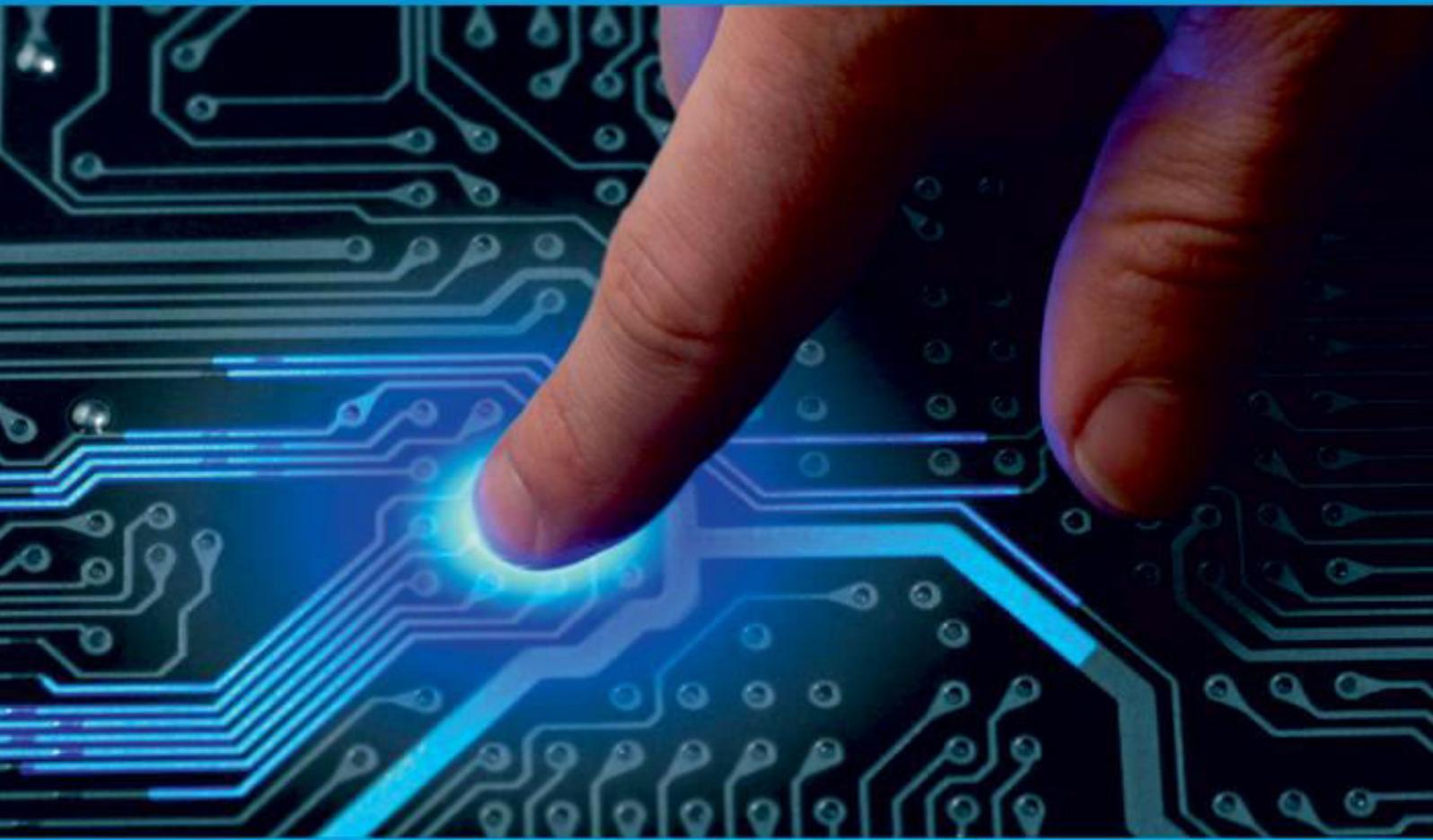




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In the Current Globalization Process Guaranteed Integral Tasks as a Factor to Increase the Efficiency of Engineering Education

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ABSTRACT: This article deals with the possibility of increasing the efficiency of student learning by introducing integrated tasks into the educational process on the engineering disciplines and using them as final control tasks.

KEYWORDS: Credit-module, integration, guaranteed, checking, pedagogy, psychology, objective, final assessment, perception, notion, skills, level of mastery, picture, drawing, "YES or NO"

Scientific and technological progress and socio-economic modernization of the system of continuous education, in particular, the improvement of the educational process in higher education institutions through the study of advanced foreign experience, innovative approaches to education and the use of information technology are important tasks today.

Therefore, it is important to pay attention to the creation and implementation of effective organizational forms, technologies of person-centered teaching that serve to develop the level of knowledge of students, intellectual potential, social activism, creativity.

Organization of knowledge resources in the teaching of engineering graphics in higher education at the level of world practice, improving the skills of using modern pedagogical and information technologies in training, professional development of independent thinking, independent search, collection and use of information in pedagogical training, pedagogical it will be necessary to form in students the necessary theoretical and practical knowledge, skills and abilities, such as broadening their thinking.

Be able to apply the achievements of modern science in practice, creative approach to solving problems; - be able to make independent decisions in solving scientific problems of their specialty, as well as use it in their professional activities; - development of spatial, figurative, logical imagination and thinking; - independence, initiative, diligence and other qualities; - Development of practical recommendations and reports on the use of research results; - master automated and computerized modeling methods in solving professional problems

The formation of knowledge and science is directly related to the education system. The effectiveness of the education system is directly ensured by the level of teachers, student needs, the content of textbooks and the infrastructure aimed at the formation of independent learning. Thus, the training of advanced personnel, increasing their competitiveness in accordance with the requirements of the labor market, the development of creative thinking professionals are closely linked with the educational process in educational institutions.

Our President Sh.M. Mirziyayev on October 8, 2019, signed the Decree "On approval of the Concept of development of the higher education system of the Republic of Uzbekistan until 2030." This important policy document states that "at least 10 higher education institutions in the country should be included in the list of the top 1,000 higher education institutions in the ranking of internationally recognized organizations (Quacquarelli Symonds World University Rankings, Times Nigher Education or Academic Ranking of World Universities) and gradual transition of the educational process in higher education institutions to the credit-module system".

The credit-module system is a process of organizing education, a model of assessment based on a set of modular technologies of teaching and credit measurement. Carrying it out as a whole is a multifaceted and complex systemic process. The credit-module principle focuses on two main issues: ensuring the independent work of students; assessment of students' knowledge on the basis of ratings.

The main tasks of the credit-module system are:

- modular organization of educational processes;
- Determining the cost of one subject, course (credit);
- Assessment of students' knowledge on the basis of rating points;
- allowing students to create their own curricula individually;
- increasing the share of independent learning in the educational process;
- Convenience of educational programs and the possibility of change based on the demand for specialists in the labor market.

The above is not only to teach on the basis of innovative educational technologies, but also to teach students to study independently, to take a new approach to education, to acquire the necessary and in-depth theoretical knowledge, to form practical skills based on the demands of the labor market. In short, this system is focused on the professional development and maturity of the student. It is aimed at ensuring the lifelong learning of the owner of knowledge and the formation of human capital that can meet the labor market and modern requirements.

Each student must collect credits in order to receive a diploma in their chosen field and specialty in the future. The accumulated credit will continue to serve the student throughout his life to improve his skills or to obtain additional higher education. In economic terms, the accumulated credit becomes a student's academic "asset".

Credit technology gives learners the right to choose the elective subjects included in the working curriculum, thereby directly participating in the formation of an individual curriculum. They are given the freedom to choose not only subjects but also professors and teachers. Giving students the opportunity to choose subjects is a positive thing. It is also an indicator of the specific value of evaluating learning processes.

All this requires the solution of the most pressing issues, such as improving the infrastructure of the material and technical base of educational institutions, including the provision of fiber-optic communication, high-speed Internet traffic.

Based on the above considerations, since engineering sciences are related to drawing, it is necessary to create convenience in the performance of final control tasks in teaching students, especially since final controls are related to drawing in determining their mastery.

Experience shows that verbal and written controls in the education system have their advantages and disadvantages. Test controls have similar indicators.

According to educators and psychologists, independent written work develops students' creative abilities at the highest level. Therefore, the level of mastery of the training material is determined objectively on the basis of a document guaranteed in writing. [2].

When written writing criteria are methodologically clear and accurate, the validity and reliability of the assessment will increase. It allows the student to improve the skills of expressing their views in writing, and the level of objective assessment in the control is much higher. In the process of checking written work, the teacher sees the product of mental thinking in the minds of students, such as logical thinking, analysis, comparison, independent conclusion based on creative research, in his physical written work and the result is a guaranteed assessment. Also, in the traditional method, one-third of the final control (1 out of 3 points) is set aside for oral questioning, which ensures the validity of this method more reliably.

It is known that this control method of assessment has its drawbacks, such as the fact that the teacher spends a lot of time and can not use a computer. It is also believed that even if the written work is encrypted, the outcome will depend on the person conducting the final control, [3].

Modern test control of students' mastery is a tool for objective pedagogical assessment. Because the result does not depend on the person who took the test. It is comprehensive and allows you to control large amounts of training material in general. However, there will be no live communication between the teacher and the student, and the student will not be able to express his / her opinion orally. It will not be possible to demonstrate knowledge and skills outside

of the program. In addition, quality testing is more complex and requires a great deal of experience and pedagogical skills [4].

Nowadays, like most sciences, engineering graphics science needs to move to the type of integrative task tasks that control is a modern requirement. Therefore, we analyzed the assignments and test questions published in the field of drawing and used in higher education, and as a result identified the following elements that they lack:

1. The level of mastery of students is not taken into account in the development of test questions, i.e. the low, medium, high and creative level of mastering is not taken into account;
2. Deliberate misrepresentation of test answers. We find it inconceivable that the drawings in the answers are intentionally erroneous in several variants.
3. In the test answers, apart from the table, there are no images in the student's mind that reflect the thoughts, reflections, creative research, and drawings or sketches that reflect their actions.

It is well known that drawing is one of the most difficult subjects for students to master. Therefore, the mastery of those who submit the final control is not at the required level. Another reason for this is that if any of the given tasks are not completed correctly by the end, the control work of such students will be assessed as unsatisfactory.

Therefore, we have a problem that such students have enough knowledge, skills and competencies to get a satisfactory grade, perhaps from the subject of drawing. Because we have put forward the idea that among such students there may be students who have the content and essence of the science of drawing, its practical significance and the ability to read drawing, that is, good spatial imagination and logical thinking.

Therefore, we aimed to develop integrated assignments that take into account the level of mastery of students, that is, that their mastery is satisfactory, good and excellent, and do not have the above shortcomings and the result is guaranteed.

Based on a creative approach to solving this problem, the first of the 3 problems in the traditional way were replaced with tasks of three simple problems, namely:

1. Whether the connections made are correct or incorrect;
2. Whether the views of the correct prism are correctly located in the drawing;
3. Is the cut of the stroke surface performed correctly in isometry?
. That is, students who answer these three control questions correctly will have the opportunity to score 60 points on a 100-point rating system of mastery (or 3 points on a 5-point system).
4. Whether the detail cut in the drawing is done correctly;
5. Are the dimensions specified in the detail sufficient.

Assignment tasks 4 and 5 consisted of intermediate and complex tasks, i.e. (students who completed 3 out of 1, 2, 3 assignments or scored 60 points) were designed to see if their mastery was good or excellent.

We recommend the development of integrated assignments based on the following methodology, which are free from the above-mentioned shortcomings in the field of drawing in the field of fine arts and engineering graphics bachelor's degree.

1. On the integrated task sheet, the control questions consist of 5 based on the principle of simple to complex, and for each of them is given one ready right or wrong solution;
2. Assignment of each task is required to reflect their attempts to develop sketch solutions by students (in pencil or pen) in the form of a sketch. In such attempts, it is not necessary to solve the task to the end, but it is continued until it is determined whether the task specified in the task sheet has been solved correctly or incorrectly. It is in this process that students are guaranteed to have done the task correctly, and the final conclusion is reached with confidence.
3. After analyzing the answers, a comment is made in the space between the questions to prove the correctness of the word "yes or no". Then the table is filled.

20% is set for the correct answer to each task.

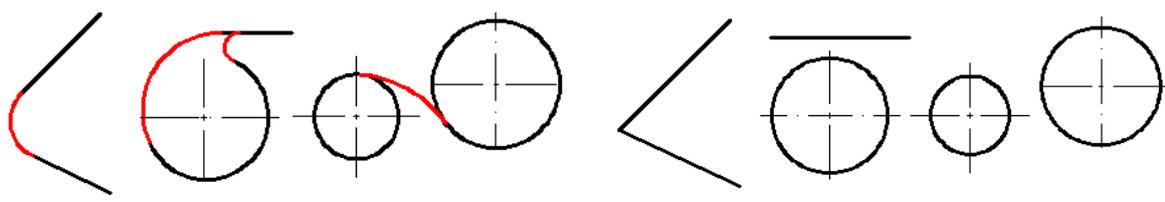
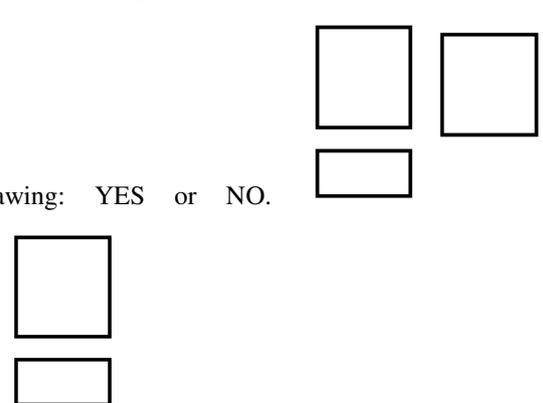
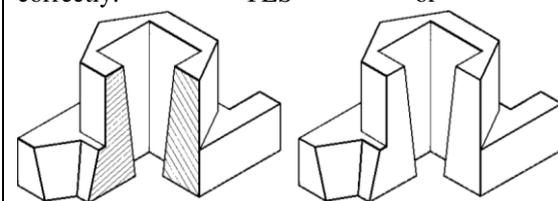
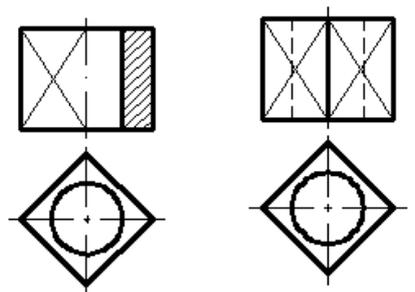
Using the newly developed integrated task tasks, we will be able to accurately identify the psychological processes in the minds of students - research, ie psychological processes such as analysis, comparison, independent conclusions and new creative, scientific and practical approaches to the task. This shows that the integrated task tasks we have developed are reliable and the result is guaranteed.

The content, essence and form of such tasks can be considered as developed on the basis of generalization, ie integration of written and test types of control. That is why we have called the newly developed task tasks integrated tasks.

An example of such an integrated task is shown in Figure 1.

Thus, the new integrated task tasks we have developed allow students to comprehensively understand, prove, apply what they know in practice (sketch in the drawing), analyze the answer and draw the right conclusions, and think, remember and creative approach to all solutions in their minds. allows you to control your skills and experiences such as synthesizing and reviewing based on.

As a result, our research has shown that it is possible to increase the effectiveness of education at the expense of general mastery, albeit at the expense of students' satisfactory assessment, conducting the final control work from drawing on the basis of guaranteed integrated task tasks.

FINAL CONTROL ASSIGNMENT SHEET ON DRAWING	
<p>Complete the graphical steps proving the correct YES or NO answer by manually performing the required solutions in the condition of each task in the form of a rough sketch in the given samples. Then fill in the table, otherwise your answer will be ignored.</p>	
<p>1. Are the connections in the drawing made correctly: YES or NO.</p> 	
<p>2. Are the prism views correctly located in the drawing: YES or NO.</p> 	<p>3. In isometry, is the cut of the stroke surface done correctly: YES or NO.</p> 
<p>4. Is the detail cut in the drawing done correctly: YES or NO.</p> 	<p>5. Are the dimensions of the detail sufficient: YES or NO</p>

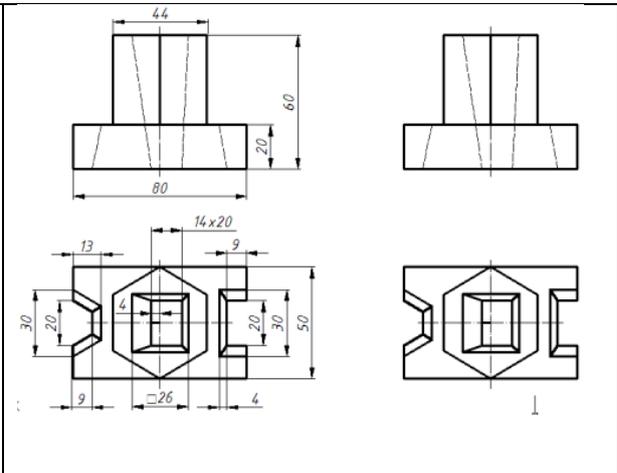
					
Fill in the table with the correct answer "+"					
YES	1	2	3	4	5
NO					

FIGURE 1

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