The Use of Information and Communication Technologies as a Means of Professional Foreign Language Training

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Abstract: Changes in the field of production, politics and education pose new requirements for foreign language training of professional personnel. The need for highly qualified specialists, including non-philological specialties, has increased. Taking into account the need to prepare future workers for professional activities, taking into account the new requirements of the information society, the main emphasis in vocational education should be placed precisely on information and communication technologies (ICT). The main task of vocational training is the preparation of qualified competitive personnel with a high level of professional knowledge, abilities, skills and mobility that meet the requirements of scientific and technological progress and market relations in the economy, the upbringing of socially active members of society, the formation of their scientific worldview, creative thinking.

The study of this article may be of interest to the world scientific community, given that today the language issue has become especially acute, given the significant pace of globalization of the countries of the world, and information technologies have become a part of the life of every person. Thus, the question arises of obtaining positive results in the study of foreign languages using ICT.

The purpose of the article is to analyse theoretically the possibilities of using information and communication technologies as a means of professional foreign language training and to test experimentally conceptual authorial provisions on the example of civil defence specialists. According to this goal, the research was aimed at practical verification of the feasibility of using ICT in the process of teaching foreign languages on the example of an educational institution.

Keywords: *information and communication, educational process, language training, modern teaching technologies, professional foreign language readiness.*

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1. Introduction

Since the twentieth century, instead of the usual transmitters of information, our lives are rapidly flooded with new ones. We all use the media on a daily basis, often through a professional calling. One of the key tasks of a teacher today is to prepare young people for integration into the international information space, which is rapidly developing and captivating our everyday life (Rush et al., 2016). Today the need to use modern computer tools in the learning process is indisputable. However, the actual problem of increasing the effectiveness of training using computers is urgent. The reason for this is the relatively sluggish and long-term transformation of modern education; it will definitely not keep up with the progress of technical means (Zhernova, 2018).

The formation of the skills of foreign language professional communication of future officers in higher military educational institutions, the psychological characteristics of the verbal and conceptual thinking of students in a foreign language, the formation of readiness for professional foreign language communication among future managers of foreign economic activity, the theory and practice of teaching English, modern approaches to the implementation of intercultural foreign language education, the use of a personality-oriented approach in the formation of readiness for foreign language professional communication of students of technical specialties, terminological problems, foreign language for special purposes and others (Ossai-Ugbah, 2011).

Today, three main directions of using computers in the educational process are clearly identified (Bandylo, 2020). The first consists in teaching technologies that require widespread use of a computer (graphic and text editors, work in computer networks), teaching specialized technologies (computer design and animation, prototyping, layout of texts, etc.). The second is to study informatics as a science with informational logical models. The third is the use of a computer as a technical means in the process of studying the basics of science in higher education institutions (Roztock et al., 2019).

British media theorist and educator Baytiyeh (2019) highlighted certain aspects of the importance of media education today, which are “a high level of media consumption and saturation of the newest media societies; the ideological significance of the media and their impact on the consciousness of the public; the rapid growth in the amount of media

information, the strengthening of management and distribution mechanisms; the intensity of media penetration into key democratic processes; the growing importance of visual communication and information in all areas; the need to educate schoolchildren and students, depending on future needs; development of national and international information privatization processes”.

Today, the search for effective methods of learning foreign languages with professional directions is extremely relevant. Graduates of higher educational institutions are required to know the language at the proper level in order to be able to find additional information in foreign literature and communicate with native speakers in order to solve professional problems (Aagaard, 2014). Therefore, laying out a foreign language in a professional direction, considerable attention is paid to the use of electronic textbooks in the educational process. Hoda (2016) notes in this regard that: "Despite the fact that the traditional textbook remains the main student's tool, the main role of the electronic textbook is to supplement the usual textbook".

Foreign language training has always been advanced among other disciplines and very quickly always the first to adapt technical advances, in particular the capabilities of information and communication technologies (Zhang et al., 2020). Actually, using information and communication technologies in practical lessons in a foreign language is a way to qualitatively change traditional educational forms; improving the individualization of educational action; optimization of the development of language structures and grammatical rules; overcoming the monotony of classes in the formation of linguistic and communicative competencies (Litvinova, 2017). Foreign language training itself turned out to be the most flexible and favorable to changes, making the most of the so-called technical teaching aids.

According to many scientists (Hanafizadeh et al., 2017; Nikolaev & Koval, 2019), the training of a competent specialist should be carried out on the basis of an activity approach with the obligatory modeling of the features of his functional production actions, the implementation of professional tasks aimed at solving real problems and situations. Being competent means being able to apply your knowledge and experience in a given situation.

The main goal of foreign language teaching, in our opinion, is the formation and development of the communicative culture of students and teaching practical knowledge of a foreign language. Consequently, the task of a teacher of a foreign language of a professional orientation is to create conditions for the practical mastery of a professional foreign language and in

the choice of such teaching methods that would allow each student to express themselves during their professional activities and increase their cognitive activity (Hartmeyer & Wegimont, 2018). Considering this, it will be important to address the question, how useful can ICTs be in learning foreign languages? We believe that the training of a competent specialist should be carried out using new pedagogical technologies and ICT. This research is theoretical with elements of an experimental survey, it is to test the hypothesis about the benefits of using ICT in the process of teaching foreign languages.

2. Methods and materials

As the sophistication of the latest computer technology, the process of teaching foreign language using information and communication technologies became more saturated with the latest technical means (Osadcha et al., 2020). This required constant improvement of the computer training of teachers of foreign languages, most of them had no technical education. At the same time, the level of professional competence of a future specialist directly depends on the amount of accumulated knowledge, on his ability to replenish his baggage with new professionally valuable information (Veter, 2017). Along with the traditional course of study, students should be able to choose various special courses to obtain in-depth knowledge of a foreign language within the framework of the studied specialty. Having a communicative focus and two-way communication with both social and special disciplines, the subject "Foreign language" contributes to the education of the personality of the future specialist (Tadevosyan, 2019; Tarnavskaya, 2019).

The growing role of information and communication technologies in teaching foreign languages also required the strengthening of integration processes in teaching (Chan & Holosko, 2015; Rokenes, 2016). Professional activity - the integration of various types of activities, and knowledge of a foreign language, and even more so - of several languages - directly affects the professional level of a specialist, and the higher his qualifications, the more it affects, the interdisciplinary basis of the thematic content of the spheres of communication of the subject "Foreign creation of a learning environment for the implementation of the principle of interactivity (Pérez et al., 2016). When a person is fully fluent in a foreign language, that is, when she does not think about the rules of the language and does not translate, but thinks and thinks in this language, then the foreign language is not a code for her, but a reference means of communication and the

formation of appropriate thoughts. In particular, the study of professionally oriented and special disciplines in foreign languages does not provide for the study of narrow professional training courses, but the development of special knowledge of the relevant industry in training in areas (for example, prospects for the development of the industry, historical aspects, key topics of professionally oriented and special disciplines, etc.). It is here that modern media are irreplaceable, providing opportunities for direct communication with native speakers (Golonka et al., 2014; Castellacci & Tveito, 2018).

3. Results and Discussions

The use of modern teaching technologies (software or Software: multimedia textbooks, disks, universal encyclopedias, video and audio materials, Internet resources, equipment: PC, audio and video equipment, multimedia projector, interactive whiteboard) significantly improves the quality of the assimilation of the material by students (Dobrova, 2017).

In order to identify gaps in professional foreign language training and the possibility of their correction, disciplines were analyzed that ensure the professional foreign language readiness of future civil defense specialists.

For the experiment, a higher educational institution of Ukraine was chosen, adheres to European principles and systems of education, and therefore its experience in the future can be used for other European universities. We have chosen such a type of experiment as a quasi-experiment, which includes two types of groups: control and experimental, but without using randomization elements. It is worth mentioning that the experiment was carried out remotely with the help of remote communication via the Internet and e-mail.

The group that took part in the practical implementation of our hypothesis is to test the value of using ICT in the process of teaching foreign languages is diverse in terms of such parameters as:

- gender
- age
- ethnicity.

The entire experiment process was anonymous. The participation of the respondents, as well as the results obtained, had no effect on their further professional and social activities. In the course of the experiment, all employees of the higher educational institution were informed and found their consent to conduct the experiment.

The assessment was carried out by a group of experts and was assessed on a 100-point scale (100 points - the discipline includes material

for the formation of professional foreign language readiness of future civil defense specialists, 0 points the discipline is not at all material for the formation of professional foreign language readiness, after which the share of influence of each of the academic disciplines on the formation professional foreign language readiness.

The research results are presented as a percentage in Figure 1.

Figure 1. The influence of academic disciplines on the formation of professional foreign language readiness of future civil protection specialists

Source: Authors' own conception

As can be seen from Fig. 1, professional foreign language training of future civil protection specialists is largely carried out in classes in "Foreign language of professional orientation" and "Foreign language", and the influence of other disciplines is much less.

In the study, we focused on the discipline "Foreign language in a professional direction", which, on the one hand, expands the opportunities for communication in the professional sphere, and on the other hand, allows the cadet / student to give knowledge about the culture, customs and history of various peoples of the world.

During the experiment, the use of various methods of teaching a foreign language in higher educational institutions was compared, determined on the basis of practical application and evaluated by experts (Fig. 2) on a 100 point scale.

The theoretically based methods correlate better with those applied in practice.

Figure. 2 Correlation of methods of teaching a foreign language

Source: Authors' own conception

It is worth paying attention to the fact that play methods and business games are rarely used, although they are associated with the expansion of the emotional field of the learning process, contributing to creative development and independence. The insufficient use of these methods is associated with the difficulties in selecting the appropriate games, the lack of methodological material.

Comparison of quantitative indicators obtained at different stages of the pedagogical experiment are presented in Table 1 and shown in Fig. 3.

Table 1 - Dynamics of levels of professional foreign language readiness of future civil protection specialists (%)
Source: Authors' own conception

Professional foreign language readiness level	EG (222 oc.)		Dynamics	CG (220 oc.)		Dynamics
	Ascertaining stage	Molding stage		Ascertaining stage	Molding stage	
Low	45,2	27,2	-18,0	44,7	43,0	-1,7
Middle	50,3	63,5	13,2	50,3	51,5	1,2
High	4,5	9,3	4,8	5,0	5,5	0,5

Fig. 3 Dynamics of changes in the levels of professional foreign language readiness of future civil protection specialists
Source: Authors' own conception

Measurement of indicators showed positive changes in both groups. The results of the formative experiment made it possible to record the positive dynamics of professional foreign language readiness at high and

medium levels. In the experimental group, the percentage of students with a low level decreased significantly (-18.0%).

The insignificant dynamics at a high level (4.8%) is explained by the fact that some of the cadets / students began to meet the requirements of the average level of professional foreign language readiness (13.2%). In the control groups, this tendency is less pronounced; significant quantitative and qualitative changes did not occur here.

The analysis of the obtained data also shows that the number of cadets / students of the experimental group with a high level of readiness (from 4.5% at the beginning of the experiment to 9.3% after the experiment) and an average level of readiness (from 50.3% at the beginning of the experiment to 63.5% after experiment).

According to the results of the experiment, it was found that professional foreign language training has a positive effect on the overall performance of cadets from other disciplines (Fig. 4).

Fig. 4 Distribution of cadets / students from the CG and CG by the levels of success at the molding stage of the experiment
 Source: Authors' own conception

In the control group, where there was a low level of professional readiness in a foreign language, a low level of knowledge in a foreign language was recorded. In the experimental group, where the level of foreign knowledge and skills was higher, there were high indicators of knowledge in special disciplines. In particular, this is due to the fact that professional foreign language training allows cadets to use a much wider range of foreign

sources - both paper and electronic. Taking into account all the experiment carried out, we can state that the use of ICT in the process of teaching foreign languages is a positive element

Thus, the qualitative analysis allows stating the effectiveness of the pedagogical influence on the dynamics of the development of the professional foreign language readiness of future civil protection specialists of the cadets of the control and experimental groups..

Bringing our hypothesis that the use of ICT is a positive element in the process of teaching foreign languages cannot be an axiom and a model for learning; this can only be the first step in the formation of a flexible system of using ICT in each individual higher educational institution.

With the help of personal computers, you can create textbooks of a fundamentally new type, the so-called information-subject complexes. Considering that the development of modern information technologies is a priority direction of scientific and pedagogical activity in educational areas, the following areas can be distinguished: improving the methodology and strategy for selecting the content, methods and organizational forms of education that are adequate to the tasks of personality development in the context of informatization of society; creation of methodological training systems focused on the development of the creative potential of pupils and students, the formation of the ability to carry out information and educational, experimental research activities, various types of information processing; creation and use of computer test, diagnostic methods for monitoring the level of knowledge of pupils and students. Among the various pedagogical applications of new information technologies, it is especially worth noting the development and use of educational software, which reflect individual subject areas of science, to a certain extent, implemented technologies for their study, provided conditions for the implementation of various types of educational activities.

4. Conclusions

Thus, knowledge of foreign languages affects almost all aspects of the professional activity of a specialist and depends on the type of professional activity (management, scientific, inventive, pedagogical, etc.). The use of ICT can significantly improve the level of foreign language training,. Scientific analysis of the use of ICT in the development of professional foreign language training during the second half of the twentieth century. - the beginning of the XXI century allows us to determine

a number of conceptual foundations and prospects for the creative use of historical experience, the implementation of which is aimed at improving the quality of training of specialists and education in general. The foregoing made it possible to determine the conceptual foundations of the development of foreign language training of specialists in the context of using information and communication technologies: professional foreign language training of specialists is considered as a general pedagogical problem; for future specialists there are features, prerequisites for formation, main trends and factors of development of the system of professional foreign language training; one of the leading ways to optimize the system of professional foreign language training of future specialists is the use of ICT, it is expedient to update the historical experience of the second half of the twentieth century. - the beginning of the XXI century on professional foreign language training; ICT plays a leading role in the preparation of textbooks and teaching aids in the learning process and in the system of advanced training of future specialists. In the future, the next step will be a more thorough study of the benefits of using ICT in the process of teaching foreign languages, involving different types of higher education institutions of various specialties and countries.

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