THE ROLE OF EDUCATION INFORMATIZATION IN IMPROVING THE EFFICIENCY OF THE EDUCATIONAL PROCESS

O PAPEL DA INFORMATIZAÇÃO DA EDUCAÇÃO NA MELHORIA DA EFICIÊNCIA DO PROCESSO EDUCATIVO

EL PAPEL DE LA INFORMATIZACIÓN DE LA EDUCACIÓN EN LA MEJORA DE LA EFICACIA DEL PROCESO EDUCATIVO

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ABSTRACT: The study aims to establish the effectiveness of informatization of the foreign language learning process of professional communication and bring the feasibility of using social networks, cloud messengers, educational platforms in preparing future specialists for professional communication in a foreign language environment. The research methods are the method of pedagogical experiment, the method of questioning, observation, descriptive method, methods of synthesis, and analysis. The main hypothesis of the study is that the application of the educational potential of social networks, platforms, messengers, quizzes is an effective method of training a specialist with a high level of foreign language proficiency in the professional sphere. The result of the study determines the effectiveness of the use of the informatization process at the level of involvement of social networks, messengers to form a high level of foreign language proficiency as per profession.

KEYWORDS: Informatization. Professional communication. Social networks. Language proficiency. Profession.

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RESUMO: *O estudo visa estabelecer a eficácia da informatização do processo de aprendizagem de línguas estrangeiras na comunicação profissional e viabilizar a utilização de redes sociais, mensageiros de nuvens, plataformas educativas na preparação de futuros especialistas para a comunicação profissional num ambiente de línguas estrangeiras. Os métodos de investigação são o método da experiência pedagógica, o método de questionamento, observação, método descritivo, métodos de síntese, e análise. A hipótese principal do estudo é que a aplicação do potencial educativo das redes sociais, plataformas, mensageiros, questionários é um método eficaz de formação de um especialista com alto nível de proficiência em línguas estrangeiras na esfera profissional. O resultado do estudo determina a eficácia da utilização do processo de informatização ao nível do envolvimento de redes sociais, mensageiros para formar um elevado nível de proficiência em línguas estrangeiras por profissão.*

PALAVRAS-CHAVE: *Informatização. Comunicação profissional. Redes sociais. Domínio de línguas. Profissão.*

RESUMEN: *El estudio tiene como objetivo establecer la eficacia de la informatización del proceso de aprendizaje de la lengua extranjera de la comunicación profesional y traer la viabilidad de la utilización de las redes sociales, mensajeros de la nube, las plataformas educativas en la preparación de los futuros especialistas para la comunicación profesional en un entorno de lengua extranjera. Los métodos de investigación son el método de experimento pedagógico, el método de preguntas, la observación, el método descriptivo, los métodos de síntesis y el análisis. La hipótesis principal del estudio es que la aplicación del potencial educativo de las redes sociales, las plataformas, los mensajeros, los cuestionarios es un método eficaz para formar a un especialista con un alto nivel de dominio de la lengua extranjera en el ámbito profesional. El resultado del estudio determina la eficacia del uso del proceso de informatización a nivel de la participación de las redes sociales, mensajeros para formar un alto nivel de competencia en lenguas extranjeras según la profesión.*

PALABRAS CLAVE: *Informatización. Comunicación profesional. Redes sociales. Conocimiento de idiomas. Profesión.*

Introduction

The future professional activity cannot be limited by the borders of one country, requires from a specialist such a level of foreign language proficiency, which would allow him/her to communicate freely in a foreign language environment on professional topics, solve professional problems both in Ukraine and abroad (JONES, 1999; BRUIN; TRECCANI; SALA, 2014; GOH, BURNS, 2012). Under such conditions, it is important and necessary to increase the effectiveness of professional training, as well as learning a foreign language as a component of this training.

The problem of introducing interactive teaching methods to increase the efficiency of foreign language professional training is very relevant in the modern education system

because a large number of teaching methods often causes difficulties in choosing the optimal and effective one.

Many scientists have investigated the issues of applying these methods for foreign language training of specialists. But, features of application of these methods for optimization of foreign-language professional training in the course of their professional training are covered in full in scientific researches.

The evolution of the processes of informatization of education can be analyzed according to the criteria of quality and efficiency, from the perspective of the thoughts and assessments of teachers and teachers, students and pupils, the quality of education largely depends on the thoughts, attitudes, and assessments of the technologies used in the educational process. Nevertheless, the implementation of such technologies is a difficult task because of the huge number of materials (tweets, interest groups, blogs, etc.), the need for a high level of digital literacy, sufficient funding, etc.

Literature Review

Many studies in the works consider the classification of foreign language teaching methodologies of professional direction and the stages of specialists' training with the involvement of ICT. The field of experiments and their results involving the possibilities of social networks, applications, Cloud messengers in the educational process is also described (CHAKIR *et al.,* 2020; KARPUSHYNA, 2019).

There have been several successful studies devoted to innovative methods of learning foreign languages (NOON-URA, 2008; KO; SAMMONS; BAKKUM, 2013; RABABAH, 2020; SICHKARENKO, 2018), as well as the possibilities of using the educational potential of media and social platforms, social networks, groups, messengers in teaching foreign languages (SIM, POP, 2014; WILLIAMSON, 2016).

The directions of research on the problem of informatization of education are quite different: linguodidactical component of informatization (SCHNEIDER *et al.,* 2019; SALGUR 2013), philosophical-methodological and psychological foundations of informatization in education (HAPSARI; WIRAWAN, 2018), efficiency of application and business feasibility of using informatization in preparing learning spaces (KOSTIKOVA *et al.,* 2019), the role of software in the introduction of informatization in the preparation of professional communication foreign language courses (CAVUS; IBRAHIM, 2017) considered machine learning as a way to improve educational programs (SIM; POP, 2014). It is also considered innovative methods of

foreign language teaching, which involves the active application of lexicon approaches, graph approaches, quiz methods to foreign language learning (MALIK, 2016; WILLIAMSON, 2016).

In several kinds of research (MASON, 2006; OSMANBEGOVIC; SULJIC, 2012), the prospects of research of the phenomenon of informatization in the educational process, the development of new approaches that can increase the efficiency of ICT use are considered.

In the future, to identify the most effective and positively evaluated developments of methodological and teaching character, the practice of introducing digital technologies into the teaching foreign languages practice of professional direction should be continued.

Aims of the study

The research aim involves performing several tasks:

– to establish the level of effectiveness of informatization of learning foreign languages of professional communication;

– consider the expediency of using social networks, Cloud messengers, social and educational platforms in training specialists who know a foreign language of professional communication at a high level.

To present the students' evaluation of the introduction of informatization in the process of foreign language learning.

Materials and Methods

The study presents a set of methods that are necessary for the introduction of a pedagogical experiment. The article uses such research materials created with the help of a research approach, and they are considered with the help of the descriptive method, theoretical analysis, and synthesis. The paper also used analytical data from Alexa, Facebook Reports, Kantar TNS, presented in the sites, and analytical studies. To assess the results of informatization of the educational process to the study involved methods of comparison, grouping, classification, and instantiation. The described activities, materials, and statistics are limited to the European institutions that actively participated in the presented study. The staging method was used to determine the stages of the experimental study and to establish evolutionary changes if any.

The materials for analysis were selected according to several criteria:

– materials published in the social network Internet and such that determine the facts of the use of social networks to learn foreign languages;

– training courses in a foreign language of professional direction on educational platforms, the main parameters of Twitter, Telegram, Facebook;

– studies in which data and statistical results are presented.

The experiment was conducted in 2019/2020 based on 3 European institutions of higher education: Zaporizhzhya National University (Ukraine), University of Latvia (Latvia), and Ternopil National Pedagogical University named after V. Hnatiuk (Ukraine). Students in the universities were combined into study groups (3 groups, 1 group in each university (20 people)), data from educational platforms (Cambridge family, EdCamp Ukraine, Coorsera) were used, having educational programs and courses for training and increasing the level of foreign language skills of specialists in various fields of knowledge.

All participants of the experiment voluntarily agreed to participate in the study, the privacy of the respondents was preserved.

Results

The means of informatization of education (social platforms, communication services, software, applications, etc.) play increasing importance in the modern technological revolution in the theory and practice of teaching foreign languages. The effective components in the formation of new courses using the informatization of vocational education are Twitter, Telegram, Facebook.

The resources presented on Facebook and Telegram are designed to solve the problem of communication of a professional nature in a foreign language. These are textual materials, audio, and video, as well as online communication opportunities.

In modern pedagogy, the approach to informatization of education in foreign language learning is closely related to the channels for obtaining new learning information. Informatization during the study of foreign languages promotes the formation of creative and technical skills, activates the intellectual activity of the student, and it is especially important in the training of a specialist. The increase in the share of distance learning in the 2019/2020 academic year, due to the coronavirus pandemic, created the prerequisites for the active application of informatization of education, learning a foreign language of professional direction.

This transition involved a significant strengthening of the material and technical condition of universities, additional training of students and, technological capabilities in the country as a whole. The involvement of ICT allowed respondents to independently obtain information, transform it, and teachers to have an idea of the quality of knowledge and the effectiveness of digital learning platforms used.

Several interactive teaching methods were also involved in the formation of a knowledge and skills set for the use of a professional foreign language, which is possible with the involvement of media and social platforms, quiz techniques, game training programs. All this in complex forms the readiness for the successful continuation of professional activity, career promotion.

Informatization in the study of foreign languages provides the introduction of multilevel monitoring of the knowledge and skills formation in the professional field, the use of opportunities for communication in a foreign language in the specialty, and also allows (in practice) to work out the components of professional work with foreign partners in space Twitter, Telegram, Facebook, it also makes possible the formation of project tasks of professional direction.

The product of the electronic networks used for the research element - Twitter became a training ground, with the help of which there is active learning of a foreign language of a professional direction.

The microblogging network Twitter was founded in 2006. It allows users to publish relevant information in a short period, mostly in text form. These text messages enable the formation and publication of professional educational content (diagrams, tables, images, articles, websites, etc.). And just as importantly, to get feedback, the reaction of platform users, that is, to get feedback and to plan future training work.

In-text messages, the maximum length of a tweet is 140 characters, it can give an algorithm for action, a description of techniques, as well as promulgate training materials and reviews, opinions on quality, and so on. What's important, all texts on Twitter have links to articles on the topic described, videos, audio, images, and the like are no exception. The use of hashtags, which mark the main topic of the message, is also becoming popular on Twitter.

On such a microblogging network during the experiment, respondents wrote tweets in a foreign language as a learning task, getting reactions to them, commenting, editing, creating new posts, and the like. Table 1 shows a slightly increased use of Twitter during the learning experiment.

Table 1 – The number of twits within the limits of the educational content (author's elaboration)

Institution, educational resource	Topic	Texts 2019	Texts 2020	Results (%)
Ternopil National Pedagogical University	Technological documentation Scientific reports in the field	493	935	Increased 47,2
Latvijas Universitate's Twitter page	Scientific and publicist materials Description of educational methods, testing	749	1004	Increased 26,6
Zaporizhzhya National University Twitter page	Technological documentation Research articles, materials	653	970	Increased 38,9

Source: Elaborated by the authors

This group includes those institutions that use Twitter as a learning platform for a more effective and practical approach to learning a foreign language of professional direction. During the pedagogical experiment was actively used Facebook as a social network, which is the largest in the world and began in 2004.

Facebook is a very convenient educational platform because it was originally designed for students. According to Alexa, *facebook.com* is the 3rd most visited site in the world (ALEXA, 2020). In 2017, the number of Facebook users reached 2 billion worldwide.

To learn a foreign language of professional direction during the experiment respondents, who became users of Facebook, organized a group of relevant topics, joined other groups with similar tasks. During the school year, respondents communicated and exchanged information, attracted private and public messages and chats. Facebook's learning potential belongs to the blogging feature, which was used by higher-quality students. All this allowed the respondents to communicate in a foreign language in groups, to learn in an Internet messenger mode, to improve their professional knowledge and language skills.

In the pedagogical experiment were also used the training and communicative possibilities of public and educational platforms, learning resources convenient for the post-Soviet countries (Ukraine, Latvia). Such platforms were chosen, were popular among users, declared an interest in the preparation of materials for the distance learning of foreign languages, foreign language of professional direction.

Open-type learning platforms were also used during the experiment, they are easy to use as learning platforms for the formation of professional knowledge in the foreign language space. Multidirectionality, a large volume of topics, a large number of educational programs

with which one can get acquainted on these platforms provide an opportunity to increase the volume of professional vocabulary and phraseology, and to choose the topics that are most interesting to the student.

The experiment involved the educational potential of the Telegram Cloud messenger, as well as the software created for smartphones, tablets, and PCs. These technical communication capabilities were used to organize distance learning groups in a pandemic environment. This messenger enabled the exchange of text messages, graphics, audio, and video files, and also makes it possible to make calls. All of these features were used in the professional communication foreign language course.

The student participants in the final stage of the experiment were asked questions concerning the evaluation of the usefulness, effectiveness, and convenience of the involvement of digital technology in the study of foreign languages, a foreign language of professional communication. There were evaluated the possibilities of information and media platforms, software, and social networks, contributing to the formation of knowledge, skills, and abilities in the conditions of distance education.

The problematic issue in the course of the surveys was the accessibility of the Internet resource for the respondents. Part of the program participants had problems with the quality of the Internet.

As the surveys showed, some students (5%) who studied at universities in Ukraine noted that they could not study fully. After all, they could not use ICT facilities because their localities had poor or no Internet coverage at all. It is this situation that may explain the lower results than in Latvia (by 10% on average).

Table 2 – Scopes of informatization capabilities

Institution's name	Usage of Twitter,	Usage of Telegram,	Usage of Facebook, educational platforms
Latvijas Universitate's	72%	74%	86%
Zaporizhzhya National University	47%	69%	78%
Ternopil National Pedagogical University	63%	57%	73%

Source: Elaborated by the authors

In the final stage, there was also a survey regarding the shortcomings and strengths of informatization in the process of learning foreign languages, to what extent Twitter, Telegram, Facebook is worth using for educational purposes.

Open-ended question 1 dealt with the disadvantages and difficulties of Twitter, Telegram, and Facebook in the course. Open-ended question 2 dealt with the positive evaluations and the risks that contributed to the professional growth and learning of foreign languages (Table 3).

Table 3 – Respondents' evaluation of the positive and negative aspects of involving informatization in the teaching foreign languages process of professional communication

Platforms	Positive aspects	Disadvantages
Telegram	The function of archiving chats in the thematic section. – Chat can be opened via a special notification. – Messenger allows you to conduct surveys. – Text messages are formatted, different types of messages can be attached.	– Insufficient software (it is inconvenient to conduct presentation and educational and game activities). – There is no sufficient level of confidentiality, it requires technical conditions and equipment for all participants in the process.
Facebook	– Opportunity to organize target groups, join them or withdraw. – bPresence of own settings. – Blogging capability (Facebook-notes) – Communication and feedback opportunities.	– The need to use special technical equipment, network coverage, – It is difficult to use the learning interface, it is often changed, – Full of advertising materials.
Twitter	– Ability to produce texts, – The possibility of feedback, – Works if all participants in the group have technical equipment, – Requires special software, Internet connection.	– Limited amount of text; – Impossibility of audio, video broadcasting; – Inability to organize presentations, training events.

Source: Elaborated by the authors

Discussion

Recently, the use of the entire rich arsenal of ICTs is an area open to research. The modern educational process involves a harmonious combination of traditional forms of teaching and learning with the help of education informatization tools. And all in a close

combination of theory, modern technologies, and practices of their use. Teaching a foreign language of professional communication is no exception. Pedagogical science is a part of the modern educational space (using the potential educational opportunities of social networks, learning platforms).

Undoubtedly, as evidenced and research in this area (GILAKJANI, 2016; PAN HUI, 2021), a large amount of information, variety, and wide range of educational offerings on such platforms make it difficult to orient and choose the most useful educational content. However, as evidenced by students' positive evaluation of the involvement of informatization in the process of learning foreign languages, the use of ICT contributes to the formation of necessary professional knowledge, the possibility of professional communication in a foreign language in future work.

In several studies, digital platforms are used to improve the monitoring of the effectiveness of learning activities, consider the possibility of giving access to all who wish to receive educational services, make the educational process user-friendly (WANG, 2016; KÖKTÜRK, 2012). In the presented study, the phenomenon of informatization of the process of learning a foreign language was positively assessed by the students, (a total of 75% of the respondents had a positive attitude). It indicates the need to further develop this direction. There is no exception in the further development of teaching materials for foreign language learning of professional.

Conclusions

In today's educational paradigm, informatization is becoming an integral component of teaching a foreign language of professional communication. As noted, there is a steadily growing demand for advanced technologies that can be effectively applied in the educational environment. The analysis of the surveys (Table 3) suggests that information technology tools should be used in foreign language teaching, as they are assessed by education applicants as useful and such that can make the learning process more technological, faster, and easier to assimilate educational material.

It should be noted that the intensity of the use of means of informatization of education is increasing. As shown in the study, the number of publications in social networks and messengers has increased by 40% overall. It occurs because ICT provides an opportunity to qualitatively master a foreign language at the level of training of future specialists, have the

prospect of continuous professional self-improvement at the level of knowledge of a foreign language.

Increased use of informatization is also associated with the introduction of distance education associated with quarantine activities. In this regard, our research and the others have noted an increase in the number of visitors to educational platforms, widespread educational groups. Accordingly, informatization of education gives prospects for the advanced technologies application, development of methodology, where new educational products and software are used.

Based on the study conducted, it can be argued that the dominance of active and interactive forms and methods of learning in the process of training for professional communication in a foreign language environment, promote "immersion" them in a foreign language environment, and create conditions for the development of such professionally important qualities of a professional, like initiative, independence, creativity, as well as to form a creative nature of his thinking. This, in its turn, will ensure the ability to transfer the acquired knowledge to new professional situations, to highlight similarities in remote phenomena, to provide the necessary information at the right time, to be able to correctly assess the phenomenon, and choose a variant of problem solution.

Prospects for further research into the ways of applying interactive teaching methods in the process of training future specialists for professional communication in a foreign language environment can cover the analysis of the foreign experience of implementing such methods and ways of using this experience in the process of foreign-language professional training of specialists in Ukraine.

In the future, it is worth paying research attention to the development and implementation of innovative methods for teaching foreign languages, foreign languages of business communication, where the possibilities of Twitter, Telegram, Facebook, Facebook would be actively used.

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