

DEVELOPMENT OF PROFESSIONAL COMPETENCE OF PROSPECTIVE SPECIALISTS ON WEB TECHNOLOGIES

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Abstract

The rapid pace of development of modern society, web design and continuous innovation processes make it impossible for future educators to fully characterize the current level of professional training by knowing the subject of education and teaching methods. The content of educational work is constantly changing, new tools and technologies of teaching are emerging, the flow of information that teachers need to take into account in their professional activities is growing. Significant changes in education are primarily related to the use of Web technologies.

Keywords: teacher training; professional competence; innovative technologies; Web technologies; Web services.

Introduction. The study of the technological components of cognitive and design based on the motivational-value of the formation of professional competence confirmed that the developed methods of the formation of professional competence of future teachers of Informatics and Information Technology have greatly influenced the motivation for educational, cognitive and professional activities with the use of Web technologies, professional, communicative motivations, motivation of reputation. The result of the application of the techniques is the formation of the ability of teachers and students to identify pedagogical appropriate tools of Web technologies, analyze and evaluate their availability, develop and apply them in the future pedagogical activity.

The current period of the development of society is characterized by the process of informatization – the use of information as a social product, which promotes the acceleration of scientific and technical development, the intellectualization of the main types of human activity, the democratization of society. One of the priority directions of informatization of society is the process of informatization of education, which implies the introduction into practice of developing educational ideas, acceleration of all levels of the educational process, increasing its effectiveness and quality, the use of internet technologies of professional development potential informatics and information technologies competence of teachers (theoretical and practical training, which in the essence of, provides the ability to strive and create pedagogical truth). One of the main directions of computerization of society is to understand and see the holistic educational process that provides for the preparation of education for innovative pedagogical activity (development, promotion or implementation of

educational activities) in the conditions of computerization of education on purpose, content and technology, as well as informatization of society.

Literature review.

Worldwide prominent international organizations and developed countries paid special attention to the education system and jointly adopted the concept of education until 2030. The concept states that “the educational process is an activity that determines the main driving force, source and strategy of the development of any country”¹. In order to establish education at the level of world sample at the level of quality, providing education based on web technologies based on modern requirements of educators and learners is an indicator of directing them to be able to operate freely in the conditions of the global educational environment [1].

The reforms carried out in the education system of our republic led to the improvement of the teaching of Informatics and Information Technologies among all disciplines. In the system of continuing education, the issue of teaching the science of Informatics and information technology has been seen again, its content is being improved at the level of today’s requirements, the introduction of teaching methods on the basis of modern information and pedagogical technologies into the educational process has been established [2]. In particular, for secondary schools T. Azlarov, B. Boltaev, M. Ziyakhadjaev, N. Taylakov, A. Hayitov and others conducted researches, and in the system of higher and secondary special education A. Abdukadirov, M. Aripov, F. Zakirova, U. Yuldashev, R. Bakiev, M. Mamarajabov, L. Nabiulina, S. Tursunov, M. Fayzieva, N. Haytullaeva, A. Eminov and other scientists have conducted researches [3].

In the Commonwealth countries, scientists such as A.A. Andreev, K.E. Arhipov, V.E. Alekseev, T.F. Bardina, E.N. Goritov, L. Zayniddinova, E. Kuznetsov, S. Krapivka, V. Konovalenko, D.S. Kiselev, Yu.R. Koftan, A. Lavrov, M. Lapchik, M. Nimatulaev, E.S. Polat, V. Tedeev carried out research work.

Foreign scientists, such as A. Boyarinov, R. England, J.H. Lee, M. Kimko, N. Hammond, A. Jones, J. Campo-Avila, M. Sigala and others conducted studies.

Scientific research on increasing the role of pedagogue in education, professional competence, system of conducting educational activities, improvement of pedagogical conditions of coordination of activities of participants in pedagogical process and introduction into practice were carried out Sh.A. Abdullaeva, N.N. Azizkhadjaeva, Yu.M. Asadov, I.O. Gileva, N.A. Muslimov, N.N. Karimova, O.A. Bayramov, J.R. Turmatov, K.T. Umatalieva, R.X. Fayzullaev, A.R. Khodjabaev [4].

Determination of factors, which determines the interrelationship of the reforms carried out with the general process, led by scientists of the CIS V.V. Kazanseva, Yu.A. Lobeyko, T.A. Marfutenko, T.V. Meheryakova, V.G. Rundak, A.V. Tutolmin, A.G. Shumovskaya.

¹ Incheon Declaration Education 2030: Towards inclusive and equitable quality education and lifelong learning for all. <https://unesdoc.unesco.org/ark:/48223/pf0000233813?posInSet=3&queryId=N-EXPLORE-a1c7c8fd-2218-4199-96d7-4c7d325025f2>

Various aspects of individual competence include cognitive and psychological activity, indicators of professional competence, pedagogical and psychological aspects of the development of creativity competence in the teacher were studied by E.S. Short, J. Raven, O.F. Volubaeva and S.P. Yalanska.

Research Methodology.

The aim of the study is to develop the professional competence of future teachers on the use of web technologies.

In the process of research and experimental design work, it was found out that the methods for organizing the professional competence of future Informatics and information technology teachers on the basis of web technologies are as follows:

1) summarizing the content of professional-oriented educational subjects and web technologies;

2) introduction of pedagogical conditions into practice in educational and upbringing processes of higher educational institutions, it contributes to future Informatics and information technologies teachers to the effective formation of professional competence in the application of web-technologies (increase of development potential of web technologies; activation of future Informatics and information technology-teachers' resource support with the use of web-services; development of methods of using web technologies in the educational process by teachers of pedagogical higher educational institutions);

3) Complex diagnostic and educational-methodological support (educational standards, curricula and programs, educational-methodological manuals, methodological recommendations, laboratory sessions, technical means of teaching, etc.) application [5].

Based on the understanding of the methodology for the formation of professional competence of teachers of information technology with the use of web-technologies (at the level of competence and competent), in connection with the innovative pedagogical activity in the future, we considered integration as the dynamic ability of students to perform professional tasks on the use of web-based technologies, to carry out method of achieving the educational goal (formation of professional competence of future Informatics and information technologies teachers and their training for innovative pedagogical activity) diagnostics of the level of primary education of students, formation of motivation for the use of web technologies in education and future types of professional activity, determination of the content of training, organization of the educational process (forms, methods, technologies and, control educational achievement during training and assessment of the level of preparation at the end of training. Accordingly, the system-forming components of the methodology for the formation of professional competence of future teachers of Informatics and information technology are as follows [6]:

- based on motivational-value (the formation of motivation for future professional activities, the application of web technologies, awareness of the personal and social value of the future profession, the need for professional self-improvement, self-education, self-awareness and self-expression, including through web technologies, self-examination, the acquisition of self-training and self-development skills, the acquisition of self-

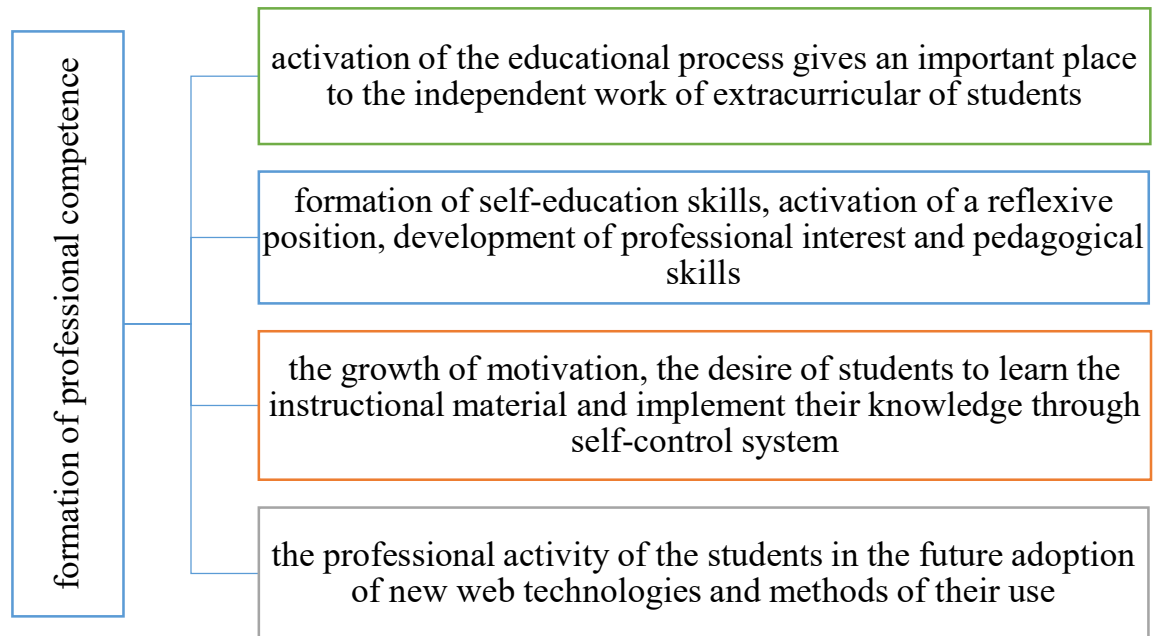
- knowledge and self-awareness; Future Informatics and information technologies teachers in innovative educational activities on the use of web technologies;
- cognitive activity (mastering of knowledge of professional importance; application of socio-pedagogical, methodical knowledge in practice; effective use of web technologies for processing, generalization of multi-form information, creation of information products; identification of pedagogical appropriate tools of web technologies, analysis and evaluation of those present, their introduction and application in future innovative pedagogical activity);
 - design-technological (formation of goals, social conditions, direction of values.

Interests, needs, inclinations that impart pedagogical activity and determine the professional orientation of the individual; the ability to carry out self-control and reflection (analysis, self-assessment, correction and development of new tasks, effort to professional development), including the use of web technologies [7].

Summarizing the motivational-value, cognitive-active and design-technological parts of the formation of professional competence, we can note that the methodology for the formation of professional competence of information technology teachers in web technologies will be an indicative basis for the following [8]:

- implementation of innovative approaches in the organization of the educational process in pedagogical higher educational institutions;
- organize and re-directing teachers' extracurricular information from the transfer to the organization and management of modern educational-methodical, cognitive and professional activities using internet technologies;
- develop the skills and abilities of information activities; increase the motivation of students for the study of subjects, on the one hand, the use of web technologies in education and future innovative pedagogical activities;
- classification of pedagogical expediency of the use of web technologies and determination of motivational-value psychological-pedagogical aspects of their application.

The implementation of the method of formation of professional competence of future teachers of Informatics and Information Technologies - research using web technologies in pedagogical higher educational institutions has been confirmed to be the cause of the following experiment [9]:



Introduction of methodology of formation of profesional competence

Analysis and results. In order to form the ability of future teachers to analyze and apply innovative pedagogical activities in the future, it is desirable to choose subjects that correspond to the level of their personal pedagogical characteristics and professional abilities [10].

Analysis of the results of the formation phase of the experiment showed that all components of professional competence in the experimental group of students underwent positive changes. We confirm the effectiveness of the work done with the results of the questionnaire of students and teachers. This confirmed that the implementation of the method combination made it possible to transfer students to an active state, many of which, together with teachers, began to work as web technology developers. And this made it possible to change the role of teachers of pedagogical higher educational institutions: their activity led to the activity of students. The main task was to create conditions for the external management of the educational and development process through cooperation and interaction, effective solutions of professionally oriented tasks and situations, the organization of interaction.

Conclusion/Recommendation. Having identified the prospects of further research, it should be noted that this study does not reveal itself as a complete solution to all aspects of the problem investigated. Therefore, for theoretical understanding and experimental confirmation, the creation and introduction of electronic resources of the information learning environment is required; Complexintegrated teaching for teachers to develop methods for the use of web technologies; development of criteria for the effectiveness of web technologies. We also consider it necessary to further improve the scientific and methodological support of preparation of future Informatics and information technologies teachers for innovative pedagogical activities, taking into account the prospective directions of development of web-technologies.

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