

***Халикова Кулира***

канд. пед. наук, профессор

Казахский национальный педагогический

университет им. Абая

г. Нур-Султан, Республика Казахстан

***Халиков Кабыл***

д-р филос. наук, проректор по научной работе

Казахская национальная академия искусств им. Т.К. Жургенова

г. Алматы, Республика Казахстан

**ПРОБЛЕМЫ ПРОФЕССИОНАЛЬНОЙ ПОДГОТОВКИ БУДУЩИХ  
УЧИТЕЛЕЙ В УСЛОВИЯХ ЦИФРОВИЗАЦИИ ОБРАЗОВАНИЯ  
В РЕСПУБЛИКЕ КАЗАХСТАН**

*Аннотация:* в статье рассматриваются проблемы профессиональной подготовки будущих педагогов. Анализируется актуальность данного исследования в нормативных документах, принятых в Республике Казахстан. Представлены проблемы профессиональной подготовки в условиях цифровизации образования, цели актуализации содержания образования и роль педагога в условиях цифровизации образования, а также приведены цель и задачи дисциплины «Информационные технологии в образовании», которые изучаются на всех педагогических специальностях.

*Ключевые слова:* профессиональное обучение, цифровизация образования, цифровая компетентность, цифровые технологии, обновленное содержание обучающих материалов.

***Khalikova Kulira***

Candidate of Pedagogical Sciences, Professor

Abai Kazakh national pedagogical University

Nur-Sultan, Republic of Kazakhstan

***Khalykov Kabyl***

Doctor of Philosophy, Professor

T.K. Zhurgenov Kazakh National Academy of Arts  
Almaty, Republic of Kazakhstan

**PROBLEMS OF PROFESSIONAL TRAINING OF FUTURE TEACHERS  
IN THE CONTEXT OF DIGITALIZATION OF EDUCATION  
IN THE REPUBLIC OF KAZAKHSTAN**

***Abstract:** the problems of professional training of future teachers are considered in the article. The relevance of this study in the regulatory documents adopted in the Republic of Kazakhstan is analyzed. The problems of vocational training in the context of digitalization of education, the goals of the updated content of education and the role of the teacher in the context of digitalization of education are presented. And also the purpose and objectives of the discipline «Information technology in education», which are studied in all pedagogical specialties are given.*

***Keywords:** vocational training, digitalization of education, digital competence, digital technologies, updated educational content.*

Providing citizens of the country with affordable and high-quality vocational education plays a key role in meeting the needs of the labor market and the prospects for the development of the digital economy and social environment. One of the main objectives of the Sustainable Development Goals in the Republic of Kazakhstan is digitalization, which will change the traditional course of life for millions of people. Today in the Republic of Kazakhstan, digitalization covers all levels of education.

The concept of the state youth policy of the Republic of Kazakhstan emphasizes that «youth should become a conductor and accelerator of the introduction of new ideas, initiatives and technologies into practice. The progress of Kazakhstan's science, especially natural and technical sciences, should be connected with it. The path of youth to science is the path to the future» [1].

Digitalization is one of the factors in increasing the availability of technical and vocational, as well as higher education in Kazakhstan. This creates the necessary conditions for promoting the concept of «Lifelong Learning» and leveling the learning environment for students in remote, rural areas.

In this regard, the objective of higher education is to prepare a new generation of professionally competent teachers in accordance with the modern model of education in the Republic of Kazakhstan in the context of digitalization [10]. The first President of the Republic of Kazakhstan, Nursultan Nazarbayev, in his Address to the people of Kazakhstan on the Third Modernization, the core of which is digitalization, noted «the importance of training highly qualified personnel and the need to revise policy in the field of education» [1].

The formation of professional competence in the context of digitalization, the development of theoretical approaches to the use of ICT tools in order to: develop the personality of the student by involving the student in research activities, the formation of cognitive interest is one of the most important goals of all modern programs of higher pedagogical education.

Now let's dwell on the question: Why is the digital economy central to the professional training of future teachers?

Let's consider the main factors that should be taken into account in the construction of a digital educational process of vocational education. This refers to the formation of a digital society, and is distinguished by three trends, such as the digital economy, digital technologies, digital generation [6].

The digital economy is placing new demands on the vocational training system.

Digital technologies allow for the formation of a new digital environment, providing development.

The digital generation is a new generation of learners, having special social and - psychological characteristics.

The digitalization of economic sectors requires new digital competencies from specialists, regardless of the profession or specialty they receive. Along with ICT competencies, which ensure the readiness of a specialist to use computer and digital technologies and form the core of modern functional literacy of any employee, the new set of expected educational outcomes also includes a wide range of other competencies (professional, general professional, universal), the content of which is significantly transformed under the influence of digitalization [6, p.14].

In this regard, a new concept such as an ecosystem of innovations has appeared. The ecosystem implies the solution of issues of joint development with partners. Corporations, institutions and innovation initiatives, start-ups and customers are in one mutually supportive development system. For all actions, the partner participants necessarily need communication skills, the creation and development of communities (networking skills), the development of relationships with stakeholders and fundraising, patience and perseverance (to capitalize on failure), the ability to develop innovation centers and corporate accelerators (innovation labs) [9].

In this regard, there is a needness for professional training of students for professional activities «taking into account the identified needs and technological innovations of digitalization», to find ways to implement and develop new forms, means and methods of forming the professional competence of future teachers.

Thus, the educational system will be completely updated in accordance with the best world practices. The new education will meet the needs of the digital economy, with an emphasis, first of all, on skills in the analysis of information and the development of creativity in thinking [13] and this is one of the main goals of the updated content of secondary education.

The modernization of secondary education is aimed at the introduction of updated content focused on the formation of students' functional literacy, critical thinking, cognitive skills and cognitive abilities (Soft skills). Since 2016, most of the republic's schools have gradually transferred to the updated content of education [5]

The main goal of the updated educational content is to improve the pedagogical skills of teachers in the context of updating educational programs, introducing a criteria-based assessment system, and digitalizing the educational process.

The formation and development of the intellectual potential of students is realized through the introduction of active forms of learning, during which it is assumed that they will independently develop functional literacy, actively «obtain» knowledge, develop communication skills with peers, and creatively approach problem solving, developing critical thinking [2,3]. The main objectives of teachers include: to instill in students the basic human norms and morals, to form tolerance and respect for other

cultures and points of view, to raise a responsible, healthy child. To implement the set goal and objectives of the updated content of education, the teacher plays the main role and the improvement of the professional training of teachers comes to the fore.

In pedagogical literature, «professional training» is considered as a set of special knowledge, skills and abilities, qualities, work experience and norms of behavior that provide an opportunity successful work in a particular profession [7, p. 550]. Vocational training is a vocational training system designed to accelerate the acquisition of the skills necessary for performing certain work [8, p. 223].

In the context of digitalization of education, the role of the teacher and the content of his work is changing significantly. Its objective is not so much the development of the course, the content of lectures and practical classes, their regular updating in accordance with new theoretical concepts and developments, as well as new technologies, practices, empirical data, publications of scientific and educational literature, as tracking electronic resources and databases. where all these materials are presented. Including he must be aware of educational programs and services offered by other universities. The teacher becomes not so much a source of knowledge as a navigator, offering an optimal path for acquaintance with databases for the purposes of this course, the development of practical assignments, cases for discussion, and, of course, testing the students' passage of this trajectory [11].

Teachers of the new generation should be able to skillfully select and apply precisely those technologies that fully correspond to the content and goals of studying a particular discipline, contribute to the achievement of the goals of harmonious development of students with taking into account their individual characteristics [12].

Qualified human resources are one of the most important factors ensuring the quality of education.

The Abai Kazakh National Pedagogical University, as the flagship of the pedagogical universities of Kazakhstan, has contributed to the development of digitalization of education in Kazakhstan. Today, one of the main problems is the training of future teachers and the retraining of teachers, teachers and educators. The discipline «Digital technologies in education» is entered to the educational program of all pedagogical

specialties of the university. The purpose of studying the discipline «Digital technologies in education» is to develop students' professional, special competencies in the field of digital technologies; develop the skills of independent search for modern digital resources and design of the learning process for special disciplines [4].

The course «Digital Technologies in Education» is intended for students of all pedagogical specialties. Practical exercises contribute to the consolidation of theoretical knowledge and the acquisition of digital skills for solving specific problems. As a result of studying the discipline, students should:

- know the main digital resources in the professional field for processing, analyzing and storing unstructured data;
- understand the basic principles of analyzing unstructured data;
- be able to analyze and use digital resources in accordance with learning objectives;
- know the main types of educational materials, the rules for their design and preparation technologies using digital technologies;
- master the skills of creating educational materials using various online platforms.

After completing the course, the student should:

- Be able to choose an adequate presentation for educational material
- Prepare educational material for use in the educational process.

Active teaching methods were used as the main technologies: Jigsaw, «The Listening Three», Jesse Gentile diagram, SWOT analysis, «Know – Want – Learn» diagram, «Think – in a pair – share», «Six thinking hats», etc.

As practice shows, this discipline contributes to the formation of professional and methodological competence and digital skills of future specialists.

Thus, the professional training of future teachers undoubtedly affects the competitiveness of the graduate, increases his need for constant self-development, helps to become an independent, intellectually developed and responsible teacher in a digital society.

### **References**

1. Address from the President of the Republic of Kazakhstan N. Nazarbayev to the people of Kazakhstan. «The third modernization of Kazakhstan: global competitiveness». – Astana, January 31, 2017
2. Khalykova K. Problems of development of students' critical thinking in the process of professional training // BULLETIN Abay KazNPU. Series of «Pedagogical Sciences». – №1 (65), 2020.101–106 pp.
3. Khalikova K. Innovative technologies in the formation of the intellectual potential of a future specialist // VII International Scientific and Practical Conference «Information and education: borders of communications» Info'15. Gorno-Altai State University (Altai Republic). – 5–8 July, 2015 Collection of scientific papers №7 (15) pp. 328–330.
4. Khalikova K. Training of students to preparation of electronic tutorials on the basis of new educational programs // International Conference Tradition and Reform. Edition II. Social reconstruction of Europe (7–8 November 2013, Bucharest, Romania) [Electronic resource]. – Access mode: [https://apps.webofknowledge.com/Search.do?product=WOS&SID=F4XTI7u3LtzDbfPQLGj&search\\_mode=GeneralSearch&prID=030b0416-756e-45c4-809b-35da9d866f2c](https://apps.webofknowledge.com/Search.do?product=WOS&SID=F4XTI7u3LtzDbfPQLGj&search_mode=GeneralSearch&prID=030b0416-756e-45c4-809b-35da9d866f2c)
5. Kazakhstan – 2019 VNR Report – Sustainable Development [Electronic resource]. – Access mode: [https://sustainabledevelopment.un.org/content/documents/23453KAZAKHSTAN\\_VNR\\_Kazakhstan\\_web\\_site\\_2019.pdf](https://sustainabledevelopment.un.org/content/documents/23453KAZAKHSTAN_VNR_Kazakhstan_web_site_2019.pdf)
6. Pedagogical concept of digital vocational education and training // Under scientific ed. V. I. Blinova / Russian Academy of National Economy and Public Administration under the President of the Russian Federation / Scientific Research Center for Professional Education and Qualifications Systems. – Moscow, 2020. P. 14.
7. Pedagogical encyclopedia / Ed. I.A. Kairov. – M., 1986. – T. 3. – 224 p.
8. Pedagogical encyclopedic dictionary / Ch.ed. B.M. Bim-Bad. – Moscow: Great Russian Encyclopedia, 2002. – 528 p.
9. Silicon Valley Experience [Electronic resource]. – Access mode: <https://svexp.ru/2018/08/29/ecosystem/>

10. the modern model of Kazakhstani education [Electronic resource]. – Access mode: <https://ppt4web.ru/pedagogika/sovremennaja-model-kazakhstanskogo-obrazovaniya.html>

11. Tulchinsky G.L. Digital transformation of education: challenges to higher education. Philosophical Sciences. 2017; (6): 121–136 pp.

12. Zakharova I.G. Information technology in education. Textbook / I.G. Zakharova. – M.: Academy, 2010. –192 p.

13. Zharkenov A.K. Digitalization as a condition for updating the content of education // Philosophical and methodological problems of education. – №3 (21). 2018.