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Improving The Information and Communication Competence of Higher Education Teachers in The Process of Distance Education

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Article History	Abstract
	This article examines the development of information and communication competence of university teachers in the environment of distance learning support. In connection with the ever-increasing requirements for the level of training of specialists in higher professional education, the need to change the very paradigm of the educational process, its conceptual model from "education for life" to "education throughout life" has become obvious. The paradigm shift determines the main trends in the development of modern education, namely: continuity, mass character, fundamentality, individualization and humanization, orientation towards a competency-based approach. The use of new technologies currently makes it possible to organize the educational process at a qualitatively new level and to significantly expand the forms and methods of its organization. One of these forms is distance learning. Distance support of the educational process involves the use of tools and methods inherent in distance learning in the traditional educational process of a university. The purpose of the study is to develop and analyze a system for developing information and communication competence of teachers when using tools and methods of distance learning support.

1. Introduction

Changing requirements for the level of specialist training and his individual qualities were the reason for reforming the education system in Uzbekistan. There is a consolidation of information and educational resources, the active introduction of information and communication technologies into the educational process, intensified by the development of infrastructures that provide free access to educational resources to wide sections of the population, regardless of place of residence. At the present stage, the strategy for the development of education is largely determined by the changes occurring in society associated with transformations in the country [1].

The reform of the Uzbek educational sphere today has led society to highlight priority areas for the development of education. It became obvious that it was necessary to change the very paradigm of the educational process, its conceptual model - from "education for life" to "education throughout life". Higher education today is considered as the main, leading factor of social and economic progress. American educator R. Hutchinson argues that the main goal of education is human improvement [3]. The reason for this is the awareness that the main value and main capital of modern society is a person capable of searching for and mastering new knowledge and making non-standard decisions.

The paradigm shift determines the main trends in the development of modern education, namely: continuity, mass character, fundamentality, individualization and humanization, orientation towards a competency-based approach, which involves systematic work with learning goals, including their structuring in the form of components. The emergence of new technical capabilities and the use of new

technologies in the educational process currently make it possible to "organize the educational process at a qualitatively new level, significantly expanding the forms and methods of its organization [2]. One of these forms is distance learning. Based on the definitions formulated by Andreev A.A., Polat E.S., Khutorsky A.B. [4] distance learning is understood as a form of education when interaction between a teacher and a student, and between students, occurs at a distance, without personal interaction, but using information and communication technologies. Distance support of the educational process involves the use of tools and methods inherent in distance learning in the traditional educational process of a university. This, in turn, requires the formation of a certain level of information and communication competence of teachers, allowing them to fully use information and communication technologies in the traditional educational process [5]. Teachers who have received traditional training cannot immediately begin to implement distance learning tools in the classical educational process. Different technology, new communication capabilities, modern management techniques require special qualifications. In other words, a certain level of information and communication competence of teachers is required, allowing them to fully apply information and communication technologies in the educational process. The system of development of information and communication competence used in the study determines the creation of an educational environment that provides the opportunity for self-development of its participants and the achievement of high effectiveness of the educational process. Such an environment is called the environment of distance learning support.

Based on the definition of a system as a collection of many parts connected and organized among themselves to achieve a common goal, the system for the development of information and communication competence of teachers in a distant learning support environment is understood as a complete set of a model of information and communication competence, a level structure for the development of information and communication competence and the necessary conditions ensuring the achievement of the goal.

3. Results and Discussion

The development of information and communication competence of teachers in the environment of distance learning support is aimed at achieving a new quality in solving pedagogical problems based on the use of new information technologies in the educational process. As follows from the previous chapter, the development of information and communication competence of teachers in an environment of distance learning support largely depends on the implementation of appropriate pedagogical conditions (fig 1).

Thus, *organizational conditions* determine the requirements for the structural organization of a distributed environment and its physical implementation. The analysis of organizational conditions was discussed in the first chapter, while the physical implementation was already described at the beginning of the second chapter. Successful implementation of organizational conditions is possible with careful analysis of software products suitable for use in the environment. methodological.

Methodological conditions include a description of the tools of the educational blocks of the environment, recommendations for teachers on the use of these tools, and methods of interdisciplinary interaction in the environment. Description of the algorithm for constructing individual elements of the course, the algorithm for assessing test tasks, and the algorithm for assessing the effectiveness of the educational process.

Motivational conditions should help increase the desire and readiness of teachers and students to use the environment of distance learning support, professional self-realization of teachers, expressed in the desire to conduct the educational process at a qualitatively new level.
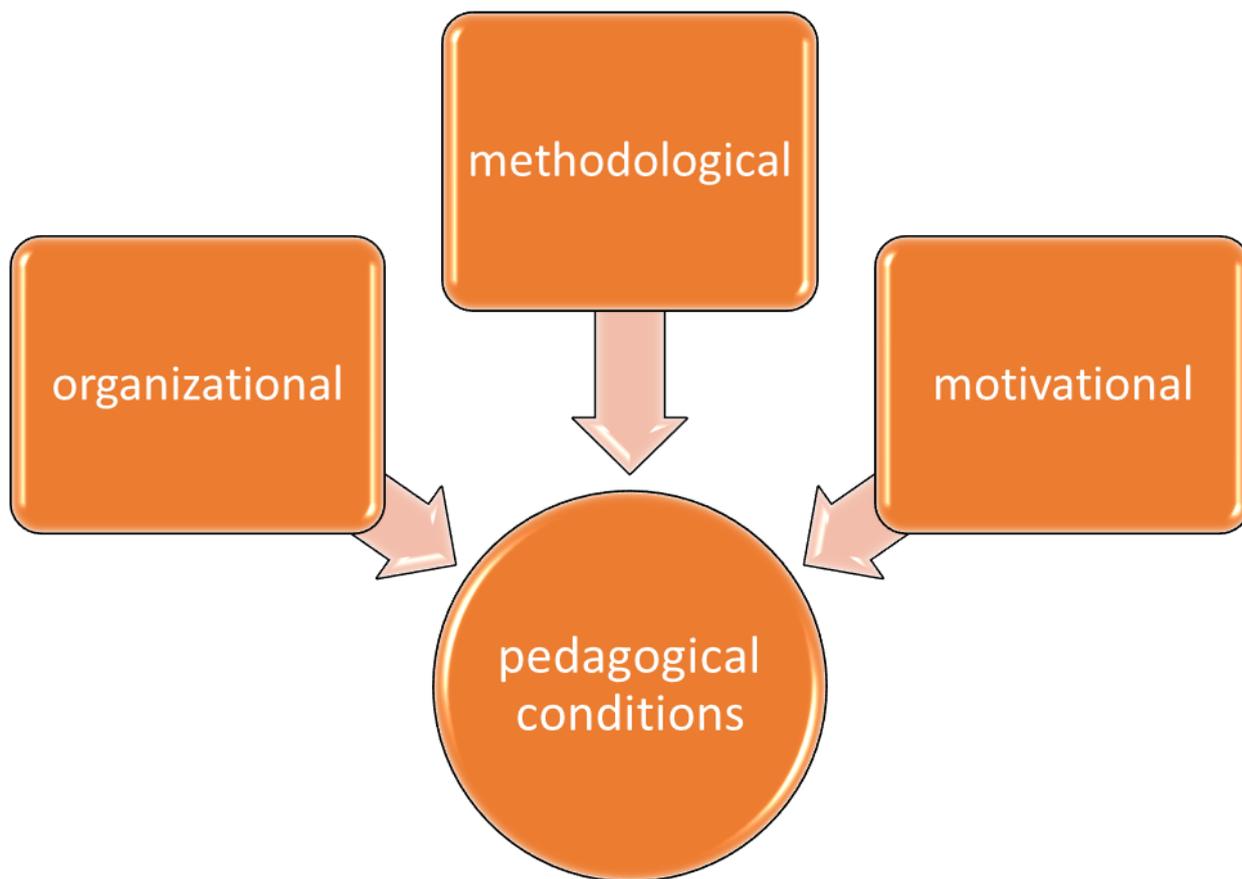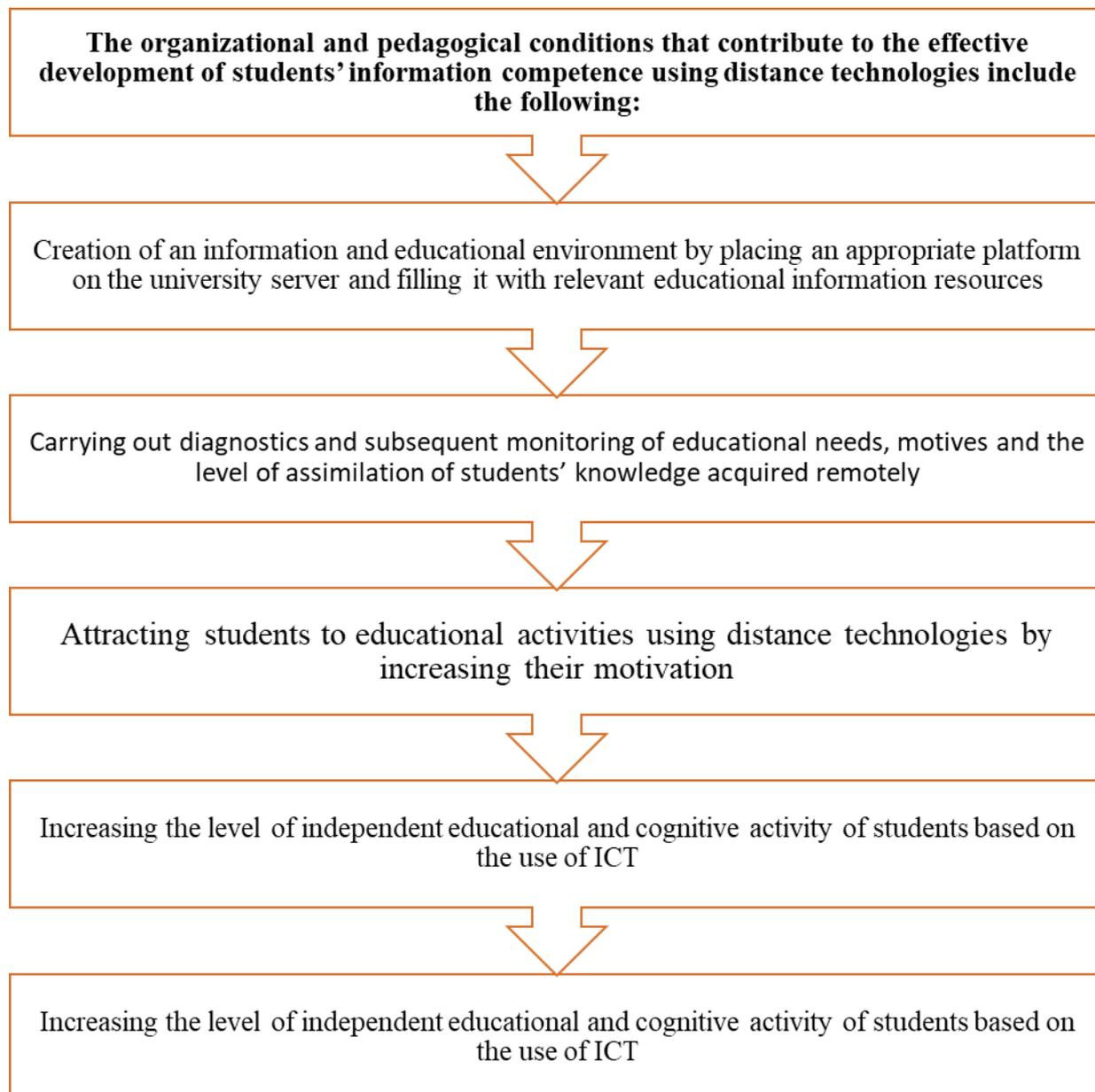
Fig.1. Implementation of appropriate pedagogical conditions for the development of information and communication competence of teachers in a distance learning support environment

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The organizational and pedagogical conditions that contribute to the effective development of students' information competence using distance technologies include the following:

⬇

Creation of an information and educational environment by placing an appropriate platform on the university server and filling it with relevant educational information resources

⬇

Carrying out diagnostics and subsequent monitoring of educational needs, motives and the level of assimilation of students' knowledge acquired remotely

⬇

Attracting students to educational activities using distance technologies by increasing their motivation

⬇

Increasing the level of independent educational and cognitive activity of students based on the use of ICT

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When choosing software for implementing training units in the distance learning support environment, preference was given to Moodle (Modul Object-Oriented Dynamic Learning Environment) as the most popular system in the world [1]. Moodle has a variety of tools for presenting educational and methodological course materials, testing knowledge and monitoring progress, organizing individual and group work.

The development of the formational and communicative competence of teachers in a distant learning support environment includes preparation for the use of pedagogical tools provided by these software products at each individual level of development of information and communicative competence. The created methodological recommendations include a description of the tools of the educational blocks of the environment, advice to teachers on the use of these tools, and methods of interdisciplinary interaction in the environment. Algorithms for constructing individual course elements, assessing test tasks and assessing the effectiveness of the educational process are described. During the preparation, the target orientation of the information and communication competence development system for teachers in the distant learning support environment is revealed - increasing the effectiveness of the educational process and moving it to a qualitatively new level through the introduction of new information technologies.

The preparation process provides for the development of the teacher's ability to carry out the necessary actions to build a training course, gradually introducing the tools being studied. The system for developing the information and communication competence of teachers in a distance learning support environment includes five interrelated stages:

Stage I involves familiarization with the "philosophy", interface and basics of interaction with the tools of the environment, as well as conducting lectures aimed at involving teachers in the use of the tools of

training blocks based on Moo-She. The possibility of combining different teaching methods is demonstrated, and the rules for organizing interdisciplinary communication in the environment are considered. Particular attention is paid to the theory of constructing so-called meta-courses and meta-portals, which allow teachers to organize joint work on educational material, and various ways of organizing this interaction in the environment are considered.

Stage II is responsible for developing the teacher's skills to ensure the constant availability of educational materials within the student's accessibility zone and the ability to combine this accessibility with the traditional educational process.

Stage III is focused on teachers mastering active teaching methods, namely the organization of chats, forums, seminars, etc., using information technologies provided by the environment.

Stage IV allows the teacher to learn how to create data banks of questions and, on their basis, formulate multi-level testing, thereby implementing effective feedback mechanisms, gaining the opportunity to vary educational material depending on the cognitive abilities of students. The implementation of these mechanisms using the pedagogical tools of the environment allows the teacher, with minimal time expenditure, to objectively test the knowledge of a sufficiently large number of students and create a cumulative assessment system. The tools provided by the framework allow it to generate tests with a high degree of reliability.

Stage V provides for teachers to master the elements of the environment that implement programmed training. This allows you to vary the educational material depending on the student's reaction, and build a mixed (linear, concentric, spiral) learning model. Combining traditional learning with the opportunities provided by the environment makes it possible to significantly increase the amount of information transmitted to students in the classroom and to qualitatively change the system of conducting the lesson itself. At the same stage, teachers are familiarized with the new (at this point) capabilities of the environment.

4. Conclusion

Thus, by reorienting traditional school teachers to a reasonable combination of classical and distance learning technologies in the educational process, its effectiveness can be significantly increased. We believe that the proposed system for increasing the information and communication competence of teachers in the implemented remote learning support environment allows us to achieve maximum results in the shortest possible time and increase the motivational interest of teachers in the use of modern technologies in the educational process.

Summarizing the main results of the study, we can formulate the following conclusions:

- ✓ the information competence of a higher school teacher is an integral multi-level, professionally significant personal education, which is manifested in the ability to handle various types of information in teaching activities, performing informational, orientation, mobilizing, organizational, constructive, communicative, developmental functions;

- ✓ the information competence of a higher school teacher is considered: as a value (state, public, social, personal), which is an objective qualitative phenomenon that determines the possibilities for the development of the educational space through the formation of a modern information competent teacher; as a system for organizing knowledge and skills, manifested in the ability to operate with various types of information in teaching activities; as a result of the individual's own internal forces, in particular, aimed at understanding their role and self-assessment of their information activities in the system of additional professional education.

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