Formation of Professional Competence of Future IT-Engineers in the Modern Information Society

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Abstract. The article discusses some aspects of the information-technological competence formation of the future specialist-engineer in the information society.

Keywords: Information society, professional competence, information and technological competence, knowledge, skills, personal qualities.

Currently, in many countries, including Uzbekistan, is going the process of reform and modernization of technical education. The aim of these processes is the training of competitive specialists of different levels and directions. Modern industries need to be competent professionals who have a high competence.

One important area of modernization of education is the process of information that makes use of the new information technologies, methods and means of information, stimulation of all levels of the educational process, improve efficiency and quality training for life in a developed information society.

Going over to the Information Society makes changes in all spheres of human activity that alters the requirements for the modern professional specialist. The modern professional must have extensive knowledge in computer science, to know the fundamentals and prospects of new information and communication technologies (ICTs) have practical skills in the use of modern technical means of information and communication systems, information and communication, to be able to evaluate information resources for the adoption of professional solutions.

For free information, the flow in the orientation of the expert should have information competence as a component of professionalism. In a number of works of information, the competence is defined as the purpose of specialist training and a necessary component of his professional competence (E. F. Zeer, A. A. Kuznetsov, E. I. Mashbits, E. K. Henner, etc.).

Computerization of contemporary Uzbek society, on the one hand, calls for more widespread use of information and computer technologies in various spheres of human activity, on the other - requires appropriate training of professionals in all areas of the economy.

The process of obtaining a higher education necessarily includes components such as training and education. A graduate of a technical college to hold receptions computer thinking not only to work customary engineer, and grow to a leading specialist and head of production. The main factor in the formation of professional competence of the future engineer is a focused, progressive educational process organized by Information and Communication Technology (ICT). Use of ICT in education can change the educational-cognitive activity of students and enhance their independent work.

Competency issue devoted to the works of V. G. Afanasiev, I. D. Bagaeva, I. A. Winter, A. K. Markova, J. Raven, V. A. Slastenin, G. S. Trofimova, A. V. Khutorskoy and other scientists. A number of scholars examines the information technology competence (ITC) as a component of professional competence (B. S. Gershunsky, V. V. Shapkin, N. H. Asaka, A. A. Abdykadirov, H. Karshibaev, O. A. Cyzicus, T. A. Gudkov, et al.).

P. A. Bespalov determines that the ITC cannot be reduced to scattered knowledge and skills in working with computers. It represents an integral characteristic of personality, implying the motivation for the assimilation of relevant knowledge, problem-solving ability in teaching and professional activities with the help of computer technology and techniques of computer ownership thinking [1, p. 42].

Activities related to engineering design, development, processing and storage of technical documentation, its structural and graphic design, systematization and analysis of statistical information, search for the normative, reference material, information exchange over networks, including e-mail, familiarity with technical information and innovations in different industrial industries.

In our opinion in the process of student learning in high school ITC can be formed as follows:

Information technology competence of the future engineer:

1. Knowledge
   ✓ basic knowledge in their specialty;
   ✓ knowledge of basic phenomena and processes in the study area;
   ✓ knowledge of methods of obtaining information and its transmission.

2. Skills
   Apply information technology in their work to:
   ✓ for observations and experiments;
   ✓ represent different types of data in a clear and accessible way (drafting structural circuits, electronic presentations, spreadsheets, graphics, charts, printed material, analysis of video and audio material and presentation in digital format).

3. Personal qualities
   ✓ the ability to perceive new information;

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ФОРМИРОВАНИЕ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ БУДУЩИХ IT-ИНЖЕНЕРОВ В СОВРЕМЕННОМ ИНФОРМАЦИОННОМ ОБЩЕСТВЕ

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Аннотация. В данной статье рассматривается некоторые аспекты формирования информационно-технологической компетентности будущего специалиста — инженера в условиях информатизации общества.

Ключевые слова: информационное общество, профессиональная компетентность, информационно-технологическая компетентность, знания, навыки, умения, личные качества.