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## **CONSTRUCTIVE DESIGN ACTIVITY AS A FACTOR OF IMPROVEMENT THE TRAINING OF FUTURE SPECIALISTS**

Forms and methods of engaging students in scientific work are different. The research work includes the educational process according to curriculum and work programs, or it is done in spare time. According to the analysis and results of the research, the very effective means which allows to activate educational and cognitive activity of students (future teachers of physics) is to involve them into constructive-research work. Especially effective for the practical implementation is radiotechnical constructing with using correct provision of computer software technology and element base of modern microelectronic. So the actual is the problem of working out the certain methodical bases for forming of knowledge and skills of students as for using means of microelectronics and new informational technologies in scientific research work in physics and in the process of projecting, and producing new educational equipment. personality

The problem of personality technical thinking is reflected in researches of many educators and psychologists. In professional activity this problem is discussed in the works of S. Batysheva, J. Bely, J. Kaloshyna, K. Slavskaya, V. Chebyshev, I. Yakymanskaya. A. Botvinnikov, A. Brushlinsky, S. Vasyleysky, L. Vygotsky, V. Herver, B. Lomov, V. Sidorenko investigated the development of technical thinking in the process of graphic activity of students. Scientists consider the design activity as a means of forming of technical thinking, creative abilities: G. Altshuller, A. Davydenko, T. Kudryavtsev, E. Mileryan, V. Molyako, I. Roitman, P. Jacobson. Such researches were directed on secondary school pupils and vocational schools. The professional training of physics students requires revision of the role of constructive work in the system of forming of technical thinking. It provides practical readiness of future specialist to ability to identify the essence of the problem or situation, evaluate it and determine ways of implementation, generate creative ideas and suggest technical means for their implementation.

The aim of this paper is to open the features of forming creative abilities of teachers physics in the development and implementation of new training equipment based on microcontroller circuitry and software and hardware information and communication technologies.

The constructively-technical work of students promotes the deepening of quality mastering material in specialty, expansion the outlook of future specialists, develop skills of own search, improving professional skills, education of scientific creativity. Generates the professional competencies and enhances the quality of physical and mathematical and technological training.