situations of personal and professional communication.

#### **4. Purpose of the Study**

As a result of the process of globalization and informatization in the professional sphere, specialists who are fluent in one or more foreign languages are valued. In order for specialists to be participants in global business and scientific community, it is necessary to establish the process of integrating profiling disciplines and foreign languages into higher education.

To understand and assess the necessity of integrated teaching implementation, we analyzed the basic conceptual principles grounds. We analyzed the main theoretical ideas and their premises in the Russian professionally oriented approach; analyzed the main theoretical ideas of the European approach, the theory of Content Language Integrated Learning. Considering the similarities and differences between two approaches, we considered the necessity in our higher educational system

In the process of the development of the theory and methodology concerning to technical specialists, an understanding of the fact that their foreign language speech training is not only a condition for mastering a profession, but also one of the basic components of the communicative competence itself is becoming increasingly clear. Methodists working with technical specialists consider it essential and mandatory to distinguish between the language of communication and the metalanguage, by means of which the profession is taught. At the same time, at the beginning of training, the language of communication dominates, on the basis of which student is gradually included in the metalanguage of communication. Such a sequence of training is dictated by the fact that communicative competence is an open-type phenomenon, which is constantly growing as one progresses in professional development. And here, in practice, teaching a foreign language speech activity is most often limited to formulas and clichés that provide basic everyday needs. Later, this approach leads to the need for constant use of the skills of foreign language speech communication in order to enrich the initial communication skills with the national specifics of the target language. The analysis of such didactic material leads to the conclusion that the basis of programmed increments of foreign language speech skills is linguistic and cultural knowledge.

#### **5. Research Methods**

With the help of a retrospective analysis of the first approach, we will try to answer the question of what are the fundamental differences between these two approaches.

In the 1950s the approach was characterized by the emergence of elements of professional teaching of foreign languages at the university. The development of the skill of reading literature in the specialty and

the skill of oral speech based on specialized texts. All that increased interest in learning foreign languages and broadened the horizons of students in their future specialty.

A professional concept was used to define the process of teaching foreign languages in a technical university, aimed at reading special literature, professional phrases, and was given in the studies of previous years (Abramovich, 2005; Folomkina, 1987; Roshchina, 1978). As a result of the development of the theory of communicative training, this direction is changing towards the formation of a creative and active personality, involving special knowledge and skills that contribute to his/her professional development in various fields of science (Obraztsov & Ivanova, 2005).

It should be noted that this approach created on the basis of the achievements of the great Russian psychologists, linguists and methodologists has very deep essential foundations. Communicativeness and problematic nature are defined as the basic principles of professionally oriented education (Serova, 2015). In this case the theory of the development of mental activity in a situation of repeated communication (Vygotsky & Myshleniye, 1982) and the theory of personality development in terms of speech activity, the principle of communication is being developed. The conditions for collective communication (scientific, professional, educational), created in the learning process, ensure the formation of social, professional, managerial abilities and competencies of future specialists. The communication from Serova's (2015) view, occurs due to the solution of specific tasks and communicative-cognitive tasks that provide a high level of motivation in learning.

The content of the topic (Zimnyaya, 1985) and the contextual approach (Verbitsky, 1999), belonging to the category of concepts of teaching professionally oriented reading, play a significant role in the choice of the content aspect of texts that play a significant role in acquiring new scientific and technical knowledge of students.

The theory of contextual learning is considered a form of active learning, intended for use in higher education and aimed at professional training of students. In accordance with this theory, training must be carried out through the systematic use of the professional context. In connection with professionally oriented teaching of reading in foreign languages, at the same time, the importance of a contextual approach to teaching lexical, grammatical, phonetic skills is of great importance. The content of the text should come first in this learning system, and the language form should come second.

Some scientists expand the concept of professionally oriented teaching thinking a professional orientation of the content of educational materials also as a professional orientation of activities and different methods and techniques forming professional abilities. They consider a foreign language as a professionally significant discipline that has the means of forming professional abilities of the students. So, it is proposed to combine the discipline of Foreign Language with profiling disciplines in the concept of professionally oriented training (Matukhin, 2011). In other words, in the professionally oriented training the task is to implement interdisciplinary communications in the higher education system actively and, based on these communications (Zinnurova, 2006).

Further, we analyzed the theory of Content Language Integrated Learning (CLIL) to compare the principles and concepts of these two approaches in teaching a foreign language in higher education institutions. This approach was developed for the high education system, and is currently being successfully

applied in the higher education system. The theoretical foundations of this theory are presented in their studies (Coyle et al., 2010).

The main ideas of this theory are: 1) cognitive-oriented training which is aimed at developing the cognitive abilities of the student's personality; 2) mastering a foreign language in the combination of profiling disciplines; 3) meaningful acquisition of professionally important information using a foreign language.

The fundamental principles of the Content and Language Integrated Learning are based on the 4 Cs' components: content, communication, cognition, culture (content, communication, cognitive and cultural components). The essential component (the content) is its basis (Coyle et al., 2015). The language teaching is guided by the students' knowledge of the lexical and grammatical components. It is described that the cognitive component means creating an effective teaching environment that encourages the development of students' cognitive abilities.

Thus, there are many similarities of the approaches considered and they are clearly understandable through the levels of their principles. In fact, all 4 Cs in the integrated learning (context, communication, cognition, culture) have professionally relevant correspondences in the professionally oriented training.

The differences between the approaches considered are the following: 1) in goal setting; 2) in the nature of joint activities of teachers of profiling disciplines and foreign languages; 3) in organizing the educational process: preference is firstly given to forming language and speech competence and then to semantic interpretation, understanding and discussion; in the second approach the training is conducted from the text to language (preference is firstly given to concept understanding of the basic content of the text).

## **6. Findings**

To achieve an increase in the effectiveness of teaching a foreign language at a technical university, it is necessary to teach students to use Internet resources to expand the possibilities of using a foreign language in their professional activities and to participate in international conferences to improve their qualifications and language skills, and joining the scientific world. Thanks to Internet resources, a student can have an access to the latest scientific research, inventions, which will allow students to replenish their vocabulary in various fields of science.

It is also necessary to develop monologue and dialogical speech, using texts and dialogues about their professional activities. It is very important to teach how to make up dialogues and monologues about your future profession. There are various methods for developing students' cognitive activity - role-playing games and problem situations.

In addition to all that has been said, one need to focus on listening. The teacher should select such texts so that they are not large in volume, so that they include a small number of new lexical units, the amount of new information should not be large too. New vocabulary should be presented for familiarization before listening to the text. The text is listened to twice, and after that students must complete exercises to understand what they heard.

Speaking about professionally oriented reading, we believe that a young specialist, first of all, needs to own an informative type of reading, since informative reading involves extracting semantic information



from a foreign language text, and reference reading implies only a general view of the main topic of the text. Thus, the result of reading is a detailed understanding of the text. To achieve this result, teachers use various assignments, both before and after the text. Pre-reading assignments include, for example, answering general questions. The task of such tasks is to evoke the student's already existing knowledge or to create associations on the issue under study. Post-reading assignments focus students' attention on details which allow them to obtain more detailed information. These tasks include writing headings for parts of the text, drawing up a text plan, dividing the text into parts according to the content. At the next stage information is analyzed, interpreted, and creatively processed. When choosing assignments, it is necessary to take into account the purpose and type of foreign language professionally oriented reading, the structure of the text and its communicative type. The use of various tasks develops the skills of obtaining and processing professionally significant information, will allow you to achieve a more complete understanding of the text, and also, which is especially important for a future specialist, to use the information received in future professional activities.

One of the most important requirements in modern teaching of a foreign language is the formation and improvement of communication skills in writing. We considered teaching writing as a mandatory component in professionally oriented teaching of a foreign language in higher education. Foreign internships for students, graduate students and young scientists involve the ability to make notes in a foreign language: compose and fill out a questionnaire, answer questions, write an application for admission to study or work, write a short or detailed autobiography, compose personal or business letters, using not only relevant grammatical structures, but also the necessary form of speech etiquette of native speakers, including the form of business etiquette. It is necessary to pay special attention to teaching students the ability to abstract and annotate professionally oriented materials, as well as present the results of their work in the form of presentations. To be considered an excellent professional, it is not enough to have a deep understanding of a topic, it is also important to be able to clearly, concisely and quickly convey important information to colleagues and partners. This versatile skill has become even more valuable in a situation where many companies have moved to a remote work format in the improvement of the communicative competence of students.

## **7. Conclusion**

The result of the formation of communicative competence at this stage of training should be the readiness of the future specialist for such a perception of foreign oral and written speech, which would be sufficient to form his full-fledged professional competence. Professional competence is the main result of higher education, its formation should be carried out by all subjects, it should go through all stages of education.

The content structural elements in professionally oriented teaching of a foreign language are:

- training dialogical speech;
- training monological speech;
- training to listen, which consists of the formation of the skills of perception and understanding of the interlocutor's statement in a foreign language;
- training to read, focusing on informative reading;

- training to write, consisting in the developing the communicative competence.

The importance of the formation of the communicative competence of future engineers when learning a foreign language is due to the need to develop students' skills and abilities of communicative communication through the use of speech models used in the course of learning a foreign language; the opportunity to study the customs of the countries of the target language, their culture, the specifics of political development and the use of the knowledge gained in the professional development of future engineers; the need to constantly improve the communicative competence of modern students in the ability to work with foreign sources and communicate with foreign specialists within the framework of interstate professional relations.

In the context of expanding international contacts, a humanized orientation of education, practical knowledge of a foreign language contributes to the formation of a comprehensively developed, socially active personality of a technical specialist, provides him with opportunities to establish cultural and business ties, familiarize himself with world culture and universal values.

The system of training specialists in a non-linguistic university should correspond to the emerging social relations, form students' ability to adapt to changing economic and updated professional information processes, independently and creatively solve professional and communicative problems. This can be achieved as a result of reforming the education system as a whole by increasing the activity of professional training of specialists and improving the teaching of all types of foreign speech activity.

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