Impact of professional self-improvement on the effectiveness of teachers in distance education

Impacto do autoaperfeiçoamento profissional na eficácia de professores em educação a distância

Impacto de la superación personal profesional en la eficacia de los docentes en educación a distancia

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ABSTRACT
Distance education requires the teacher to conduct systematic classes with the student, methodologically competent use the developed content for distance learning, means of communication, and educational resources of the Internet, as well as implement technical support for the educational process. The purpose of the study is to develop educational and methodological support for the process of professional self-improvement of teachers in higher education institutions when working remotely. The study analyzes the role of a teacher in the distance learning system, identifies the types of teacher's activities, as well as the requirements and conditions for their successful work. Working online expands and renews the teacher's role, makes them a mentor-consultant who coordinates the cognitive process, constantly improving their course and increasing creativity and qualifications in accordance with innovations. Based on empirical research using the survey method, the dynamics of teachers' readiness to work online before and after passing the interdisciplinary course "Distance Education Technologies in the Educational Process of the University" were determined. Positive results in the formation of teachers' readiness to work online after completing the course were obtained. The study concluded that the readiness of teachers to work remotely can be increased if the appropriate educational and methodological support is developed and implemented in higher education institutions, which will lead to an increase in the effectiveness of teachers' work.

Keywords: Distance learning. Information and communication technologies. Distance course. Moodle.

RESUMO
A educação a distância exige que o professor ministre aulas sistemáticas com o aluno, seja competente em termos metodológicos, utilize os conteúdos desenvolvidos para a educação a distância, meios de comunicação e recursos educacionais da Internet, bem como implemente suporte técnico para o processo educacional. O objetivo do estudo é desenvolver suporte pedagógico e metodológico para o processo de autoaperfeiçoamento profissional de professores de instituições de ensino superior no trabalho a distância. O estudo analisa o papel do professor no sistema de ensino a distância, identifica os tipos de atividades do professor, bem como os requisitos e condições para o seu sucesso no trabalho. O trabalho online amplia e renova o papel do professor, faz dele um mentor-consultor que coordena o processo cognitivo, aprimorando constantemente seu curso e aumentando a criatividade e a qualificação de acordo com as inovações. Com base na pesquisa empírica utilizando o método survey, foi determinada a dinâmica de prontidão dos professores para trabalhar online antes e após a aprovação no curso interdisciplinar "Tecnologias da Educação a Distância no Processo Educacional da Universidade". Foram obtidos resultados positivos na formação da prontidão dos professores para o trabalho online após a conclusão do curso. O estudo concluiu que a prontidão dos professores para trabalhar à distância pode ser aumentada se o suporte educacional e metodológico adequado for desenvolvido e implementado nas instituições de ensino superior, o que levará a um aumento da eficácia do trabalho dos professores.
Palavras-chave: Ensino à distância. Tecnologias de informação e comunicação. Curso a distância. Moodle.

RESUMEN
La educación a distancia requiere que el docente lleve a cabo clases sistemáticas con el alumno, use metodológicamente competente los contenidos desarrollados para el aprendizaje a distancia, los medios de comunicación y los recursos educativos de Internet, así como que implemente el soporte técnico al proceso educativo. El propósito del estudio es desarrollar un soporte educativo y metodológico para el proceso de superación profesional de los docentes de las instituciones de educación superior cuando se trabaja de forma remota. El estudio analiza el papel de un docente en el sistema de educación a distancia, identifica los tipos de actividades del docente, así como los requisitos y condiciones para su trabajo exitoso. Trabajar en línea amplía y renueva el rol del docente, lo convierte en un mentor-consultor que coordina el proceso cognitivo, mejorando constantemente su curso y aumentando la creatividad y las calificaciones de acuerdo con las innovaciones. A partir de una investigación empírica mediante el método de encuesta, se determinó la dinámica de la disposición de los docentes para trabajar en línea antes y después de aprobar el curso interdisciplinario "Tecnologías de Educación a Distancia en el Proceso Educativo de la Universidad". Se obtuvieron resultados positivos en la formación de la preparación de los profesores para trabajar en línea después de completar el curso. El estudio concluyó que la disposición de los docentes para trabajar de forma remota puede incrementarse si se desarrolla e implementa el apoyo educativo y metodológico apropiado en las instituciones de educación superior, lo que conducirá a un aumento en la efectividad del trabajo de los docentes.
Palabras clave: La educación a distancia. Tecnologías de la información y la comunicación. Curso a distancia. Moodle.

INTRODUCTION

Modern trends in teaching young people in the mode of remote access to educational resources, communication with the international community, encouragement of industrial

cooperation at the state level, and personal interest of citizens are intensifying the emergence of changes in the system of professional training of students. A modern institution of higher education (university) must ensure the competitiveness of future specialists in the labor market. One of such directions in which Russian higher education should move is the introduction of distance learning (DL) to improve the quality of training of new generation specialists.

Researchers (Anderson & Dron, 2011; Gagne & Shepherd, 2001; Ilina et al., 2018; Poddubnaya et al., 2021) believe that DL is a natural stage in the development and adaptation of existing types of education, as it allows, through the use of new information technologies (ICT), to activate students' independent work; individualize and differentiate learning; work at an optimal learning pace; increase the amount of available educational resources; master new ways of knowing the world around; ensure the possibility of communication between the subjects of training, regardless of their geographic location. The DL formation is associated with the development and implementation of international and national projects and programs for the informatization of education, providing for the use of new network information technologies in the educational process.

The quality and effectiveness of DL depend on the following components: the quality of educational materials; the technical basis of the organization of DL; the methodology of organizing and conducting training; the active participation of the teacher in the learning process. The last two components are extremely important. However, as the analysis of the experience of pedagogical work shows, some obstacles hinder the effective implementation of DL (unpreparedness of teachers and students for educational innovations, weak material and technical base of universities, underestimation on the part of the management of the labor intensity of creating distance courses, teaching materials for their organization, high cost of education, etc.).

Distance education expands and renews the teacher's role, making them a mentor-consultant who coordinates the cognitive process, constantly improving the courses and increasing creativity and qualifications in accordance with innovations. For effective work in this system, the teacher must be competent not only in the field of classical pedagogy but also have knowledge in the field of information technology, be competent in the methodology of organizing and conducting DL as well as consider the psychological characteristics of interaction with students in the process.

The personality of the teacher deserves special attention, since their professional self-improvement on the issues of DL, on the one hand, is a demanded process, and on the other hand, is inactive and passive. As noted by N.V. Nikulicheva (2016), teachers are not prepared for the use of ICT in the educational space and, unfortunately, sometimes students are better at using computers than teachers. S. Guri-Rosenblit (2016) points out that the training of teaching staff is the most important area of using the opportunities of preschool education. Specialized teacher training is one of the key elements of successful education.

The issue of professional self-improvement of teachers when working remotely in universities is due to the insufficient development of the theory and practice of informatization of education and the contradictions between the requirements of society for high qualifications of specialists in any industry and the insufficient focus of higher education on production; modern requirements for the digital competence of university graduates and insufficient use of the pedagogical capabilities of DL; the needs of modern youth for interactive professional communication and DL and insufficient readiness of teachers to work online.

Therefore, the analysis of issues of specially organized training of teachers for remote work is relevant and appropriate.

Literature Review

The scientific studies that consider issues related to the introduction of DL and the use of ICT in the educational process are close to the research topic (Table 1).

Table 1. Areas of research on the introduction of DL and the use of ICT in the educational process.

Source	Areas of research
Alexander, 2006; Pavel et al., 2015; Bondareva, 2016	formation of professional competence of future specialists by means of ICT
Keengwe & Georgina, 2012; Cavus & Momani, 2009; Park, 2014	improving the quality of education and training of students of various specialties through the use of ICT
Ellis & Cohen, 2001; Moore et al., 2011; Khamzina, 2014	discussion of the requirements for the preparation of teachers for the introduction of DL

B.J. Zimmerman (2002) notes that an important element of DL is specific staffing, a feature of which are qualitatively new requirements for a teacher from a fundamentally new level of professional and computer knowledge and skills to mastery of conceptual issues and didactics of DL. The teacher becomes a consultant, qualified opponent, developer of scientific and methodological support of distance materials.

The essence of the teacher's activity in distance education is the provision of educational, methodological, psychological, pedagogical, and organizational assistance to students in the DL system through full-time and remote support. Thus, with a significant share of independent work remotely, high-quality learning outcomes are a well-thought-out system for accompanying students in educational activities by a teacher. Under the accompaniment by a teacher of students in the DL system T.V. Gromova (2011) understands a system of interrelated actions and activities implemented in various forms and techniques that provides qualified assistance to those who study throughout the entire process in distance education through the implementation of various types of pedagogical activities (preliminary diagnostics, design training with an emphasis on goal-setting, motivating students for educational activities, managing interaction with students, organizing the educational process, reflection, communication, control).

In the study, T.V. Gromova (2011) found that the accompaniment by a teacher of students in DL should take place in several stages, namely:

1. Planning and preparation. At this stage, there is a diagnosis of students' needs for accompaniment and support; determination of the primary level of their knowledge and skills; preparation of teaching materials.

2. Directly escort. This stage provides for the deepening of knowledge, development of skills and abilities of students, counseling, and testing; information and analytical support; organization of information exchange and contacts between students; actualization of the internal forces of students and reserve capabilities.

3. Use of learning outcomes and summary analysis. This stage provides for the consolidation of the acquired knowledge, the acquisition of skills and abilities; development of experience in solving professional problems; monitoring the progress and changes; final assessment of the effectiveness of the maintenance process.

A separate position is the requirements for the professional activity of scientific and pedagogical workers of universities and the role of new educational technologies in it. Researchers (Webster & Hackley, 1997) emphasize the characteristic features of teachers who use new technologies in the educational process. Such teachers are active, motivate students, are flexible, easily adapt to new working conditions, positively perceive changes, and know how to predict and move forward.

N.A. Shevelev (2011) denies the existence of the stereotype "with the introduction of DL, teachers will become unnecessary". In turn, the introduction of DL expands the boundaries of the teacher's self-realization. There is a division of labor of teachers and their specialization: expert, course author, distance course methodologist, course designer, coordinator, specialist in interactive presentation of training courses, control of students' educational and cognitive activities, etc.

There are various attempts to improve the qualifications of teachers on the implementation of DL in education: remote webinars on the issue and Skype communication are widely used. According to researchers (Joksimović et al., 2015; Sekerin et al., 2018), the advanced training courses for teachers should prepare them for the design of DL systems, since they change their "usual life", contribute to their future development, and enrich the pedagogical skills of communication and cooperation in the educational environment.

Scientists (Harper et al., 2004; Skrylnikova et al., 2020; Shishov et al., 2018) believe that the effectiveness of teachers' remote work depends on the level of their readiness for professional self-improvement by means of ICT. However, the readiness for professional self-improvement when working remotely at the university remains low, and the quality of education leaves much to be desired.

The hypothesis of the study: the development and implementation of educational and methodological support for the process of professional self-improvement of teachers when working online in higher education institutions will lead to an increase in their effectiveness.

The objectives of the study:

1. Drawing up a survey to identify the readiness of teachers to work remotely;

2. Development of an interdisciplinary course "Introduction of DL Technologies in the Educational Process of Higher Education";

3. Obtaining the results of the formation of teachers' readiness to work remotely.

The study consists of an introduction, literature review, methods, results, discussion, and conclusion.

METHODS

Study design

To achieve the objectives, we defined an indicative set of theoretical and empirical research methods:

theoretical methods (analysis, synthesis, comparison, generalization) – for the study of scientific literature on the state of the introduction of DL and the use of ICT in the educational process;

empirical methods (survey method, pedagogical experiment method) – to determine the dynamics of teachers' readiness to work remotely.

Design of an experimental study covered:

– conducting a survey to identify the readiness of teachers to work remotely (its content is given in Table 2);

– development of an interdisciplinary course "Introduction of DL Technologies in the Educational Process of Higher Education";

– conducting an interdisciplinary course "Distance Education Technologies in the Educational Process of the University" for teachers, the use of didactic materials for the use of information and communication technologies in teaching students;

– analysis of research results and prognostics of further study of the problem.

Procedure, research tools

The research methodology was developed in accordance with the basic principles of organizing DL and the requirements for higher education institutions that provide educational services for training specialists.

The survey, aimed at determining the proficiency of teachers in various types of activities in Moodle, and an interdisciplinary course "Distance Education Technologies in the Educational Process of the University" were developed.

The study involved teachers from various departments: humanitarian (pedagogical) and technical orientation (67 teachers in total). The study is structured from the standpoint of an

integrative approach to education. Such a combination of teachers with pedagogical and non-pedagogical education was advantageous since in the process of exchanging pedagogical experience, their effective professional self-improvement took place and the skills of pedagogical cooperation were formed.

<u>Statistical analysis</u>

During the mathematical processing of the results, the percentage of teachers' self-esteem was determined regarding the level of proficiency in various types of activities in Moodle ("I am proficient", "I am not proficient", "I do not know").

RESULTS

The results of the preliminary survey that identify the readiness of teachers to work remotely are presented in Table 2.

Table 2. Results of the preliminary survey.

The content of the teacher's activities in Moodle	I am proficient, %	I am not proficient, %	I do not know, %
Development of a program for an educational distance course (EDC); development of the EDC structure	7	63	30
Creation of EDC content management tools	8	61	31
Development of methodological recommendations for the implementation of laboratory, practical, seminars, study of lectures of the EDC	9	64	27
Archiving and accounting of learning outcomes (assignments for independent work, calculation, control works, course projects)	11	60	29
Organization of remote control of educational and cognitive activities of students	8	63	29
Assessment of the performance of students in the form of a class register	7	62	31
Development of tests of various forms; test design	7	65	28
Use of gamification elements to control the educational and cognitive activity of students	4	64	32
Professional and informational communication with students by means of "Forum"	3	65	32
Creation of a thematic "Forum" for conducting an online seminar	3	67	30
Development of guidelines for organizing communication by means of "Forum"	4	64	32
Conducting individual and group consultations using "Chat"	6	73	21
Development of guidelines for the organization of online consultation	7	72	21

The analysis of the results of the preliminary survey shows that the teachers have an insufficient level of readiness. Thus, the following indicators have minimum value: "Professional and informational communication with students by means of "Forum" – 3%, "Creation of a thematic "Forum" for conducting an online seminar" – 3%, "Use of gamification elements to control the educational and cognitive activity of students" – 4%. Such a low quantitative value of indicators is due to the fact that teachers do not have experience in using Internet communication tools for consultations and training sessions as they do not consider it expedient to use gamification elements to control the educational and cognitive activities of students. The best indicators are: "Conducting individual and group consultations using "Chat" – 15%, "Archiving and accounting of learning outcomes (assignments for independent work, calculation, control works, course projects)" – 11%. This is due to the fact that teachers chat on social media, upload and store reports with student learning outcomes in Moodle. However, in general, this is a small number of enthusiastic teachers.

To help teachers in creating EDC, an interdisciplinary course "Introduction of DL Technologies in the Educational Process of Higher Education" was developed, in the process of passing which teachers:

– got acquainted with the normative documents on the introduction of DL at the university;

– created curriculum templates, a repository of competencies and distributed competencies by courses and types of student activities;

– learned to assess the degree of formation of students' competencies by means of Moodle;

– studied content management tools and various forms of organizing classes (lecture, practical lesson, forum, chat, games, glossary, seminar, test, wiki);

– created tests of varying complexity and shape to control the educational and cognitive activity of students;

– designed and supervised EDC, developed their own knowledge assessment systems, and used time constraints (controlled the transfer of tasks completed by students for verification, recorded tasks sent late, allowed or prohibited students to retake control tasks);

– developed educational and methodological recommendations for the implementation of educational activities of students in the framework of the EDC.

After passing the course, the second survey was carried out.

The results of the final survey that identify the readiness of teachers to work remotely are presented in Table 3.

Table 3. Results of the final survey.

The content of the teacher's activities in Moodle	I am proficient, %	I am not proficient, %	I do not know, %
Development of a program for an educational distance course (EDC); development of the EDC structure	31	65	4
Creation of EDC content management tools	40	58	2
Development of methodological recommendations for the implementation of laboratory, practical, seminars, study of lectures of the EDC	42	56	2
Archiving and accounting of learning outcomes (assignments for independent work, calculation, control works, course projects)	39	58	3
Organization of remote control of educational and cognitive activities of students	45	53	2
Assessment of the performance of students in the form of a class register	36	60	4
Development of tests of various forms; test design	34	63	3
Use of gamification elements to control the educational and cognitive activity of students	30	65	5
Professional and informational communication with students by means of "Forum"	34	63	3
Creation of a thematic "Forum" for conducting an online seminar	32	62	6
Development of guidelines for organizing communication by means of "Forum"	34	65	1
Conducting individual and group consultations using "Chat"	31	66	3
Development of guidelines for the organization of online consultation	30	67	3

The analysis of the empirical data presented in Table 3 allowed us to evaluate the results of the passing by the teachers of the interdisciplinary course "Distance Education Technologies in the Educational Process of the University". The most positive changes in the activities of teachers are associated with the development of computer tests (45% are proficient). This is due to the fact that teachers have experience in using test control and diagnostics of the level of preparedness of students. Moreover, positive changes were observed among teachers in the development of

methodological recommendations for the implementation of laboratory and practical work and seminars (42%) and the creation of EDC content management tools (40%).

The least positive changes in the knowledge and skills of teachers are associated with: the organization of online interaction between the teacher and students, development of methodological recommendations for the organization of online seminars (30%), individual and group consultations using "Chat" (31%), the use of elements of gamification to control the educational and cognitive activity of students (30%). Such a small number of percentages can be explained by the insufficient practical experience in the conditions of preschool education and the lack of educational and methodological materials on the use of games in Moodle.

The statistical probability of the prevalence of positive changes in the formation of knowledge and skills after the preparation of teachers for remote work at two levels of significance is confirmed by the calculation of the G-criterion of signs (Gcr.=55, p≤0.05; Gcr.=51, p≤0.01; Gemp=2; Gemp.<Gcr.).

DISCUSSION

Today, according to researchers (Khribi et al., 2009), those who can combine and apply their knowledge and skills of pedagogy and psychology, special disciplines, as well as information and communication technologies can adapt to the new role of a teacher in distance education.

As part of our research, the teachers' need to prepare for remote work was aimed at practical and cognitive goals: the development of a distance course, creation of computer tests in a specialized discipline, and development of new network learning tools. In this regard, the teachers were given the right to choose the content, methods, and forms of training. Therefore, with those who were prompted by a sense of duty to prepare, several seminars were held in the classroom, where enthusiastic teachers shared their experience of using distance technologies in the educational process and also revealed the problems they face when implementing DL. This form of conducting classes contributed to an increase in teachers' interest in training and the formation of the need to use the experience gained in teaching.

For example, according to the results of the seminar "Control of Educational and Cognitive Activity of Students in DL" teachers developed a glossary containing control questions. On this basis, the teachers developed tests with elements of gamification (games): Hangman, Crossword, Cryptex, Sudoku, Race for the Leader, Hidden Picture, Millionaire, Book with Questions. During the game, a word (concept or term) is used and a test question with a short answer is generated. The teacher sets the parameters: the number of words, ability to present a hint, or time to complete the game.

Crossword loads questions with short answers from a glossary, a question bank, or a quiz and generates a random crossword puzzle. The teacher can set the maximum number of columns/rows or words. The student can click the "Check Crossword" button to check the correctness of the answers. Each crossword puzzle is dynamic, so it is individual for each student.

Millionaire loads multiple choice or short answer questions to create a "Who Wants to Be a Millionaire?" analog with three lifelines. The rules of the game are simple: to continue, the student must answer each question correctly, if they answer one question incorrectly, the game ends. In the lower right corner of the screen, the student can see if they answered the question correctly.

Book with Questions contains a series of questions arranged in sections. When the student answers correctly, they can move on to the next section. Questions are added from the question bank, glossary, or a test. As a result of the game, students instantly receive awards, certificates, badges, grades, bonuses, or penalties. The developed tests were tested by teachers in practical and lecture classes.

To develop the skills of conducting online sessions (seminars, disputes, consultations), business games were organized for teachers as part of the course. For example, in a business game simulating an online seminar in mini-groups formed according to a subject orientation, some of the

teachers acted as "students", and some of the teachers as "consultants". The duties of the "consultant" included, for example, the choice of the type of seminar; discussion topics; development of a seminar plan, preparation of questions, a list of auxiliary sources of information, guidelines for the content of the seminar; development of ready-made clichés (questions and answers); development of criteria for assessing the activity of students at the seminar; scheduling (time, date of the beginning and end of the seminar, the frequency of identifying the activity of the seminar participants) distribution of prepared documents to the participants of the seminar; recording of the entire process of the seminar for its subsequent analysis. The duties of the "students" included a preliminary acquaintance with the topic of the seminar; processing guidelines and other information related to the workshop; preparation of possible answers and questions. The main difficulties experienced by the teachers during the game were methodological: the selection of the optimal number of participants; selection of a criterion for assessing the activity of a "student" during a seminar; designing possible questions, answers, and remarks to the expected actions of "students"; stimulating students' activity, determining the optimal time for conducting an online lesson; great complexity of preparation of an online lesson. The results of such a seminar were educational and methodological recommendations for conducting an online seminar using the "Forum" in the Moodle.

One of the most effective methods of training teachers to work remotely was the project method. A group of teachers developed a project "Paperless accounting and archiving of control, calculation, calculation and graphic, laboratory and coursework/projects, and abstracts at the departments of the university". The main goals of the project include: reduction and complete rejection of paper accounting and archiving of control, calculation, calculation and graphic, laboratory and coursework/projects, and abstracts at university departments; development of a unified information base of the university; reducing the risk of losing documents; structuring of all reporting electronic documentation according to the approved nomenclature of cases at the university; increasing executive discipline among teachers and students due to the ability to track their current activities; control over the implementation of all types of educational work in accordance with the teaching load; improving the efficiency of teachers and training students.

For archiving, checking the learning outcomes uploaded in the form of report files of control, laboratory, course, calculation, and practical work, teachers used the element of the distance course "Assignment". Students uploaded their reports to the system, and the teacher checked, rated, and commented. They checked the integrity and content of the report in their visual form for the presence of title pages, the content of an explanatory note, drawn up in accordance with the requirements of the department and the university, and, if necessary, sent the student a file with comments. After checking, students, in the case when the work was not graded, read the comments of the teachers, fulfilled their requirements and redownloaded the report.

Considering the educational activities of students deserved special attention. In Moodle, teachers controlled and monitored students' educational products using electronic class register entries. The teacher pre-configured the class register, recorded the forms of the student's work on the study of the distance course: viewing and studying lectures, performing control, laboratory, coursework, computational work, passing thematic, final testing, participating in seminars, conversations, consultations, developing a glossary, and participating in the quiz. For each type of educational work, the teacher established assessment criteria, time of completion, possibility of retaking, content of competencies, and other parameters. This allowed improving executive discipline among teachers and students by observing their activities.

The results of our study are confirmed by the results of other studies (King et al., 2001; Valentine, 2002; Picciano, 2017), which reveal the following requirements for a teacher that works remotely (Table 4).

Table 4. Requirements for a teacher that works remotely.

The teacher must:	Requirements
know:	a) the basic principles of the functioning of telecommunication systems and cloud technologies; b) features of videoconferences, webinars, forums; c) the basics of netiquette; d) individual styles of students' educational and cognitive activities; d) the peculiarities of students' independent activity in the network during the DL; e) facts that stimulate the students' activities in the network and be able to use them in the DL; f) active teaching methods (teaching in collaboration, project method, multilevel teaching, research, search methods, etc.)
be able to:	a) work with information resources (databases, information services); b) create web pages; c) use a range of services that are provided by the environment and cloud technologies; d) present the educational material that ensures the effective, individual, and independent of place and time, work of the student; d) conduct psychological and pedagogical testing and current activities of students; e) prevent and resolve conflict situations; f) conduct online role-playing games; f) integrate full-time and distance learning; g) organize and implement projects; h) actively use the communicative capabilities of computer networks to organize communication between participants in the educational process; i) if not to create courses, then at least adjust the existing ones according to the new requirements of the educational process
possess:	a) information navigation skills; b) a specific information and educational environment; c) a methodology for the formation of systemic thinking, including critical thinking, as well as reflection in students, as a means of assessing their activities with the aim of further improvement; d) active teaching methods

R.D. Manning et al. (2003) believe that the success of a teacher's work depends on a number of conditions. Based on the analysis of the specifics of the teacher's activities, the requirements for them and problems that they may face, we identified three groups of conditions that ensure their successful activity (Table 5).

Table 5. Conditions for the successful work of a teacher in distance education.

Conditions	Characteristics
pedagogical	considering the psychological and pedagogical principles of DL and the organization of the pedagogical process, use of various and correct goals at each stage, ensuring interactivity throughout the entire learning process
organizational and communicative	knowledge of the psychology of communication, ways to increase motivation and inclusion of students in the learning process, choosing the right style of leadership and communication
technical	providing access to computer means of communication (for both the teacher and students); computer literacy of participants

Thus, remote work makes special demands on the level of professional training and qualifications of teachers involved in organizing and conducting distance courses. In our opinion, the effectiveness of teachers' work depends on professional and pedagogical (considering the psychological and pedagogical principles of DL, diagnosing learning goals, using a variety of pedagogical forms, methods and techniques), technical (mastering the information and educational environment, developing multimedia learning, mastering computer literacy) and psychological (knowledge of the psychology of communication, the rules of etiquette, ways of increasing motivation and activating students' activities) the teacher's readiness to implement it.

CONCLUSION

Based on the analysis of scientific and methodological literature on the work of university teachers remotely, the necessity of solving the problem of professional self-improvement of teachers is substantiated, which arose due to their unpreparedness to work online in higher education institutions. The results of the theoretical analysis showed that the effectiveness of teachers' work depends not only on the quality of teaching materials (training courses), but also on

the teacher's skill. Therefore, both the content and the pedagogical organization of DL (at the stage of designing the course and in the process of its use) is a priority. At the present stage of DL development, it is necessary to develop the information and communication competence of the teacher, teach them the forms and methods of organizing distance educational activities, familiarize them with the method of developing a distance course, the method of conducting interactive chat and online classes, with the development of fragments of DL lessons of various types with the use of computer technology, and teach how to carry out reflection on their own activities.

In the course of the research, the survey was conducted to identify the readiness of teachers to work remotely, the analysis of the results of which showed an insufficient level of this readiness. Therefore, the interdisciplinary course "Distance Education Technologies in the Educational Process of the University" has been developed and implemented. Positive results were obtained in the formation of teachers' readiness to work remotely (distance courses, automated tests, game complexes, and a multimedia glossary). Thus, the readiness of teachers to work remotely can be increased if appropriate educational and methodological support is developed and implemented in higher education institutions.

Therefore, the hypothesis of the study was confirmed that the development and implementation of educational and methodological support for the process of professional self-improvement of teachers in DL in higher education institutions will lead to an increase in their effectiveness.

The research carried out does not cover all aspects of the problem. Further study requires considering the specifics of the subject training of teachers to work remotely.

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