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PEDAGOGICAL AND ERGONOMIC APPROACHES TO IMPROVING THE COGNITIVE AND QUALIFICATION COMPETENCIES OF FUTURE TEACHERS USING INFORMATION TECHNOLOGIES

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Abstract: The article examines the issues of using information technologies in the modern educational process from the standpoint of the pedagogical-ergonomic approach. The use of information technologies from the point of view of pedagogical-ergonomic approaches improves the cognitive-qualification qualities of students-future teachers.

Keywords: information technologies, pedagogical ergonomics, ergonomic system.

Introduction: Pedagogical and ergonomic approaches in higher education involve studying the organization of the educational process in the ergonomic system "teacher-student-information technology educational environment". Pedagogical ergonomics in synthesis with modern education is a new branch of science that studies the relationships of the components of the system: "teacher-information technology-student-environment". Modern higher education is unacceptable without the use of information and innovative technologies. Thus, computers, being one of the means of innovative technologies, in particular, distance learning, provide a wide opportunity to obtain information of various kinds, including educational tasks. At the same time, the function of the teacher changes somewhat. If in traditional education the teacher's function looked like "teacher-educator" and "teacher-authoritarian", then when using distance learning the teacher's function looks like: "teacher-consultant", "teacher-manager of the curriculum", "teacher-interlocutor", assistant in mastering the educational task. The teacher has the opportunity to communicate with student groups as a whole or individually with each. Classes can be conducted both synchronously and asynchronously. With the synchronous method of teaching, the teacher and the student communicate directly via the computer, unclear questions on the topic are clarified immediately. The time of work on the computer is assigned by the teacher or by mutual agreement in case of individual training.

With asynchronous - the teacher drops hypertext into the computer, on which the student studies independently, and at any time convenient for him. The student clarifies unclear questions on the topic himself, based on the hypertext or by referring to the electronic reference book and other electronic links, or to the teacher. The asynchronous method is convenient in terms of time, does not contribute to the intensity of training, although it increases motivation, interest in studying the task.

Pedagogical and ergonomic approaches to the use of computer technology in these cases are based on the convenience of the teacher and the student, the removal of tension and stressful situations that are often observed during traditional classroom lessons. At the same time, pedagogical ergonomics places high demands on the qualifications of the teacher, his ability to work with innovative technologies, his interactivity with students, support, guide the student in his search for the task, i.e. in his creative development.

Pedagogical ergonomics in synchronous and asynchronous methods of teaching involves their synthesis both among themselves, as in traditional teaching. Pedagogical ergonomics takes into account the factors of the educational environment, which includes not only cognitive, informational, but also uses

medical and physical measures to protect and strengthen the health of students. All in a complex, interrelated, contributes to the increase of cognitive-qualification competencies of the student. Thus, pedagogical ergonomics in modern education takes into account the relationships and interdependence in the system: "teacher - student - information technology - educational environment" and is aimed at protecting and strengthening the health of future teachers, increasing their cognitive-qualification competencies.

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