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Research Article

BROADENING THE HORIZONS OF STUDENTS WITH THE PARTICIPATION OF INTEGRATION

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ABSTRACT

In this article, the author highlights the expansion of the horizons of students of the specialty in teaching engineering graphics and design through the integration of disciplines, as well as increasing the requirements for the quality of professional training of engineers and designers, identifying the main tasks that are expected to be solved, improving the student's personal qualities in the implementation of project activities along with the basic level of training.

KEYWORDS

Integration, synthesis, differentiation, subject, pedagogy, system, modeling, concept, structure, integrity, knowledge, skill, reproducibility, design, engineer, designer, graphics, imagination, fantasy.

INTRODUCTION

Integration processes are a set of actions aimed at uniting parts into a single whole. Again, this process is not just a unification of sciences, it is a synthesis, which, moreover, generates new sources due to the interconnection of scientific subjects. Integration is the opposite of differentiation and the opposite of it. It is advisable to apply it in the following areas: a) integrated study of the content within the framework of academic subjects and disciplines; b) integration of the activities of students from different academic subjects; c) integration of forms of organization of educational work or a school day. Integration is the convergence and interconnection of disciplines in the course of a differential process. The integration

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process is a stage of a new, qualitative convergence between sciences, manifested in high visibility. It is worth noting separately that the integration process is based on folk pedagogy and scientific pedagogy of the distant past. Integration is an interdisciplinary connection. The foundations of interdisciplinary communication arose from the need to show and explain nature in full in textbooks.

Literature review. "This is Ray Zamindar, the mutualistic Persian poet Muhammad Abu Bakr ibn Ibrahim, who expressed the opinion about integration as that the little thing does not exist by itself, that everything is interconnected and complements each other. The great scientist and educator Jan Amos Komensky writest in this regard: "it is necessary that all relationships be studied in this regard." Subsequently, many scientists developed this idea by generalizing it. This is necessary so that each subject of the interdependence of disciplines in education corresponds to each other and follows a high-quality, effective plan. The modern education system at a high level is focused on establishing the foundations of science, developing thinking, understanding and imagining the universe as a whole, correctly understanding the events taking place around, educating young people who are able to comprehend their essence. In particular: in the field of improving the educational process in our country R.X.Jo Raev, B.S.Abdullayeva, U.K.Tolipov, P.Musaev, R.F.Yuzlikaev, E.Ro ziev, A.Khamrakulov, D.Nazilov, S.Abdurakhmanov, S.Saidaliev, S.S.Sharipov, S.N.Muslimov, A.B.Tajibaev, Sh.D.Dilshodbekov, N.I.Khurboev, J.A.Kasimov, S.X.Mardov and a number of our scientists have conducted scientific research corresponding to modern teaching methods, the effective use of information related to fine arts and drawing in solving graphic problems in the educational process.

METHOD

As you know, any science arises under the influence of sciences close to it and develops with them. Interdisciplinary communication will be required to form systematic (systematic) knowledge, concepts and worldviews. Interdisciplinary communication should be established on the basis of facts, concepts and ideas common to the subjects, and the formation of reading skills. The possibilities of interdisciplinary communication are limitless even when optimizing the content and scope of education, enriching the educational process with modern pedagogical technologies and information and communication technologies, embodying the content of education in the minds and thinking of students by means of life images. Also, pedagogical classification implies the separation of graphic images depending on the sphere, essence, and type. An integrative resource assumes that all subjects are solved as a product of developing creativity, technological integration is the basis of the general educational process of transition towards computerization, the introduction of synthetic teaching methods into the educational process (World art Culture), as well as artificially created meta-subjects (sign, number, symbol), which are active for all teachers.

Another aspect of the specifics of the integration approach is to identify the principles of consistent modeling of educational activities, increasing student activity based on improving its content. The concept of an integration approach in learning is based on the formation of a holistic, holistic structure of the learned activity. The essence of integration lies in the search for a holistic unifying starting point inherent in the content of a different nature, and as a result of the creation of a new integrated learning content. The integrated learning content is classified into internal subject and interdisciplinary. With internal scientific integration,

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the educational material is concentrated into large blocks. Interdisciplinary integration, on the other hand, is aimed at harmonizing the various characteristic systems of the content of the educational process. At the same time, the analysis conducted on the basis of the curriculum showed that there is mutual proximity in the general professional disciplines of engineering graphics and design.

That the requirements for the knowledge and skills of students of engineering graphics and design in the higher education system differ from each other, but that engineering graphics, which inextricably links them, is a fundamental part of science, at the same time, creating design skills for students studying engineering graphics, there are still many opportunities to meet the public the demand for these specialists in the implementation of large-scale changes taking place in our country means that something needs to be done. In the traditional educational process, all theoretical work is undertaken by the teacher. At the same time, the content and goals of integrating the disciplines of engineering graphics and design require active perception and memorization, as well as the activity of creative imagination, reproductive or creative thinking.

RESULTS

Based on the mutual integration of engineering graphics and design disciplines, separate tasks were defined for each stage of the content of improving the teaching methods of students:

* clarify the requirements of modern society for the quality of professional training of engineers and designers;

• identification of the main tasks awaiting solution within the scope of professional activity of the designer and graphic engineer;

* development of the content of integration of engineering graphics and design disciplines among themselves.

A questionnaire was received on the reasons for the students' choice of the educational direction “Fine Arts and engineering graphics". Below are examples of student responses:

- I like drawing in an integrated lesson more than in regular lessons;

- I want to do integrated topics, I want to participate in various interesting contests with my design ideas;

- I like to create things with my own hands, designing objects in graphic design programs;

-I want to bring my ideological projects into production through the integration of engineering graphics and design science for the community;

- my professional interest in the integration of these two disciplines is growing;

At this stage, work was carried out to diagnose the formation of students' skills in engineering graphics and design disciplines, to identify the student's personal qualities in the implementation of project activities along with the level of basic training.

CONCLUSIONS AND SUGGESTIONS

Integration supposedly does not seem necessary in the transfer of knowledge, but it is a way for students to understand the world more broadly, so that students' worldview expands: it deepens the understanding of the laws of language, art, history, music, literature, and learns the relationship. Modern teaching methods include teaching student creativity, research orientation, and the formation of imagination and fantasy. In particular, the teacher enters the classroom and invites students to a discussion.

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