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FORMATION OF STUDENTS' INFORMATION AND COMMUNICATION COMPETENCE IN FOREIGN LANGUAGE TRAINING

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Abstract

The paper is devoted to structure, content, organization, and methodology of formation of professional communicative competence of the future IT experts. The basic components providing integrity of educational process are described. The course "Translation in the area of professional communication" for the continuous training of students in English is proposed. The course allows to strengthen the inter-subject status of a foreign language. The educational course blocks are organized so that they match the disciplines of the major curriculum. Three stages of the learning process are distinguished within each disciplinary unit. The purpose of the article is to justify that training on the basis of proposed experimental training system positively affects not only the level of mastering the knowledge of English, but also the formation of the professional communicative competence of the programmer. Besides, the course is useful for the development of positive motivation for professional activity, for the self-development of the personality and for the growth of interest in communication. The academic success of students having such course in the curriculum is analyzed. This analysis confirms the effectiveness of the experimental system of training when compared to a traditional approach.

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Keywords: Communicative competence, computer technologies, professional competence.

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1. Introduction

Nowadays, various studies are conducted to study the problems of correspondence of the level of bachelors and masters training and the growing social and individual needs of qualified specialists with higher professional education.

The basic requirements for graduates are, generally, the requirements for their professional competence; therefore, it is necessary to determine the most suitable organizational and pedagogical conditions that contribute to the effective formation of the professional competence of the graduate of the university. A graduate must have professional competencies corresponding to the type of professional activity. In addition, graduates should determine their professional importance considering the job market, they should be able to combine knowledge acquired in the university with practice, and they should be ready for teamwork. In order to form their professional competence, they need to develop a stable capacity for lifelong learning, and stay independent and motivated. Global accumulation of new information and communication products demands specialists who would be knowledgeable, broad-minded, flexible, and capable of adopting high-tech products to achieve their life goals (Razinkina et al., 2018).

2. Problem Statement

Analysis of both the job market of applied information technologies and the results of the training of IT specialists shows that many graduates can indeed read literature in their specialty with a dictionary or work with text using word translators, but they find it difficult to express their thoughts in a foreign language using their professional knowledge. All this is a consequence of insufficiently close connection of teaching foreign languages with the profession in vocational schools.

It is important to note that professionally oriented studying of foreign language included in the curriculum of the "Information and communication technologies and communication systems" program is hardly related to the professional training of bachelors. Insufficient language training of graduates does not meet the modern requirements of the IT services market. Teaching foreign languages should be one of the means and elements of the learning environment that ensures the formation of professional competence of students (Rubtsova & Almazova, 2017, p. 107).

3. Research Questions

The current research is aimed at answering the following questions:

1.Is the proposed system of training successful in the formation of professional communicative competence of the future IT experts?

2.What methods, means, forms of organization of the education process are particularly effective when developing the information and communicative competence of IT students?

4. Purpose of the Study

The purpose of the research is to theoretically substantiate and assess a suggested system of continuous training for developing information and communication competence among future IT professionals. The present study was undertaken to test the hypothesis that the developed course

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"Translation in the area of professional communication" is an effective tool in the formation of information and communication competence.

5. Research Methods

The methods of research are based on theoretical and practical approaches: the study of philosophical and psychological-pedagogical literature, analysis and synthesis of research results, modelling of didactic theory, comparison and interpretation of new facts, questioning, testing, observation, pedagogical experiment and statistical methods of data processing.

6. Findings

As a part of the experimental work, a system of continuous training of future IT specialists in English was offered, the core of which was the course "Translation in the area of professional communication". In order to integrate it into the training system of IT professionals, the main components were developed to ensure the integrity of the educational process.

Structural and organizational component determines the order of execution of the course "Translation in the area of professional communication" in the system of training IT professionals with the purpose of forming professional communicative competence of students.

The proposed course is a condition for ensuring the continuous training of students in English from the fifth to eighth semesters, and it allows to strengthen the inter-subject status of a foreign language. The introduction to the specialty, which is taught in English by a foreign language teacher, can provide a greater correspondence of the contents to the specialty of students and more effectively prepare them for their professional work (Kogan, Khalyapina, & Popova, 2017).

The descriptive component determines the procedure for building the course "Translation in the area of professional communication" and reflects the sequence of the introduction of academic disciplines in the system of training IT professionals. The disciplinary blocks of the course are grouped according to topics corresponding to the disciplines of the major curriculum.

The learning process within each disciplinary unit is organized according to the same scheme and includes three stages. The first one is a training, consisting of lexical training and translation of professionally-oriented texts.

The second one is controlling, including a series of tests on the material learned, consisting of external final control and self-control. At this stage, the level of the formation of the translation skills for each disciplinary unit is monitored.

The third stage is developing and controlling at the same time, since it includes a business game (educational and cognitive element), which is a form of the final control of the communication skills level for each disciplinary unit. Farooq (2015) reported that for effective communicative language teaching environment, different assessment instruments may be developed to assess communicative competence of the students.

The organizational and methodological component determines the accompaniment of the educational process during the course "Translation in the area of professional communication".

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For the didactic support of the process of forming the professional communicative competence of a software engineer, an educational and methodical complex has been developed. The title and terminological content of each of the ten chapters of the reference book strictly corresponds to the educational disciplinary blocks of the discipline "Translation in the area of professional communication.

Pragmatic component determines the forms and methods of conducting classes of the course "Translation in the area of professional communication". Along with the traditional methods of teaching, organizational forms and means, active teaching methods, such as group teaching and the method of business games, were used in order to effectively develop the professional communicative competence of IT professionals. Studying a foreign language and mastering communicative skills in all kinds of speech activity happens without any unnecessary strain, between intensive reading and discussing professionally significant topics and problems in a foreign language (Khalyapina, 2017).

When teaching the translation of complex professionally oriented tests, saturated with terminology on the specialty "Computer Information Technologies", methods of group work and training were used. Among the effective methods one must note the division of the text into fragments, the structuring of the text, the compilation of a diagram, charts, summarizing and annotating the unadapted literature on specialty, etc. These types of work are particularly effective when translating texts saturated with special terminology.

Creating a favorable atmosphere in the implementation of the communicative task was also facilitated by the dynamics in the organization of classes. They were organized in such a way that free communication was carried out first in pairs formed considering the level of language proficiency of the interlocutors, then in random pairs, then in small groups, and finally in the general group together with the teacher. This organization of activities makes communication comfortable, and this fact has a positive effect on the development of communicative competence of students in general.

The suggested educational and methodological complex providing the didactic filling of the elective course "Translation in the area of professional communication" is a tool that can be easily adapted to new thematic sections due to its flexible variable structure.

The successful implementation of the pedagogical process is determined not only by the content, but also by the procedural level: methods, means, forms of organization of the education process. Along with traditional methods, organizational forms and means, active methods of teaching, such as group teaching and the method of business games that help develop professional communicative skills of specialists in the field of information technology were used (Kashkin, 2000).

When teaching the translation of complex professionally oriented tests saturated with terminology on the specialty "Information Computer Technologies" group work methods were used. Among the effective techniques they used division of the text into fragments, the students were asked to structure the text, draw a diagram, a chart, etc. Another interesting method of working with professionally oriented text is the translation of the "express information" type. When carrying out assignments of this kind, students must not only translate the text, but also carefully comprehend it, understand the intricacies of technical terminology, find the correspondence of complex English computer terms, and state the entire text according to their own plan. According to our observations, these types of work are particularly effective in the semantization and translation of complex texts, saturated with special terminology.

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The organization of role-play on the basis of the use of computer tools allowed to achieve the optimal result in the implementation of integration in the educational and extracurricular activities of all types of activities of the future programmer, and contributed to the formation of his professional competence due to the accumulation of acquired competencies.

For practical lessons, the topics were selected in such a way that they were directed not only to the development of a particular lexical material, but also indicated a problem within the framework of this topic. The problematic presentation of the material stimulates students' interest, encourages them to debate. As a result, the training material contributed to self-development of the personality, enhanced reflexive abilities, stimulated interest to communication (Minkina, 1995).

Creation of a favorable atmosphere in the implementation of the communicative task was also facilitated by the dynamics in the organization of classes of this kind. Classes were organized in such a way that free communication was carried out first in pairs formed considering the level of language proficiency of interlocutors, then in random pairs, then in small groups, and finally in a general group together with the teacher. Such organization of activity brings comfort to communication, there is an improvement in the emotional well-being of communicants, which had a positive effect on the development of communicative competence of students in general. This is also confirmed by the most important idea in the concept of Raven that competence manifests itself and develops only in conditions of activity of interest to a person, which allowed the author to define it as “motivated abilities” (Raven, 2002a, 2014b).

The results of the research showed that the developed system for the formation of the professional communicative competence of the programmer was based on provisions that revealed general questions of the methodology of pedagogical science, philosophical provisions on the social conditioning of the formation and development of the trainee's personality; dialectical method of cognition of reality, the idea of local psychologists about the leading role of activity in the formation of a specialist and the theory of development of motivation, which formed the methodological basis for research.

Comparison of these control sections at different stages of the experiment in the control and experimental groups allows us to trace the dynamics of the process of formation of professional communicative competence. In order to do this, the level of communication competence was tested for each aspect, based on the students' integrated test task in the control and experimental groups.

After completing the assignment with the purpose of determining the degree of formation of professional communicative skills, students were divided into four groups: with heuristic, high, medium and low level of the specified skills.

Analysis of the results showed that in the experimental group, when studying disciplinary blocks and moving to more complex cycles, positive changes in the performance of testing tasks at a more complex level are observed. If tests on the first two disciplinary blocks of a low level of complexity were performed by an average of 34% of students, then tests on 5-6 blocks were performed by about 22% of students, and only 11% of students coped with tests on the last blocks of the discipline. At the same time, the number of students who fulfilled the tasks of a high level of complexity increased from 15% on the first disciplinary blocks to 30% on the last disciplinary blocks of the discipline. The selective value of the Student's test $t = 2.53$ remarkably exceeds the critical value $t\alpha/k = 2.01$. Therefore, to a high degree of

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accuracy, we can conclude that there is a significant difference in the average score for the performance of the final task for students in the experimental and control groups.

Analyzing the distribution of total marks for the completed task and the composition of the mistakes made in the development of the site, we can conclude that the students of the experimental group coped better not only with the search and analytical stage of the site development, but also with the tasks of securing information and certification of the software product.

To obtain more reliable and accurate data, we checked the normality of the distribution of marks in every aspect.

Since the sampled value $t_в = 2.19$ exceeds the critical $t_кр = 2.01$, it is arguable that in each aspect of communicative competence, the average marks in the control and experimental groups differ.

7. Conclusion

Thus, we can note that in fulfilling the professional tasks that are part of the perceptive communicative competence, the importance of the English language is manifested to a greater extent. Accordingly, we can observe the positive dynamics in perceptual skills, which became apparent due to the introduction of the continuous learning of English into the learning process. According to the result of the research it is possible to draw a conclusion that the offered course is one of the basic means of formation of communicative competence of the engineer-programmer.

Thus, the processing of the results of the experiment showed that training on the basis of suggested experimental training system positively affects not only the level of mastering the knowledge of English, but also the formation of the professional communicative competence of the programmer, and the development of positive motivation for professional activity, as well as the academic success of students.

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