

## **Ensuring the Effectiveness of Professional Training of Students Who Receive Design training in the Process of Teaching Computer Graphics**

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**Abstract.** This article examines the methods used to ensure the effectiveness of professional training of students studying in the design direction in the process of teaching computer graphics and the research carried out in this direction.

**Keywords:** graphics, design, technology, surfaces, straight line, second order line.

### **Introduction**

The transition of society to the Industrial Age led to mass, collective training of people in various professions. there is a need for workers who possess information technology, have comprehensive knowledge, are active and educated with a wide profile, including information technology knowledge. The process of training designers means not only replacing some techniques with others, but also restructuring training plans and programs, changing the system of forming the professional qualities of a common person. Future designers should use rational methods and tools in practice, make decisions based on the acquired knowledge and professional skills. Researchers who have studied the role, importance of the profession in society: I. M. Duranov, V. I. Zhernov, E. F. Zeer, E. A. Klimov et al. Researchers engaged in the issues of professional training of psychologists: V. A. Bodrov, H. H. Grachev, I. S. Greenspoon et al; teachers-E. P. Belozertsev, A. D. Goncharenko, A. Ya. Nine, A. G. Pashkov, V. A. Slastenin et al.

The rapid introduction of modern printing equipment into production in the last decade has made it possible to improve the quality of the product. Analysis of advertising brochures, exhibition expositions, repeated conversations with consumers, personal experience of working with print media make it possible to emphasize the need to present the project today in computer processing. However, not all educational institutions pay enough attention to this issue, which is primarily due to the low material base and insufficient methodological support. The idea of using computer graphics in teaching students is not new. The use of computer and computer technology in the educational process of schools and universities is widely discussed in domestic and foreign literature. The theoretical aspects of the problem were reflected in the following areas: teaching the development of computer technology (Yu.K. Babansky, G. K. Selevko, N. F. Talyzina et al.); the use of new information technologies in the educational process (G. P. Bludnov, B. S. Gershunsky, B. F. Lomov, E. M. Razinkina, A. B. Solovov, O. K. Tikhomirov et al.); analysis of the problem of computerization of Education (T. V. Gabay, E. I. Mashbits et al.).

Modern computer graphics systems make it easier to work with the created object, changing it. They have the possibility of using any materials when working, applying a wide range of colors, modeling various scenes and situations that can be a design object: to create a three-dimensional model,

axonometric projection, perspectives of the created model and modeling. physical impact on complex structure. The use of these technologies will help to diversify the educational process in modern conditions, improve its quality and expand its availability. The use of graphic editors in the educational process takes students to a qualitatively new, professional level, gives a positive impetus to the work itself, the use of a computer and, accordingly, self-expression. The methodology for teaching the basics of Information Culture is based on the widespread use of problematic teaching elements in the classroom, an increase in the role of independence, the organization of research and experimental activities of students, which in turn increases the possibilities for its intended purpose. formation of both intellectual creative abilities (volatility, hypothesis and improvisation) and emotional strong will. With a problematic education. N. Leontiev, A. M. Matyushkin, M. I. Makhmutov, S. L. Rubinstein et al. The process of teaching computer technology involves step-by-step training, the implementation of which considers the student as a system of certain types of activities that lead him to new knowledge and skills. This issue is P.Ya.Galperin, N. F. Reviewed in the study of Talyzina et al [1].

For Our research. A. Evdokimova studied the largest architectural and design universities and developed a number of rules that these universities of the country adhere to [2]. Some of them consider it necessary to include computer technology in the composition of related disciplines. Others propose to disassemble the course and strengthen the material through professionally oriented practical work, using graphic sets suitable for educational tasks. Others combine computer graphics with multimedia capabilities and develop life tasks in collaboration with large commercial corporations. This is evidenced by the variety of theoretical approaches and large differences in the practice of teaching computer graphics. Designer education consists in the preparation of a complex of developed creative abilities, formed by aesthetic views, well-versed in the language of the project, always ready for self-development and self-realization. JI for a deeper understanding of the essence of design creativity. Research on creativity and creative thinking by C was very important. Vygotsky, A. M. Matyushkina, Ya.A. Ponomarev, V. P. Ushachev et al. Technique of self-realization of creative potential O. S. considered in his works. Bazyleva, B. S. Gershunsky, L. B. Ermolaeva-Tomina, A. Maslow, Yu.I. Mishukovskaya, C.JI. Rubinstein et al.. Features of design thinking B. J. I.reflected in the works of. Eyes-Chewa, K. M. Cantor, V. F. Sidorenko et al. [3, 4].

In the modern world, changes are happening quickly, and education does not always suit them, and then the traditional composition of teaching educational subjects slows down the professional training of future specialists. The survey and repeated interviews with graduates of our faculty, practicing designers showed that in previous years they did not have enough computer training. Today, the use of computer technology ensures the intensification and relevance of the educational process.

The social demand of society makes the problems of improving the computer training of specialists relevant. At the moment, it is clear that it is necessary to revise traditional approaches that have been operating in the field of higher education for a long time, but do not find solutions to all the problems of training a future specialist. the context of the transition to an information society. Thus, the relevance of our study is determined by the following factors:

- insufficient theoretical knowledge and flexible organization of professional training of design students in the process of teaching computer graphics;
- weak links between existing theoretical developments and the practice of teaching computer science;
- the fact that the content, methods and means of teaching computer graphics are not the same.

The study of theoretical and practical issues on the topic under study provided the basis for the formation of the research problem as follows: how to ensure the effectiveness of professional training of students of the design direction in the process of teaching computer graphics?

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