ON SOME ADVANCED POSSIBILITIES OF TESTS IN EDUCATIONAL PROCESS (AS AN EXAMPLE PHYSICAL CHEMISTRY)

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The use of testing in the educational process and its discussions are most frequently restricted by its control functions, and its other possibilities, to say nothing of its advantages, are practically ignored.

According to our experience, tests in comparison with classic textbooks, help to present the material being studied in various forms and aspects and in a greater range of sophistication. It makes possible to learn the material and independently evaluate the degree of mastering the subject: just at the level of basic concepts and definitions, within the framework of the program or beyond it /1/.

The arrangement of tests in the sequence, representing a gradual sophistication of material being studied, as well as predomination of the tests of type “4 correct answers –1 incorrect one” in comparison with the usual variant “4 incorrect answers – 1 correct one” allows to assign a number of sections of the course to be studied self-dependently. Sets of tests on comparative analysis make it possible to reveal additional, not stipulated by standard program, regularities such as, for example:

- interrelation of fusibility curves of different types between each other and their analogy with boiling point diagrams;
- general mechanisms underlying allegedly unrelated methods for separation of components such as fractional distillation, zone melting, extraction;
- relation of solubility diagrams of 2 and 3 liquids with restricted solubility, distribution coefficient and extraction, etc.

A constant use of tests for training and current control when conducting different types of classes is much more effective than their use only for examination. The same tests represented, in an ordered or “disconnected” variants may perform the training and controlling role.

When using tests for training purposes, one should constantly keep in mind the fact that the incorrect work of the authors not only aggravate the disadvantages of testing itself but, what is more important, may result in biased assessment of knowledge. It is precisely this fact that explains the necessity of joint efforts of teachers of different educational institutions and countries enabling the creation of integral bank of tests accessible to both teachers and students.

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