

THE EXAMINATION OF READINESS OF PRIMARY SCHOOL TEACHERS TO DISTANCE LEARNING IN THE SYSTEM OF LIFELONG EDUCATION

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ABSTRACT

The article analyzes the state of readiness of primary school teachers to distance learning in the system of lifelong education. Motivational-value, operational and cognitive components which represent the structure of primary school teachers' readiness to distance learning in the system of lifelong education are characterized. Four levels of readiness are defined: low, average, acceptable and high. 519 respondents participated in the experiment: 342 students who were trained in the speciality of "Primary Education" (educational qualification levels "specialist" and "master"), 81 primary school teachers and 96 lecturers of the Primary Education Faculty. The methodics of the experiment involved defining indicators, levels of primary school teachers' readiness to distance learning in the system of lifelong education and the use of the following methods: questioning, conversation and observation. Methods of mathematical statistics were used to process the data. The analysis of the experiment results showed that primary school teachers' readiness to distance learning in the system of lifelong education is predominantly within the low and average levels. Therefore, the formation of primary school teachers' readiness to distance learning in the system of lifelong education can be carried out within the course "Fundamentals of Distance Learning in Primary Education".

Keywords: Primary school teachers' readiness, distance learning, system of lifelong education

INTRODUCTION

At the present stage of economic relations development the processes of higher education modernization in Ukraine are directed towards world integration, globalization, democratization and humanization. The modern information society of a developed country requires of higher education institutions training of specialists capable of distance learning in the system of lifelong education.

The necessity of introduction of modern information technologies in education is caused by the fact that under modern conditions primary school teachers need to self-educate throughout life, therefore a new opportunity to learn continuously appeared. Lifelong education is largely associated with the technologies of distance learning (DL), that is, with the use of Internet technologies, and they, in turn, open up great opportunities for effective learner-centered teaching. Therefore, a particularly urgent issue is primary school teachers' readiness to distance learning in the system of lifelong education.

RESENT STUDIES ANALYSIS

The problem of readiness for distance learning of students in educational institutions has always been in the focus of researchers: O. Andrieiev, N. Zhevankina, V. Oliinyk, E. Polat, S. Kalashnikova, G. Kozlakova, G. Kravtsov, V. Kukharenko, P. Stefanenko, V. Soldatkin, Zh. Talanova, B. Shunevych and others. However, the problem of primary school teachers' readiness to distance learning in the system of lifelong education remains insufficiently studied.

THE PURPOSE OF THE ARTICLE

Analyze the state of readiness of primary school teachers to distance learning in the system of lifelong education.

MAIN MATERIAL STATEMENT

The training of primary school teachers to use DL technologies in the system of lifelong education was studied by us in higher education institutions. In the process of developing an effective system of forming primary school teachers' readiness to DL in the system of lifelong education we have identified the following stages of experimental verification of the main conclusions of our work:

- **Ascertaining stage.** The level of primary school teachers' readiness to DL in the system of lifelong education was studied;
- **Forming stage.** The effectiveness of the author's DL model in the system of lifelong education of primary school teachers was tested;
- **Analysis of the implementation results of the model of learning.**

The stages have no strict limits as it is impossible to fragment the integral process, define its links: where education begins and where beliefs continue, and where the latter pass into active and volitional sphere. However, each stage requires appropriate organizational and pedagogical content.

The DL model in the system of lifelong education of primary school teachers (Mukoviz, 2014) is based on a number of necessary structural elements of professional training, personality traits of a teacher by stimulating the already existing potential characteristics and bringing them to the desired level. At the experimental stage of the study the model as an integrated system of the formation of primary school teachers' readiness to DL in the system of lifelong education was implemented.

Also the process and the nature of the main components were monitored. It was essential to identify and to justify theoretically the significant relationships between the changes in the content, the forms and ways of organization of professional pedagogical training and practical results of primary school teachers' activity, the dynamics of mastering their DL professional skills in the system of lifelong education.

The results of the experiment helped to evaluate its effectiveness, to make the required correction, to generalize the experimental data, to conduct a comparative analysis and to make conclusions.

The logics of the study provided consistent deployment of scientific research from the hypothetical idea about the ways of forming primary school teachers' readiness to DL in the system of lifelong education to modeling the process as an integrated system, which included the experimental verification of theoretical conclusions and practical recommendations. At the ascertaining stage of the experiment we defined the objective: to check the state of readiness of primary school teachers to DL in the system of lifelong education. According to the objective of the study the following tasks were set:

- to identify and substantiate components of primary school teachers' readiness to DL in the system of lifelong education;
- to define and justify the levels of primary school teachers' readiness to DL in the system of lifelong education;
- to check the state of readiness of lecturers to tutor activity in higher educational institutions of III-IV accreditation levels;
- to check the state of readiness of primary school teachers to DL in the system of lifelong learning.

Modern primary school teachers are specialists with a high level of professional readiness that is why in preparatory work with them in the focus of our attention were the following components of readiness to DL in the system of lifelong education: motivational-value (relation to the activity and personal goals), cognitive (knowledge) and operational (skills and abilities).

The emotional-volitional component of professional readiness has universal significance and includes appropriate volitional qualities that are highly developed in each specialist of primary education. Let us describe all components of primary school teachers' readiness to DL in the system of lifelong education and justify the need of them.

THE MOTIVATIONAL COMPONENT

The analysis of psychological and educational literature showed that it is impossible to achieve high results in the development of a person without positive motivation and, therefore, in the effective professional activity (Slastenin, Isaev, & Shijanov, 2002; Shadrikov, 1996; Shtejnec, 1998). Psychological Dictionary defines motivation as "a complex process that requires analysis and evaluation of alternatives, choice and decision making.

Motives cause defining of a goal as a subjective image of a desired result of the expected activity, action" (Platonov, 1984). The precondition for the development of a motive is interest. It is interest that determines the state of motives and goals. A. Leontev proposes for awakening interest to form a motive and then to open the ability of goal finding for those who learn. Professional interest can be formed through the formation of the motive for pedagogical activity.

The scientist stresses that "the process of the emergence of new motives and new kinds of activity is characterized by the transference of motives towards the realization of a goal" (Leontev, 1975). A goal has a special place in the structure of activity. In psychological and pedagogical literature (Kuzmina, 1985; Leontev, 1975; Platonov, 1984; Zimnjaja, 2002) a range of purposes is considered: from mastering specific topics of the syllabus (close goals) to developing abilities to perform professional activities (distant goals).

In the study a distant goal is creating a positive attitude of primary school teachers to distance learning in the system of lifelong education that contributes to the effective use of DL technologies in professional activity, a close goal is solving the educational tasks that are offered to develop certain personality traits.

If a teacher is aware of close and distant goals of preparation for the use of DL technologies in professional activity, it means that the motivational component of readiness has been formed. A conscious motive makes a specialist strive for self - improvement and use of DL technologies in solving professional tasks.

The motivation of primary school teachers for DL in the system of lifelong education is, first of all, cognitive motivation, which is the basis of active learning activities, the catalyst of the learning process and contributes to the search for new ideas of using DL technologies, the acquisition of new knowledge, abilities and skills.

This proves the connection of the motivational component with cognitive operational components of readiness.

THE COGNITIVE COMPONENT

The cognitive component of readiness implies that primary school teachers have professional expertise, which combines psychological, pedagogical and methodical knowledge and the knowledge of the DL problem.

Psychological and pedagogical knowledge includes the knowledge of the DL technologies use in professional pedagogical activity.

Methodical knowledge is the knowledge about the general methods and techniques of the organization of the teaching-learning process using DL technologies. Knowledge of the DL technology is the knowledge of software and hardware of DL technologies.

The cognitive component characterizes the amount of knowledge and innovative way of thinking. Let us define in the structure of the cognitive component the professional knowledge, which should have a modern primary school teacher in the system of lifelong learning (see Table 1.).

Table 1.
Structure of the cognitive component of primary school teachers' readiness to DL in the system of lifelong education

Component of professional activity	Knowledge
gnostic	modern approaches to the use of DL technologies in the system of lifelong education of primary school teachers; kinds of activity of participants of the teaching-learning process in DL in the system of lifelong education of primary school teachers; software for diagnosing, monitoring and evaluation of academic achievements of pupils (students);
projective	theoretical foundations of DL in the system of lifelong education of primary school teachers; peculiarities of developing distance courses in the system of lifelong education of primary school teachers; psychological and pedagogical aspects of the use of DL in the system of lifelong education of primary school teachers;
constructive	application of DL technologies in the system of lifelong education of primary school teachers; special software and hardware in DL in the system of lifelong education of primary school teachers;
organizational	organization and implementation of DL in the system of lifelong education of primary school teachers; technologies of organizing DL in the system of lifelong education of primary school teachers;
communicative	potential of DL technologies for communication, organization of interaction and collaboration in the system of lifelong education of primary school teachers; the rules of e-mailing and communication in the system of lifelong education of primary school teachers;
creative	potential of DL technologies in the implementation of non-standard classes in system of lifelong education of primary school teachers; potential of DL technologies in training, conducting contests and competitions in the system of LLE of primary school teachers.

THE OPERATIONAL COMPONENT

The operational component reflects practical readiness of primary school teachers to DL in the system of lifelong education. This is the organization of practical educational-cognitive activity of learners with mastering the content of education.

This component is one of the main components of the didactic process; it can be defined as a processual, methodical (Yahupov, 2002). The processuality of this component is reflected in the form of training of primary school teachers to DL in the system of lifelong education. The structure of this component includes a set of skills and abilities associated with the use of DL technologies in professional activity.

The educator's abilities prove conscious mastery of DL technologies. The structure of the operational component of readiness is shown in Table 2.

Table 2.
Structure of the operational component of primary school teachers' readiness to DL in the system of lifelong education

Component of professional activity	Skills and know-how
gnostic	to search ways to improve the use of DL technologies in the system of lifelong education of primary school teachers; to use universal and special DL technologies in the system of lifelong education (LLE) of primary school teachers;
projective	to develop distance learning courses in the system of LLE of primary school teachers; to plan the activities of the subjects (participants) of the educational process using DL technologies in the system of LLE of primary school teachers;
constructive	to integrate multimedia technologies, special hardware and software in DL; to develop educational resources, means of evaluation of educational achievements of the subjects of the educational process by means of DL technologies in the system of LLE of primary school teachers;
organizational	to organize own activity and the activity of other subjects of the educational process in DL in the system of lifelong education of primary school teachers; to diagnose and monitor the activity of the subjects of the educational process and evaluate their educational progress in the system of LLE of primary school teachers;
communicative	to carry out the organization and moderation of electronic communication in individual, pair and group activities of the subjects of the educational process by means of DL in the system of lifelong education of primary school teachers; to establish the relationship between the subjects of the educational process by means of DL in the system of lifelong education of primary school teachers;
creative	to conduct research activities using the means of DL in the system of lifelong education of primary school teachers; to create (find) own original approaches to the use of DL in the system of LLE of primary school teachers; to set professional tasks and solve them creatively using DL technologies in the system of LLE of primary school teachers.

Consequently, the motivational-value, cognitive and operational components together represent the structure of primary school teachers' readiness to DL in the system of lifelong education (See Figure 1).

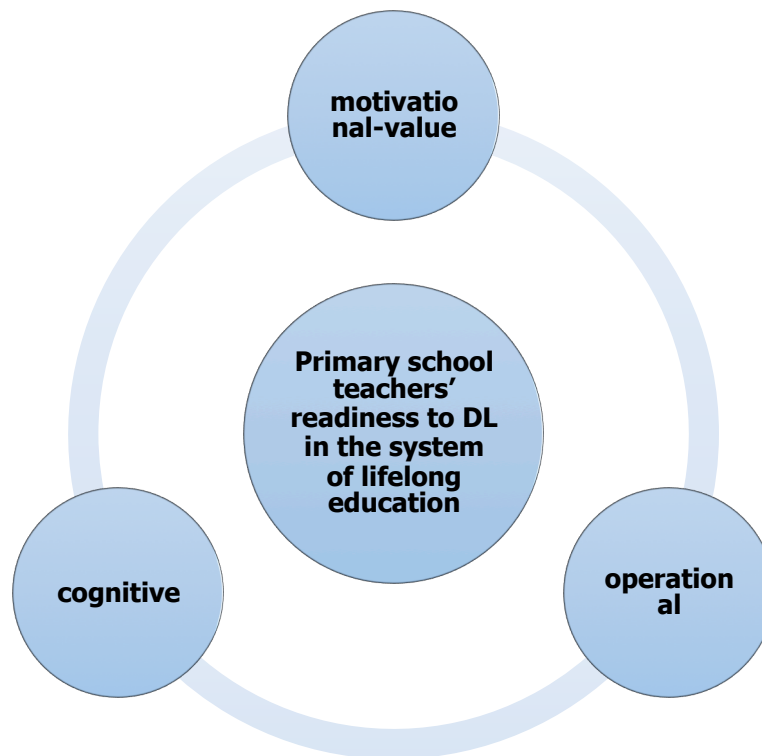


Figure 1.
Structure of primary school teachers' readiness to DL
in the system of lifelong education

The links between the structural components of primary school teachers' readiness to DL in the system of lifelong education, which are shown in Figure 1, prove that the successful formation of the cognitive and operational components is possible on condition that a teacher has a positive attitude to DL technologies, understands the necessity and expediency of their use in their professional activity, focuses on self-improvement and self mastery of new DL technologies and adequately appraises own activity in DL.

At the same time, it is impossible to form the motivational-value component of primary school teachers' readiness to DL in the system of lifelong education without the appropriate knowledge and skills.

The next step of our research was to determine the readiness levels of primary school teachers to DL in the system of lifelong education.

The analysis of scientific papers of O. Abdullina, D. Bodnenko N. Volkova, O Dubaseniuk, T. Koicheva, O. Kirilenko, N. Kuzmina, O. Piekhota, I. Pidlasyi, O. Samoilenko, V. Slastonin and others has given us reasons for singling out four levels of readiness of primary school teachers to DL in the system of lifelong education. Let us characterize these levels.

THE LOW LEVEL

The low level of readiness of primary school teachers to DL in the system of lifelong education indicates that such teachers lack the following:

- **personal interest in DL; positive attitude to DL in educational activity, such as the study of capabilities,**
- **purpose of the use of DL technologies;**
- **understanding the advantages of DL technologies in pedagogical activity; interest in developing their own information products (an educator prefers already created information products, educational software, digital educational resources);**
- **self-improvement in DL; skills and abilities to analyze and select digital educational resources (large number of information resources and software makes it very difficult to choose those that meet the goals and tasks of a lesson);**
- **ability to articulate the purpose of DL in accordance with their individual**
- **characteristics, to plan their own pedagogical activity and the activity of others, to plan curricular and extracurricular activities in DL;**
- **knowledge about the existing educational software for organizing the process of learning in primary education, DL hardware and software, monitoring and evaluating their own learning achievements by means of DL;**
- **knowledge about the organization of communication among participants of educational activity in DL.**

Weak knowledge of DL technologies while working with distance courses and lack of skills to integrate DL into projects are the characteristics of the low level of primary school teachers' readiness to DL in the system of lifelong education.

Consequently, the low level of readiness to DL in the system of lifelong education is characteristic of educators with weak knowledge and skills in DL, those who do not seek to acquire them and are not able to appreciate the advantages of DL. Planning their own professional activity they use traditional forms and methods of presentation, communication, organization of teaching-learning process in higher education institutions.

THE AVERAGE LEVEL

The average level of primary school teachers' readiness to DL in the system of lifelong education is characterized by the following features: educators are not always aware of the purpose, objectives and peculiarities of DL; have positive attitude to DL, but prefer traditional forms and methods of organizing the teaching-learning process in primary education; actively master the suggested DL technologies, but do not aspire to self-improvement, do not want to master other DL technologies; show an active interest in analyzing DL, but their knowledge of psychological and pedagogical aspects of implementing in teaching-learning process in higher education institutions is incomplete or inaccurate.

Typically, such educators have general knowledge of DL, available educational software, software for communication and interaction; have difficulty in using them in planning their own activity or students' activity.

The characteristics of an average level of primary school teachers' readiness to DL in the system of lifelong education are as follows: the ability to analyze DL, understanding the benefits of using DL compared to traditional forms and methods of learning and partial awareness of the problem of their own choice and the use of DL in any educational activity; adequate evaluation of their own activity during DL.

Thus, teachers with an average level of readiness for DL in the system of lifelong education use DL occasionally. They have sufficient knowledge of professional, psychological, pedagogical, and methodical and IT subjects, but underestimates digital educational resources, have difficulties in planning teaching-learning process and are not always able to adjust their activity in a specific learning situation.

THE SUFFICIENT LEVEL

The sufficient level of primary school teachers' readiness to DL in the system of lifelong education is defined as the ability to clearly understand the necessity for and expediency of certain DL technologies in any sphere of educational activity. Educators with a sufficient level of readiness understand basic methodical tasks of DL, confidently use DL technologies in educational activity, create from templates and integrate distance courses, but technically and technologically well developed educational products do not always take into account the principles of teaching, psychological and pedagogical requirements. The characteristics of a sufficient level of primary school teachers' readiness to DL in the system of lifelong education are as follows:

- the ability to plan own activity in DL;
- the ability to see the mistakes and shortcomings, but their correction requires the help of a specialist.

Educators adequately assess their readiness, but cannot heighten its level. Teachers with a sufficient level of readiness to DL in the system of lifelong education are well aware of the purpose and goals of DL, the need for mastery of special knowledge of DL and special DL techniques, have enough skills in the use of DL technologies, are critical of their own capabilities and abilities, seek lifelong learning by means of DL.

THE HIGH LEVEL

The high level of primary school teachers' readiness to DL in the system of lifelong education indicates the following: a strongly marked positive attitude to DL; awareness of the importance, necessity of DL in pedagogical activity; deep understanding of the important role of information competence in future professional activities; focus on self-motivation in DL.

Educators with a high level of readiness know basic concepts of DL, have deep theoretical knowledge of DL, its types, functions, feasibility and the models of implementation in educational activity; know special software and hardware, special multimedia equipment and its use in educational cognitive and project activity, individual work; understand the capacities of DL for communication, organization of interaction, collaboration, research; know the requirements for the use of DL technologies, requirements for distance courses and rules of safe operation of DL technologies.

The characteristics of a high level of primary school teachers' readiness to DL in the system of lifelong education are as follows: the ability to articulate the purpose of educational activity; the ability to plan their activities in DL; the ability to plan and the skills to create and use various information educational resources within their subject area (presentations, syllabuses, models, methods of assessing educational achievements and diagnostics); the ability to use local and global networks for organizing pedagogical communication, project, individual, pair, group activities and primary school teachers' communication in the system of lifelong education; the ability for self-reflection, for an adequate analysis and appraisal of their own activity in DL, for quick correction in a particular learning situation, for independent search for ways of improving this activity.

Thus, teachers with a high level of readiness and have a steady need and clear motivation for using DL technologies in pedagogical activity; have sufficient fundamental knowledge of DL, psychological, pedagogical and methodical knowledge, using it in their professional activity; have a developed system of skills and abilities of the practical, methodical and professional use of DL technologies, creative professional activities in DL; the ability for self-analysis, prognostication, self-improvement and self-education.

The ascertaining experiment took place in 2014 in six educational institutions:

- **Pavlo Tychyna Uman State Pedagogical University (170 students and 96 lecturers).**
- **Hryhoriy Skovoroda State Pedagogical University of Pereyaslav-Khmelnytsky (46 students).**
- **Ivan Ohienko Kamianets-Podilsky National University (70 students).**
- **Volodymyr Vynnychenko Kirovograd State Pedagogical University (56 students).**
- **Zhytomyr Regional Institute of Postgraduate Pedagogical Education (43 primary school teachers).**
- **Cherkasy Regional Institute of Teachers' Postgraduate Education (20 primary school teachers).**
- **K. D. Ushynskyi Chernihiv Regional Institute of Postgraduate Pedagogical Education (18 primary school teachers).**

In total, 519 respondents participated in the experiment: 342 students trained in the speciality "Primary Education" (educational qualification levels "specialist" (7.01010201) and "master" (8.01010201)), 81 primary school teachers and 96 lecturers of the Primary Education Faculty.

The methodics of the ascertaining experiment involved defining indicators, levels of primary school teachers' readiness to DL in the system of lifelong education and the use of the following methods:

- **questioning,**
- **conversation and**
- **observation.**

Methods of mathematical statistics were used to process the data.

Taking into consideration the complex structure of the studied phenomenon, we identified two approaches of defining readiness to DL in the system of lifelong education of primary school teachers:

- **their self-esteem, which was studied on the basis of questionnaires;**
- **an expert assessment by specialists of the indicators of the formed phenomenon in the respondents according to the results of the respondents' answers to the questions in the questionnaire developed by us.**

The study was held mainly at Pavlo Tychyna Uman State Pedagogical University, so before defining the state of primary school teachers' readiness to DL in the system of lifelong learning, we examined the state of readiness of the lecturers of this university to tutor activity in higher education institutions of III-IV accreditation levels.

The survey was prepared and conducted to define the state of the lecturers' readiness to tutor activity in higher education institutions of III-IV accreditation levels. In total, 96 lecturers of the Primary Education Faculty at Pavlo Tychyna Uman State Pedagogical University participated in the experiment. The average age of a lecturer who completed the questionnaires was 37 years, although 40-49 year-olds and 26-28 year-olds predominated.

The majority of respondents were female (80), the rest were male (16). The majority of respondents had 12-20 years of teaching experience at university.

The above described components (motivational-value, cognitive, operational) and levels (low, average, sufficient, high) of primary school teachers' readiness to DL in the system of lifelong education are also suitable for defining the state of lecturers' readiness to tutor activity in higher education institutions of III-IV accreditation levels.

The validity of the survey was determined by the adequacy of the content of the questions to the purpose of the study (See Table 3).

The questionnaire consisted of 16 questions and respondents indicated their agreement using points: completely agree -3, partly agree -2, partly disagree -1 and completely disagree -0.

Table 3.
Questionnaire for defining the state of lecturers' readiness to tutor activity in higher education institutions of III-IV accreditation levels

№	Personality Characteristics	Level of Agreement			
		Completely agree	Partly agree	Partly disagree	Completely disagree
1.	I would like to improve my qualification distantly.	3	2	1	0
2.	I think that distance learning is effective for lifelong education of primary school teachers.	3	2	1	0
3.	I would like to use the elements of distance learning in the teaching-learning process in a higher education institution.	3	2	1	0
4.	I am ready to carry out distance learning in lifelong education of primary school teachers.	3	2	1	0
5.	I know the history and theory of distance education.	3	2	1	0
6.	I know the Regulation on distance learning.	3	2	1	0
7.	I know the Regulation on eLearning Certification at Universities and the Ministry of Education and Science of Ukraine.	3	2	1	0
8.	I know the software and hardware which can be used for distance learning technologies.	3	2	1	0
9.	I can communicate remotely (synchronously and asynchronously), regularly and consistently.	3	2	1	0
10.	I can use different forms and methods of organization of distance learning in the teaching-learning process in higher education institutions.	3	2	1	0
11.	I am able to work in information-educational environment at USPU (http://dls.udpu.org.ua).	3	2	1	0
12.	I know how to develop distance learning courses.	3	2	1	0
13.	I can provide online assistance during the studying of a distance course.	3	2	1	0
14.	I can create a positive emotional atmosphere between the subjects (participants) of distance learning.	3	2	1	0
15.	I can use different forms of control during the studying of a distance course.	3	2	1	0
16.	I can use an individual approach to the student during distance learning.	3	2	1	0

For verification of the survey results and the subsequent statistical analysis every answer to the question was given qualimetric indicator (See Table 4).

Table 4.
Qualimetric indicators of the level of formed readiness of lecturers to tutor activity in higher education institutions of III-IV accreditation levels and primary school teachers to DL in the system of lifelong education

Nº question	Component of readiness to DL	Level of readiness to DL			
		Low (points)	Average (points)	Sufficient (points)	High (points)
1-4	Motivational-value	to 2	3-6	6-9	9-12
5-8	Cognitive	to 3	3-6	6-9	9-12
9-16	Operational	to 5	5-11	12-18	19-24
The total number of points according to the level of per capita		to 10	11-23	24-36	37-48

The statistical results of the survey were summarized based on the number of questions, the maximum possible number of points received for the answer and the amount of points according to the level of formation of a readiness component, which was assessed. This table helped to quantify the indicators of the formation levels of respective components of lecturers' readiness to tutor activity in higher education institutions of III-IV accreditation levels.

Having quantified the qualimetric indicators of the defined levels of the components (motivational-value, cognitive and operational) of lecturers' readiness to tutor activity in higher education institutions of III-IV accreditation levels, we related the amount of points in the corresponding part of readiness to the total number of points and calculated the percentage. Then we compared the results to define the components that will need more attention. The analysis of lecturers' readiness to tutor activity according to the levels of formed components is presented in Table 5.

Table 5.
Level of lecturers' readiness to tutor activity according to the levels of formed components (ascertaining survey)

Component of readiness	Level of readiness (%)			
	Low	Average	Sufficient	High
Motivational-value	62,5	27,08	6,25	4,17
Cognitive	62,5	29,16	4,17	4,17
Operational	58,34	31,25	6,25	4,16

The data in Table 5 show the superiority of the motivational-value component of lecturers' readiness to tutor activity in comparison with other components. This is explained by the fact that lecturers desire to work in a modern way, but they do not have knowledge, skills and abilities necessary for the realization of this desire. Our further work was directed towards the development of these components of lecturers' readiness to tutor activity. The general level of lecturers' readiness to tutor activity in higher education institutions of III-IV accreditation levels was defined as an arithmetic mean of all the criteria by Formula 1:

$$\sum = (a_1 + a_2 + a_3):n \quad (1)$$

where \sum is the general level of readiness,

a is the number of participants in the relevant component of readiness,

n is the number of components of readiness (motivational-value, cognitive and operational). The consolidated experimental data are shown in Table 6.

Table 6.
General description of readiness levels of lecturers to tutor activity in higher education institutions of III-IV accreditation levels (ascertaining survey)

Level of readiness	Number of lecturers, %
High	4,17
Sufficient	6,25
Average	29,16
Low	60,42

The qualitative analysis of the ascertaining experiment allows to draw conclusions on the causes of the results:

- lack of theoretical knowledge about the problem of DL;
- indifferent attitude of lecturers to organizing DL;
- lack of a set of guidelines on problems of organizing DL;
- lack of awareness of the purpose and objectives of DL.

That is why the technology of training of distance learning tutors (organizers) in higher education institutions of III-IV accreditation levels was further aimed at organizing DL in the system of lifelong education of primary school teachers.

Another objective of our study was to examine the state of primary school teachers' readiness to DL in the system of lifelong education.

As it was already indicated 342 students and 81 primary school teachers participated in the ascertaining experiment. All the students have Bachelor's degrees in "Primary Education" and most of them work in their speciality field, so we equated them to primary school teachers.

The average age of a primary school teacher who completed a questionnaire is 25 years, 22 year-olds predominated. The majority of respondents were female (403), the rest were male (20) men. The majority of respondents had not less than 2-3 years of teaching experience at primary school. The validity of the survey was determined by the adequacy of the content of the questions to the purpose of the study (See Table 7).The questionnaire consisted of 16 questions and respondents indicated their agreement using points: completely agree -3, partly agree -2, partly disagree -1, completely disagree - 0.

Table 7.

**Questionnaire for defining the state of primary school teacher'
readiness to DL in the system of lifelong education**

№	Personality Characteristics	Level of Agreement			
		completely agree	partly agree	partly disagree	completely disagree
1.	I fully understand the need to improve my professional knowledge and skills after graduation.	3	2	1	0
2.	I think that distance learning is effective for the improvement of my professional knowledge and skills after graduation.	3	2	1	0
3.	I would like to use the elements of distance learning in the teaching-learning process in a higher education institution	3	2	1	0
4.	I am ready to carry out distance learning in lifelong education of primary school teachers.	3	2	1	0
5.	I know the history and theory of distance education.	3	2	1	0
6.	I know the basic requirements for the organization and implementation of distance learning in higher education institutions.	3	2	1	0
7.	I know the software and hardware which can be used for distance learning technologies.	3	2	1	0
8.	I know the structure of a distance learning course.	3	2	1	0
9.	I can communicate remotely (synchronously and asynchronously), regularly and consistently.	3	2	1	0
10.	I am able to work in information-educational environment at USPU (http://dls.udpu.org.ua).	3	2	1	0
11.	I can use e-lectures, webinars, practical tasks and resources of a distance course.	3	2	1	0
12.	I am generally able to work with distance courses.	3	2	1	0
13.	I can provide online assistance to a group mate during the studying of a distance course.	3	2	1	0
14.	I can create a positive emotional atmosphere during distance learning.	3	2	1	0
15.	I know how to work with tests, questionnaires and do other kinds of activity in a distance course.	3	2	1	0
16.	I am able to work in the system of lifelong learning of primary school teachers (http://sno.udpu.org.ua).	3	2	1	0

For verification of the survey results and the subsequent statistical analysis every answer to the question was given qualimetric indicator (See Table 4).The statistical results of the survey were summarized based on the number of questions, the maximum possible number of points received for the answer and the amount of points according to the level of formation of a readiness component, which was assessed.

Table 4 helped to quantify the indicators of the formation levels of respective

components of primary school teachers' readiness to DL in the system of lifelong education.

Having quantified the qualimetric indicators of the defined levels of the components (motivational-value, cognitive and operational) of primary school teachers' readiness to DL in the system of lifelong education, we related the amount of points in the corresponding part of readiness to the total number of points and calculated the percentage. Then we compared the results to define the components that will need more attention. The analysis of primary school teachers' readiness to DL in the system of lifelong education according to the levels of formed components is presented in Table 8.

Table 8.
Level of primary school teachers' readiness to DL in the system of lifelong readiness according to the levels of formed components (ascertaining survey)

Component of readiness	Level of readiness (%)			
	Low	Average	Sufficient	High
Motivational-value	62,44	28,63	7,05	1,88
Cognitive	74,17	17,37	6,58	1,88
Operational	48,82	39,91	8,92	2,35

The data in Table 8 show the superiority of the motivational-value component of primary school teachers' readiness to DL in the system of lifelong education in comparison with other components. This is explained by the fact that teachers desire to work in a modern way, but they do not have knowledge, skills and abilities necessary for the realization of this desire. Our further work was directed towards the development of these components of primary school teachers' readiness to DL in the system of lifelong education. The general level of primary school teachers' readiness to DL in the system of lifelong education was defined as an arithmetic mean of all the criteria by Formula 1. The consolidated experimental data are shown in Table 9.

Table: 9
General description of readiness levels of primary school teachers to DL in the system of lifelong education (ascertaining survey)

Level of readiness	Number of teachers, %
High	2,04
Sufficient	7,52
Average	28,63
Low	61,81

The analysis of the survey results showed that primary school teachers' readiness to DL in the system of lifelong education is predominantly (89% of respondents) within the low and average levels.

CONCLUSIONS

Thus, the ascertaining experiment showed that primary school teachers' readiness to DL in the system of lifelong education is influenced by many objective and subjective factors, the development of the internal structure of primary school teachers' training is gradual and acquires the integrity by means of forming a general professional-pedagogical personality of a teacher.

Clearly, primary school teachers' readiness to DL in the system of lifelong education is formed during their professional training and covers the stages of forming motivational and target areas, knowledge about the nature of DL and the possibility of its application in modern lifelong education while teaching academic subjects, developing skills in using the mentioned technology in lifelong education.

The stages have no strict limits as it is impossible to fragment the integral process, define its links: where education begins and where beliefs continue, and where the latter pass into active and volitional sphere. However, each stage requires appropriate organizational and pedagogical content.

In prospect, the formation of primary school teachers' readiness to DL in the system of lifelong education can be carried out within the course "Fundamentals of Distance Learning in Primary Education".

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