Hiltai Lesia. Pedagogical conditions for forming the readiness of future specialists in computer technologies to professional activity. Journal of Education, Health and Sport. 2021;11(12):513-518. ISSN 2391-8306. DOI http://dx.doi.org/10.12775/JEHS.2021.11.12.041
https://apcz.umk.pl/JEHS/article/view/46004
https://zenodo.org/record/8298625

The journal has had 5 points in Ministry of Science and Higher Education parametric evaluation. § 8. 2) and § 12. 1. 2) 22.02.2019.

Received: 12.11.2021. Revised: 30.11.2021. Accepted: 28.12.2021.

UDK 378:004.9-051(477)

PEDAGOGICAL CONDITIONS FOR FORMING THE READINESS OF FUTURE SPECIALISTS IN COMPUTER TECHNOLOGIES TO PROFESSIONAL ACTIVITY

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Abstract

The study is devoted to the actual problem of training and professional self-improvement of future specialists in computer technologies in institutions of higher education. An analysis of pedagogical conditions for the professional self-improvement of future computer technology specialists, which contribute to the formation of the readiness of future computer technology specialists for professional activity, was carried out, the essence of the concept of «Pedagogical conditions» was clarified. The work considers pedagogical strategies, aspects and approaches aimed at developing the competencies of future specialists, including technical, communicative, analytical and creative skills. The structural components, criteria, methods, means, and approaches are determined, the methodological approaches of forming the readiness of future computer technology specialists for professional self-improvement are substantiated.

The results of the study can contribute to the improvement of educational programs, methods and approaches in the training of future specialists in computer technologies that meet the requirements of the labor market and the technological challenges of today.

Keywords: pedagogical conditions; education; pedagogical process; computer technologies; educational process; professional activity; information technologies; future specialists in computer technologies.

Introduction. The history of pedagogical conditions has a long path of development, since the issues of the effectiveness of teaching and education have always been relevant for humanity. Let's consider several important stages in the development of pedagogical conditions:

Antiquity. In ancient Greece and Rome, pedagogical conditions included the ideas of famous thinkers such as Socrates, Plato, and Aristotle. They developed approaches to learning, emphasizing the importance of individual thinking and the development of students' moral values.

Middle Ages. During this period, pedagogical conditions were mainly focused on religious education, particularly in church schools. Mentors (monks) imparted knowledge and values to students in the form of religious texts and rituals.

Renaissance. Interest in humanistic education was reviving in Europe. Educators, such as Erasmus of Rotterdam, emphasized the development of a student's personality and harmony [2].

Enlightenment. The Age of Enlightenment brought the idea of rationality, openness and emphasizing the importance of science and knowledge. Pedagogical conditions became more systematic, the first school programs and curricula appeared [3].

19-20 centuries. The development of psychology and pedagogy influenced the understanding of the principles of pedagogical conditions. Educators such as Janusz Korczak, Maria Montessori, and Jean Piaget made significant contributions to the understanding of how children learn and develop, and developed approaches aimed at creating favorable conditions for learning [4].

Modernity. In modern pedagogical conditions, interactive methods, the use of technologies in education, support for the development of critical thinking, creativity and soft skills of students have acquired special importance. The idea of inclusive education, which contributes to ensuring equal opportunities for learning and development of all students, including children with special needs, has also gained popularity [1].

The history of pedagogical conditions has a long path of development, since the issues of the effectiveness of teaching and education have always been relevant for humanity. Let's consider several important stages in the development of pedagogical conditions:

Basic material. In modern scientific and pedagogical literature, the term «pedagogical conditions» is used to denote specific factors, conditions, circumstances, environment, and organizational aspects that create a favorable environment for learning, development, and education of pupils or students.

Pedagogical conditions provide for a comprehensive approach to the organization of education and training, where various aspects of the pedagogical process are combined to ensure optimal conditions for the development of students. *The main goal* of pedagogical conditions is to promote successful learning and personal development of each student, taking into account his individual characteristics, abilities, interests and needs.

In the process of historical development, pedagogical conditions continue to change and adapt under the influence of new technologies, scientific research, and the needs of the educational services market and society. The development of pedagogical conditions is aimed at ensuring quality, purposeful and differentiated education for all recipients of educational services, which contributes to their development and successful future.

These conditions cover various aspects of the educational process, including methods, means, approaches, organization, pedagogical atmosphere, the role of the teacher, cooperation with parents, and other factors that affect the quality of education and development of future specialists in computer technologies for professional activity.

To create effective pedagogical conditions, it is necessary to take into account the needs and individual characteristics of pupils or students, their interests, level of knowledge, learning style and other factors. Pedagogical conditions should be aimed at supporting active learning, stimulating cognitive activity, developing critical thinking, creative abilities and social skills of students.

Pedagogical conditions are determined taking into account specific educational tasks and the needs of students, which helps to ensure optimal progress in the education and development of students.

Students' readiness for professional activity is an aspect of the educational process. Ensuring the optimal learning process and development of students' competencies requires the creation of a favorable educational environment and the use of effective pedagogical approaches. Here are some pedagogical conditions that contribute to optimal learning and development of students' competencies:

– *Active interaction.* Involvement of students in active learning and interaction in the group. Teachers can use methods of group work, discussions, practical tasks, projects and other forms that activate students and contribute to deeper learning of the material.

– *Professionally oriented educational programs.* Development and implementation of educational programs aimed at forming those competencies and knowledge necessary for successful professional activity. Programs must be relevant, use modern trends and requirements of the labor market.

– *Practical orientation of education.* Providing students with the opportunity to gain practical experience, engage in professional activities on real projects and tasks. Organization of stages, practices, work with employers or partners of the university help students to master their acquired skills.

– *Formation of critical thinking.* Promoting the development of critical thinking in students, as well as teaching them to analyze and evaluate information critically and reasonably.

– *Development of key competencies.* Helping students develop key competencies, such as communication, problem-analytical, creative, leadership skills, and others, which are key to success in any professional field.

– *Interaction with representatives of business and professional communities.* Organization of meetings, seminars, master classes with representatives of business and professional communities gives students the opportunity to gain real experience, to know the needs of the professional market and to practice their skills.

– *Active interaction and cooperation.* Involvement of students in active learning, interaction and cooperation. Group projects, discussions, situational games help students realize the importance of teamwork and develop communication skills.

– *Application of modern technologies.* Use of modern teaching aids and information and communication technologies, such as video lectures, interactive platforms, online courses, etc. This will help make learning interesting, accessible and effective.

– *Constant support and feedback.* Providing student support, training, counseling and feedback. It promotes the development of self-esteem, motivation and helps students in their professional growth.

These pedagogical conditions help to create an optimal context for the formation of students' readiness for professional activities, the development of their professional competences and ensure preparation for a successful career.

The formation of the readiness of future specialists in computer technologies for professional activity is a complex and multifaceted process that requires a comprehensive approach and the application of various methods and strategies. The readiness of future specialists in computer technologies for professional activity is an important aspect of education in the field of information technologies. This means that students who receive an education in the field of computer technologies must have not only the necessary knowledge and skills in this area, but also the readiness to implement them in professional practice.

To achieve the readiness of future specialists in computer technologies for professional activity, it is important to consider the following aspects:

Curriculum Relevance: Curricula should cover modern technologies, programming languages, algorithms, databases and other key knowledge required in the computer technology industry.

Practical approach: It is important to provide students with opportunities for practical application of acquired knowledge in real projects and tasks. Laboratory work, projects, internships in IT companies help to gain practical experience.

Application of technologies: The use of modern learning technologies, including online courses, virtual laboratories, tests, allows students to immerse themselves in a real software environment.

Support of creativity and innovation: Promotion of student initiatives, development of creativity and innovative projects helps to create specialists capable of independent work.

Developing soft skills: In addition to technical knowledge, career readiness includes developing soft skills such as communication, creativity, work discipline, critical thinking and collaboration.

Interaction with industry: Cooperation with companies and industrial partners helps to familiarize students with modern labor market requirements and work practices in real conditions.

Continuous learning: Continuous self-education and the desire to improve, to learn new technologies and trends, is an important component of the readiness of future specialists for professional activities in the rapidly changing IT world.

Taking into account these pedagogical aspects will help to create an effective educational program that will prepare future specialists in computer technologies for professional activities and ensure their competitiveness in the labor market.

Conclusions. Ensuring the readiness of future specialists in computer technologies for professional activity is an ongoing process that requires the cooperation of teachers, students,

IT companies and stakeholders to create optimal pedagogical conditions and ensure the successful release of professional specialists to the labor market in the field of computer technologies.

Provision of these pedagogical conditions will contribute to the preparation of future specialists in computer technologies for professional activities, help to develop their potential and ensure successful adaptation in the labor market in the field of information technologies.

Referens

1. Hevko I. V. The use of interactive technologies in education // Scientific Notes [M.P. Drahomanov National Pedagogical University]. Series: Pedagogical sciences. Kyiv: NPU named after M. P. Drahomanov, 2018. Issue XXXX (139). P. 53-60. https://enpuir.npu.edu.ua/bitstream/handle/123456789/24374/Hevko.pdf?sequence=1

2. Dzyuba O. M. Erasmus of Rotterdam [Electronic resource] // Encyclopedia of the history of Ukraine: Vol. 3: E-Y / Editor: V. A. Smoliy (head) and others. NAS of Ukraine. Institute of History of Ukraine. – K.: Scientific Opinion, 2005. – 672 p.: ill.. URL: http://www.history.org.ua/?termin=Erazm_Rotterdamsky (last revision: 02.08.2023)

3. Ideas of the early Enlightenment in the educational and cultural space of Ukraine in the 17th-first half of the 18th century: a monograph / G. D. Antonyuk; for sciences ed. B. I. Shunevych; Ministry of Education and Science of Ukraine, National Lviv University polytechnic. – Lviv: View of Lviv. polytechnics, 2015. – 496 p. https://opac.lpnu.ua/cgi-bin/koha/opac-detail.pl?biblionumber=1005415

4. Skrypchenko O. V., Lysyanska T. M., Skrypchenko L. O. Handbook of pedagogy and psychology: Education. manual for teachers, graduate students and students. ped. education closing – K.: NPU named after M.P. Dragomanova, 2001. – 216 p. ISBN 966-7584-99-2