

# Conceptual Bases Of Production Of Teaching Technologies In Lectures And Practical Classes Of Engineering Graphics

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**Abstract** – Creation of knowledge resources in the teaching of engineering graphics at the level of world practice, improving the skills of using modern pedagogical and information technologies in training, professional training of independent thinking, independent search for information, information gathering and use, pedagogical thinking it will be necessary to form in the audience the necessary theoretical and practical knowledge, skills and abilities, such as expansion.

**Keywords** – Engineering Graphics, composition, graphics, spatial thinking sculpture, computer Graphics.

The President and the Government of the Republic of Uzbekistan pay special attention to the training of personnel in line with international standards. The main factor in the management and organization of the teaching process is the knowledge, experience, skills, scientific and pedagogical potential, skills and abilities of the professor-teacher. Accordingly, training manuals and tools will be developed, including the development of the lecture from simple to complex.

Uzbekistan, on the path of its independence and development, is finding its rightful place in the international arena. In order to ensure the independent development of our country, profound reforms are being carried out in the socio-political, economic, cultural and educational spheres. The success of these reforms, which are in the interests of society and the individual, directly depends on the potential of professionals trained in the education system.

The classroom will be prepared for the lesson. The teacher will focus on the following:

- ✚ Creates an atmosphere of group discussion by encouraging students to answer questions, forms positive answers;
- ✚ allows temporary free exchange of ideas;
- ✚ give examples from everyday life;
- ✚ encourages students to ask questions;
- ✚ compares previously studied events and situations with new ones;
- ✚ Gives a lively and interesting presentation of various information in the field of science.

During the course, three stages are used in the formation of students' critical (analytical) thinking:

1. Giving a referral;
2. Increase in importance;
3. Spatial thinking.

Interactive methods play an important role in developing students' critical (analytical) thinking, which is expressed in theoretical and intellectual considerations that help to direct the subjects of cooperation to creative research, to discover and discover the unknown.

The effectiveness of the teaching process is high when students are in high spirits, passionate and creative at the beginning of the lesson. In this case, the teacher's work should be based on a clear plan, prepared in advance. This means that the teacher's teaching is based on state educational standards.

The second stage of the National Training Program is to improve the quality of the educational process, that is, to train competitive, high-level specialists in accordance with international standards. Finding solutions to these complex problems and applying them in practice poses great challenges for higher education professionals.

Specific tasks include direct improvement of the educational process, further improvement of curricula, introduction of modern pedagogical technologies, widespread use of technical means and, on this basis, the widespread introduction of distance learning.

Knowledge is formed depending on the quality and method of education. It determines not only the skill of the teacher, but also the level of desire, ability and knowledge of the listener. Education is a long process. Bill, on the other hand, is an abstract concept that is imparted through the continuity of education. While knowledge is specific, education is general. Education is a process that goes on for everyone. Knowledge is manifested as a set of concepts that are formed as a result of observations and perceptions in the human brain as a result of the reflection of events in an objective being.

If the quality of education is determined by the quality of the people involved in its delivery, then knowledge acquires individuality. The level of people who teach or teach can vary. But the education you give to the students in the group is the same. The teacher does not teach, but teaches. And the student acquires knowledge in the process of learning. To do this, he reads independently, prepares, observes, acquires spatial imagination, and synthesizes what he hears and reads. The result is knowledge.

Based on the above, we present the main conceptual approaches to the design of educational technology for the course "Engineering Graphics":

**Person-centered education.** This education, by its very nature, involves the full development of all participants in the educational process. This means that when designing education, of course, the approach should be based not on the personality of a particular learner, but primarily on the learning objectives related to future professional activities.

**Systematic approach.** Educational technology should embody all the features of the system: the logic of the process, the interconnectedness of all its components, the integrity.

**An action-oriented approach.** Represents education aimed at the formation of process qualities of the individual, the activation and intensification of the activities of the learner, the discovery of all his abilities and capabilities, initiative in the learning process.

**Dialogic approach.** This approach emphasizes the need to create a psychological unity and interaction between the participants in the learning process. As a result, a person's creative activity, such as self-activation and self-expression, increases.

**Organizing collaborative learning.** Democracy, equality, and the subjective relationship between educator and learner emphasize the need to focus on the introduction of collaboration in shaping the content of goals and activities and in evaluating the results achieved.

**Problem-based learning.** One of the ways to activate the learner is to present the learning content in a challenging way. This provides an independent creative activity of the objective contradiction of scientific knowledge and methods of its solution, the formation and development of dialectical observation, their creative application in practice.

The use of modern means and methods of presenting information - the use of new computers and information technology in the educational process.

Based on the given conceptual guidelines, the purpose, structure of the course "Computer Graphics", depending on the content and scope of educational information, the specific conditions and the time period set in the curriculum, teaching, communication, a choice of methods and tools to ensure information and their joint management.

Teaching methods and techniques. Lecture (introduction, thematic, visualization), problem-based method, case study, pinboard, paradox and project methods, practical work method.

Teaching aids include traditional forms of teaching (textbooks, lecture notes), as well as computer and information technology.

Methods of communication: direct interaction with the audience based on operational feedback.

Methods and means of feedback: observation, blitz-questionnaire, diagnostics of training based on the analysis of the results of intermediate and current, final control.

Methods and means of control: planning of training in the form of a technological map, which defines the stages of training, the interaction of teacher and listener in achieving the goal, not only in the classroom, but also independently outside the classroom control of affairs.

Monitoring and evaluation: regular monitoring of learning outcomes, both in the classroom and throughout the course. At the end of the course, students' knowledge is assessed using test assignments.

### CONCLUSION

The factors that determine the quality of education in the educational process are: teaching at a high scientific and pedagogical level, reading problematic lectures, interesting organization of lessons in the form of questions and answers, the use of advanced pedagogical technologies and multimedia. The use of guidelines ensures that the priority of education is to motivate the audience, to challenge them, to be demanding, to work individually with the audience, to encourage creativity, to communicate freely, to teach creative thinking, to engage in research and other activities.

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