

Computer-Test Control of Knowledge of Students in Engineering Graphics

P. Adilov¹, N. Tashimov² and S. Seytimbetov³

¹Associate Professor, PhD., of the Tashkent State Pedagogical University

²Associate Professor, of the Tashkent State Pedagogical University

³Postgraduate Student of the Tashkent State Pedagogical University



Abstract - This article deals with the principles of the development and preparation of tests, how to use a computer program to control the knowledge of students on the engineering drawing.

Keywords - Information Technology, Engineering Graphics, Descriptive Geometry, Knowledge, Skills, Spatial Thinking, Positional and Metric Problems, Tests.

In the conditions of sharp reduction of time for studying of engineering and graphic disciplines to count on performance of a large volume of the graphic works developing spatial thinking, there are no opportunities and therefore now the level of the organization of educational process on new technology becomes actual, in other words everything depends on skillfully built curriculum, adequate presentation of educational material.

In this regard, one of the forms of stimulation of the student to better assimilation of the material is testing, as this form of knowledge control now in combination with its advantages with the possibilities of computer technology is of increased interest.

The advantage of the test control of knowledge is the ability to cover a large amount of material in the process of testing, it can be applied not only before exams or exams, the latter is now widely practiced in almost many

Universities of our Republic, but also in the control of current performance, as well as the so-called entrance control at the first lesson in engineering graphics to identify the level of knowledge in drawing on the basis of high school.

At the Department of "Engineering graphics and methods of teaching" TSPU named after Nizami developed computer programs for students at different levels of assimilation of theoretical material.

For the input control of the developed computer test on the test of school level knowledge in mechanical drawing. At this stage, the tests can be used to check the levels of proficiency, skills and only the lowest levels of assimilation of the theory. A student who has just entered the UNIVERSITY is given the opportunity to check the level of his school preparation with the help of a computer at the first lesson in engineering graphics. To do this, it is

sufficient to "scroll" visually presented three-dimensional models consisting of simple geometric bodies. Tests are

designed so that the subject chooses one correct answer from a set of four answers offered to him/her. (Fig. 1)

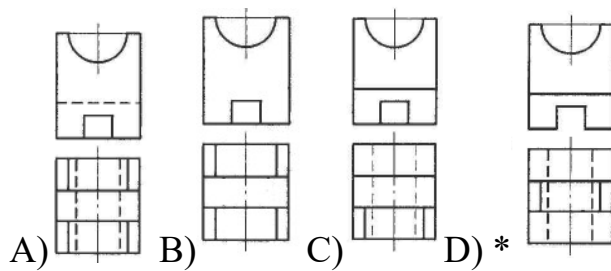


Figure 1.

Find a Projection Corresponding Visual Representation?

The applied tests at the very first stage of training are motivated by their convenience for mass testing, for verification in an automated mode.

V.P. Bepalko investigated the subject tests, what they should be in content and developed the technology of their preparation.

Tests are divided into psychological, pedagogical and sociological.

Tests used in pedagogy are called subject tests.

Subject tests are used to consolidate, generalize, systematize, as well as to determine and assess the degree of assimilation of students' knowledge.

Subject tests have the following forms:

1. Under each task, 4 answers are given, of which one is correct. The learner must find the right answer among them. Such tests are called programmed.

2. Tasks are made in such a way, where answers are immediately given, the main problem part of which is skipped in the form of points. The learner must substitute in the missing place by selecting one of the options below. Such tests are called problem tests.

3. Mixed tests. In such tests, in addition to programmed and problematic tasks, tasks are made without answers, in the form of short questions. On the left free space under the question, the student must write an answer that he believes is correct. In the preparation of tests are based on the following principle: Scientific, consistency, convenience,

specificity and accuracy, informality, logical sequence, systematicity, generality and particularity, simplicity or complexity, visibility, the connection of theory with practice, the development of thinking, creativity, independence and consciousness, differentiability, taking into account individual properties, education, compliance with the curriculum, objectivity in time, the possibility of application.

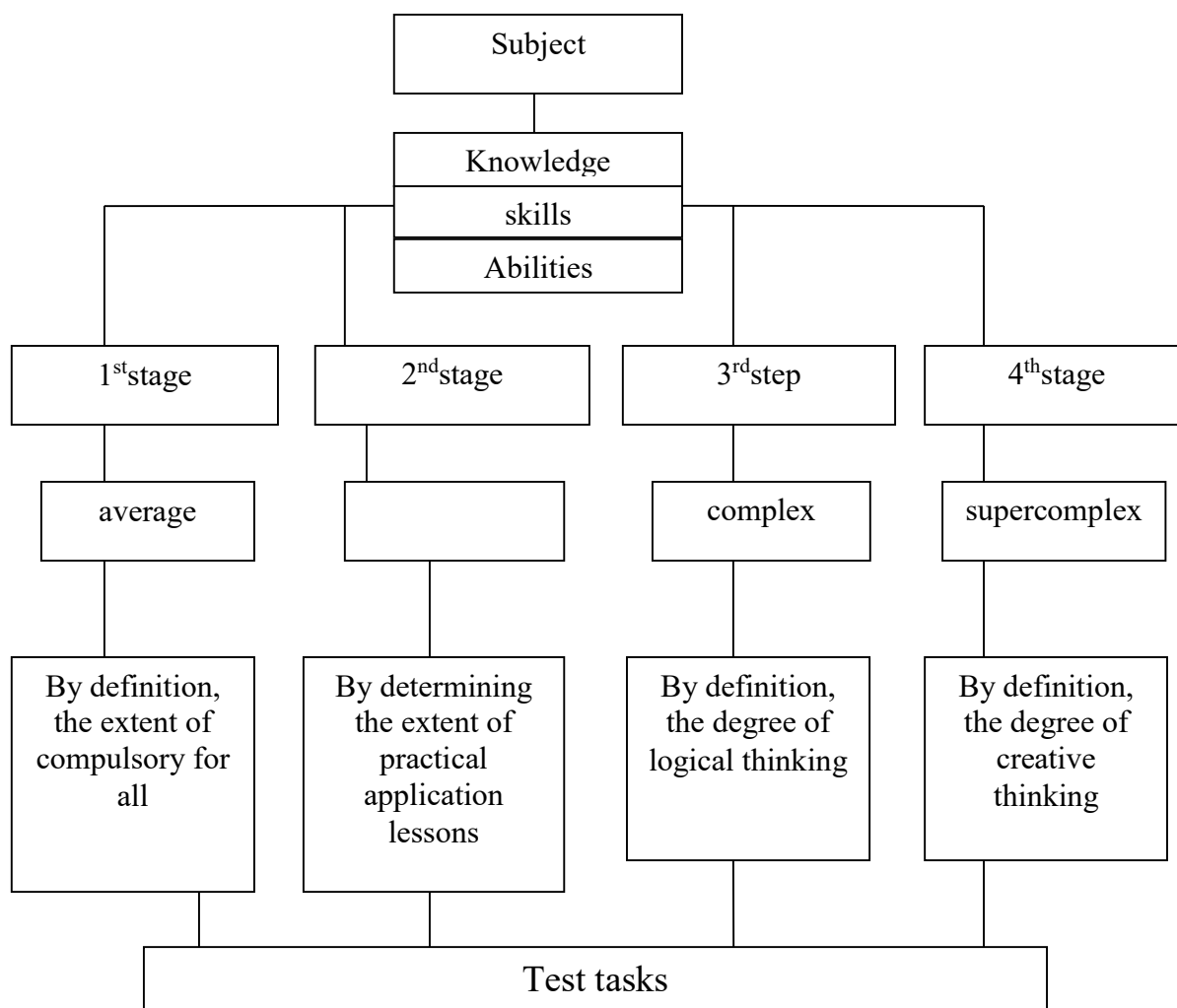
The General structure can be represented by the scheme 1:

Unlike exact disciplines, where the answer can be expressed by a number, a formula, or a single parameter, in graphic disciplines it is not possible to do the same, since the answer most often represents the image obtained in a complex drawing.

Graphic literacy is determined not only by the student's knowledge of the theory, but especially by his ability to graphic performance. He his thought, ideas should be able to correctly, competently and technically depict on a sheet of paper.

The test method in the cognitive part of training is advisable to apply in order to ensure the completeness of the theory of the studied material. This course of drawing can be a complete set of rules of GOST on the studied material, and on descriptive geometry a set of all possible options for the topic under consideration.

Scheme 1



REFERENCE

- [1] Dzhanaev Zh.Zh., Tashimov N.E. Computer modeling of educational tasks by means of their algorithmization. Professional and pedagogical culture of a teacher and teacher: content, models and technologies of educational activity. Collection of materials of the VII International Scientific and Practical Conference (Belgorod, April 16-17, 2019) 31-34 pp.
- [2] Tashimov N.E., Zhumaev I. Computer technology in teaching graphic disciplines in a pedagogical university. Professional and pedagogical culture of a teacher and teacher: content, models and technologies of educational activity. Proceedings of the VII

International Scientific and Practical Conference
(Belgorod, April 16-17, 2019) 149-151 pp.