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DISTANCE TEACHING TECHNOLOGIES AT HIGH SCHOOL: PROBLEMS AND PROSPECTS

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Abstract

Based on a theoretical analysis of the requirements for successful work in the distance learning system (DLS), the article identifies five main groups of professionally significant qualities of a university teacher, which, together with a motivational-value attitude, are indicators of teachers' readiness for work in the DLS, and can become the basis for pedagogical activity in this system: didactic, organizational and methodological, informational, communicative and developing. The article also reflects the results of diagnostics of teachers' readiness for work in the DLS. The results of the survey, questionnaires, observations, analysis of the products of activity showed that most teachers are characterized by a low and medium level of formation of selected professionally significant qualities for working in the distance learning system. Determining the willingness to work in the DLS is the first step in identifying the guidelines, stages, and problem areas that the teacher development program for working in the DLS should focus on. At the same time, most of the problems in the DLS are related to the lack of teachers who are ready to professionally, technically and psychologically use distance technologies in the educational process, and the need for such specialists in the educational services market is constantly growing.

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Keywords: Distance learning, professional competencies, professionally significant qualities

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1. Introduction

The formation of a global information and communication environment, the informatization of society led to new opportunities for improving the educational system, which not only affected the improvement of the technical base of the educational process, providing access to world educational resources via the Internet, but also contributed to the emergence and use of innovative forms and methods of training, focused on providing affordable quality education ("eLearning", "e-education", "distance education", etc..).

Distance education as an interactive form of interaction between learners and students, through an interactive source of information resource (web site or web page), which consists of components (goals, content, methods, organizational forms, training tools), is implemented using information and communication technologies.

Despite the fact that distance learning has been intensively developed in our country, the introduction of distance learning in the higher education system is fraught with a number of difficulties and limitations, among which we can separately highlight the problem of the provision of universities that use the distance learning system (DLS) in their educational practice with highly qualified teachers characterized by developed competencies for working in new conditions. In this regard, the urgent problem of modern pedagogical science and the education system is the training of distance learning teachers, characterized by a system of professional competencies in the DLS.

2. Problem Statement

The informatization of society, as a result, the informatization of education, including higher education, has activated scientific research in both domestic and foreign pedagogical science, which reveals: methodological and technological aspects of distance learning (Andrews, 2011; Mödritscher, 2006; Petrov & Khudzhina, 2016; Richter & Latchem, 2018); various aspects of the use of distance learning technologies in the educational space of the university (Blaine, 2019; Debrok, 2018; Karakozov, & Manyakhina, 2017; Panshin & Bakuradze, 2019; Roshchina et al., 2018; Safrontsev & Safontsev, 2014); scientific and methodological principles, issues of methodological and staffing, quality of distance learning (Babin, 2017; Chow et al., 2018; Janelli, 2018; Mashinyan & Kochergina, 2016; Min-Lin, 2016; Nikulicheva, 2015).

Conclusions and recommendations of these authors are widely used in the educational process of educational institutions, including universities. At the same time, the analysis of scientific and pedagogical literature, the analysis of the activities of higher education institutions showed that the potential of distance learning technologies is not fully realized in the educational process of universities, and one of the main reasons for this state of affairs, in our opinion, is the problem of providing universities with highly qualified educators characterized by developed competencies for working in new conditions. In this regard, the problem of the study is to study the basic professionally significant qualities of a university teacher necessary for successful work in this system.

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3. Research Questions

3.1. What are the main requirements for a university teacher to work successfully in the distance learning system?

3.2. What is the level of readiness of university teachers to work in the distance learning system?

4. Purpose of the Study

The purpose of this work is to highlight the professionally significant qualities of a university teacher, which can become the basis of pedagogical activity in DLS and in determining the level of teachers' readiness for work in DLS, which is the first step in identifying guidelines, stages and problem areas that should be guided by teacher training program for work in the DLS.

5. Research Methods

An experimental study was conducted at the North Caucasus State Academy. During the study, the following methods were used: theoretical analysis of scientific, psychological, pedagogical and methodological literature, survey, observation, analysis of activity products, questionnaires. The experimental sample consisted of representatives of the faculty of the Engineering Institute, the Medical Institute, the Institute of Applied Mathematics and Information Technology and the Faculty of Law in the amount of 118 people.

Based on the analysis of psychological, pedagogical, methodological literature, scientific and methodological programs, and the project of Professional Industry Standard “Pedagogical Activities in the Field of Distance Learning” (Nikulicheva, 2015), we identified five main groups of professionally significant qualities of a university teacher, which, in our opinion, form the basis of pedagogical activity in DLS:

- didactic;
- organizational and methodological;
- informational;
- - communicative;
- - developing.

6. Findings

We used the methods of survey, observation, analysis of product activities and questionnaires to answer the second question of the study. At the same time, we considered the willingness to carry out activities in the DLS as a combination of professionally significant qualities of a teacher and a motivational-value attitude, as awareness of the need to use distance learning technologies, the formation of internal prerequisites for activities in the DLS and the improvement of skills for working in this system.

The questionnaire consisted of 27 questions: some questions implied the answer “yes” or “no”, some had several suggested answers, some questions were open, i.e. assumed an independent wording of the answer. The questionnaire questions were compiled based on the project of Professional Industry Standard

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"Pedagogical Activities in the Field of Distance Learning", a unified register of professions, and continuing education programs.

The first part of the questionnaire ("passport") consisted of questions aimed at identifying age, teaching experience, academic degree, and academic rank. The average age of the respondents was 43.5 years; the average length of service was 14.5 years. The qualification level of the teaching staff is quite high: 8% of respondents have a doctorate degree, 56% have a Ph.D. and an associate professor position.

The questions of the second part of the questionnaire were aimed at identifying the level of formation, selected groups of professionally significant qualities of a university teacher. An analysis of the results showed that most respondents (84%) have personal computers with Internet access. The majority of teachers (46% rated it 4 points, 34% 5 points on a five-point system) have a positive assessment of their computer skills with standard programs (46%); 12% of teachers have their computer skills with standard programs rated as satisfactory, 8% said that they could not do without outside help. The percentage of teachers who assess positively their computer skills with special programs (data processing, design, web design, programming, etc.) is much lower: the majority (34%) rated their skills as satisfactory, 17% do not have such skills, 17% of respondents do not do without outside help.

About 68% of the faculty do not have experience using ICT methods in their professional activities, since when answering the question "What ICT do you use in your professional activity?" the majority did not formulate an answer to the open question of the questionnaire (47%), they wrote a computer, a laptop - 19%, an interactive whiteboard, a projector -15%. There is a terminological confusion, which, in our opinion, is due to the low level of information literacy.

Only 22% of representatives of the teaching staff have experience in teaching using distance learning technologies. The following forms were selected as the main forms and means of distance learning used at the academy: website (91%), email (84%), newsgroups, webinars (34%), forum (17%), chats (17%).

It is noteworthy that half of the respondents highly appreciate their skills that will be needed to create electronic content, the knowledge and skills needed to develop educational and informational and methodological materials. But, at the same time, 81% of teachers have difficulties related to the features of e-learning and the requirements for training using distance technologies. 36% of teachers did not formulate an answer to the open question about the benefits of distance learning, 32% noted the availability and cost-effectiveness, 16% noted the flexibility of the educational process, 10% mentioned the possibility of sharing experience as an advantage of distance learning, 6% noted the possibility of teaching children with disabilities.

Most of the respondents highly value their personal information and communication skills, and half of the teachers think that they have reflective and analytical skills. The greatest difficulty for teachers is the process of developing a distance learning course (91%) and the lack of psychological readiness (93%).

The questionnaire suggested questions about the motivational readiness to use distance educational technologies in the educational process. 46% of respondents would like to use distance learning technologies in their activities, 54% answered negatively. 43% of teachers recognize the need to increase competencies in the field of distance learning and consider it necessary to organize advanced training courses for distance learning of teachers. 57% of the representatives of the teaching staff are against the introduction of training using distance technology, and also, they do not consider it necessary to improve

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their skills in this area. In our opinion, this is a rather high percentage, which indicates a low level of formation of motivational readiness of teachers.

The final question was “Who is the tutor in your mind?” Most believe that the concept of “tutor” is synonymous with such concepts as “advisor”, “mentor” -38%, “leader, teacher accompanying educational activities, individual learning path” - 20 %.

The results obtained in the course of questionnaires, surveys, observations and analysis of activity products allow us to state the presence of a low level of formation of some professionally significant qualities of teachers that are necessary for successful work in the DLS. A low level of formation of organizational and methodological (53%), information (56%) and developing (53%) professionally significant qualities was found in the majority of respondents. They are characterized by a low level of formation of competencies in organizational activities in DLSs, possession of various forms, methods and technologies in DLSs, competencies for the management of educational activities of students in DLSs, in the field of creating electronic content, including competencies in the development of various types of pedagogical control in the DL system, competencies for independent cognitive activities, self-organization skills, including the ability to activate cognitive activity and independent work of students in DLS. On average, most teachers have a low and medium level of formation of selected professionally significant qualities for working in the distance learning system. It is also noteworthy that 21% of the representatives of the faculty are characterized by a high level of development of professionally significant qualities (Figure 01).

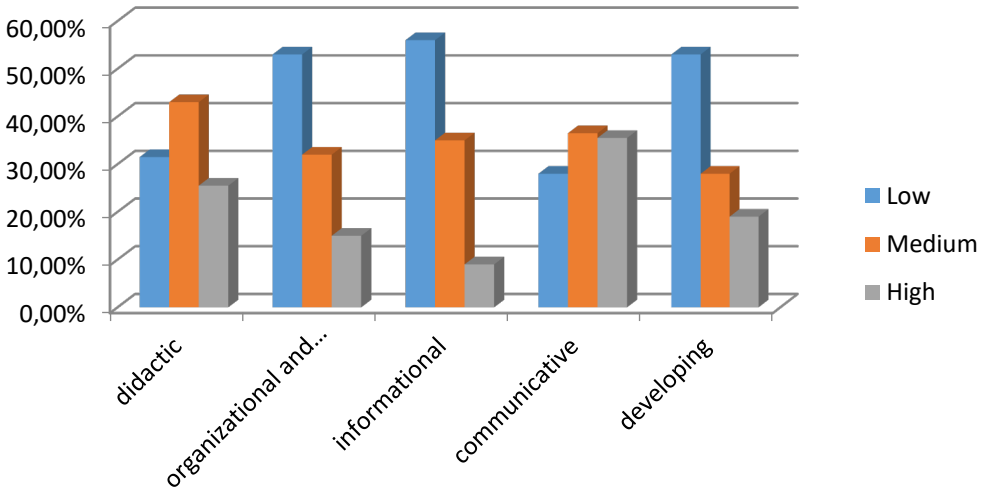

Figure 1. Levels of formation of professionally significant qualities of a university teacher necessary for successful work in the DLS

As we noted above, the willingness to work in the DLS also includes a motivational-value attitude. Diagnostic results of the motivational-value attitude to work in DLS presented in Figure 02 show that most of the researchers do not fully recognize the need to use distance learning technologies, they are characterized by a low level of formation of internal prerequisites for activities in DLS and improvement of skills for working in this system.

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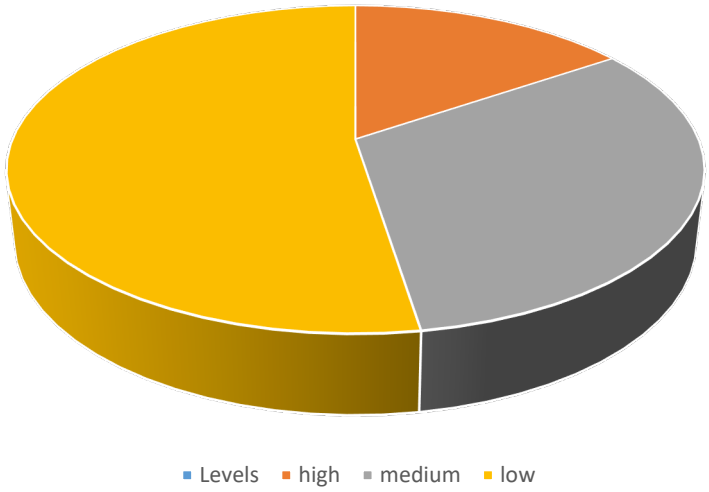

Figure 2. Motivational-value attitude to work in DLS

Thus, it can be concluded based on the available data that there is a need for focused work on the formation of professionally significant qualities of university teachers for work in the DLS, in the process of which it is necessary to solve difficult problems that affect many issues from the field of pedagogy, psychology, methodology, computer science and information technology, ensuring the quality of training, intellectual property rights, etc. that will contribute to the effectiveness of the educational process through distance learning technologies.

7. Conclusion

The results of the study allowed identifying the main areas and problem areas on which it is necessary to focus efforts in the course of training teachers for work in the DLS:

- features of the organization of training using distance learning technologies;
- management of the learning process using distance learning technologies;
- current trends in the development of educational psychology using distance learning technologies;
- forms of organization of remote interaction;
- characteristics of the creation and placement of tasks for the control and management of knowledge in the DLS;
- creation of electronic educational-methodical complexes;
- development of ICT competencies;
- automated testing of training quality using distance learning technologies.

It should be noted that the study is not intended to be exhaustive. It demonstrates the problematic areas in the work of distance learning in a particular higher educational institution, although now that the challenges of the time have forced the whole country, all higher and secondary educational organizations to switch to the distance learning system, all problems in this area have been revealed that indicate the need for a system purposeful work in the organization of continuing education courses for teachers and teachers to work in DLS.

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