The motivation of learning activity on basis of pedagogical testing

Shishkina I. L.

The main problem of Russian education policy is to provide the quality of modern education based on conservation of its being fundamental and being corresponding to actual and long-range wants of individuals, society and government. There are several main conditions pointed out among the necessary ones for achievement of new vocational training quality such as

– the pilot study of the different integration models of secondary and high vocational education;
– the optimization of teaching methods including educational informatization;
– the extension of integration and interdisciplinary programs of high vocational education based on modern high technology.

The first condition is connected with Russia entering Bolonsky process, the main aim of which is the use of European credit-module system. The second condition suggests working out modern didactic supplements of educational methodological system. This methodological system is based on the rating system as technological basis of forming internal motivation factors of students. The third condition outlines the necessity of working out educational process according to requirements of educational process quality.

The research touches upon the module-rating learning activity motivation on the basis of pedagogical testing. The research urgency is manifested in the existing contradictions between

– the necessity of module educational system on the basis of significant structured elements and their being overloaded with actual materials without essential influencing understanding studied phenomena;
– the modern tendency of increasing students’ self-learning. It is based on pedagogical support and lectures mostly presenting the material in the form of monologues. Such a way leads to automatic memorization and reproduction;
– the necessity of objective estimation of students’ achievements with the help of pedagogical testing and the subjective forms of diagnostics which predominate in educational practice.

Thus the development of modern educational technologies may be discussed according to two complementary ways:

1) to extend possibilities of technical means through reproduction of informative-communicative support;
2) to improve methodological system of teaching built on module structured educational programs and to use of problematic method, method of projects and standard pedagogical methods.

These tendencies rest on the idea of existing general laws of educational process. These laws help to build up a generalized educational system providing the stimula-
tion of internal motivation factors of students. The educational system may be discussed as an example of such a system which is based on inverse connection and causes achievement of aims.

The interrelation between the procedure of pedagogical testing and the formation of students’ internal motivation is built up on basis of classical measurement theory. This theory rests on the selection of significant criteria of latent variables characterizing educational process. This theory provides working out criteria which are competence-oriented testing. Also it builds up the rating system on basis of indicator variables fixed with the help of internal estimation scales. If students’ competence is discussed as a latent variable and as an indicator there is estimation according to European Credit Transfer and Accumulation System (ECTS), the procedure of pedagogical testing is to stimulate students’ internal motivation factors.

The theory of educational qualimeter [1, p. 17] is built up on the principles of invariance and discounty and on the technology of standardization of pedagogical testing. This theory helps to estimate not only the learning achievements but potential abilities of students to continue education. This individual peculiarity is connected with internal individual motivation. Besides there exists external motivation depended on professional career and on results of learning. Also there is procedural motivation formed in the process of realizing the use of fulfilled work. The secondary motivation is connected with reflection upon pedagogical test results and traditional forms of current control. Since the procedure of pedagogical measurement is connected with the formation of secondary motivation, test results are considered to be one of internal motivation factors of students to enlarge their competence.

The important element of working out teaching methodological system of is educational planning. By educational planning we understand iterative process of reforming pedagogical process. It suggests certain consistency of analysis, expertise in accordance with experience which changes due to conditions and standards.

There is a theoretical model created as a result built on comparative analysis of well-known conceptions educational process planning. This model allows to achieve the optimization of educational planning in accordance with the requirements of the state educational standard. The main elements of this model are:

1) to analyse of purpose and content component of the state educational standard from the point of formation of the future specialists’ vocational competence;
2) to determine of the interrelation between various units of discipline (internal connection) and corresponding school subject (successive connections) and their institute disciplines (interdisciplinary connections);
3) to structure and synchronize the discipline contents while working out modules;
4) to realize the iterative cycle, to develop the thematic matrix by means of the optimization of the structure and content of each module; to give the quantitative analysis of each module content and the matrix formation of tempo-
rary connection; to execute the educational process according to worked out thematic plan including tests; to give the mathematical result testing, statistic analysis of the test quality, the matrix of temporary transformation; to give the pedagogical analysis of test results including the optimization arrangements; to return to the beginning of the iterative cycle.

The mathematic model of interdisciplinary balance is created on basis of the worked out theoretical model. This mathematic model comprises steady temporary connections of themes of exact subject between each other on the one hand and themes of other subjects on the other hand. The statistic data handling is fulfilled with the help of electronic worksheet in Microsoft®Excel [2, p. 55-62].

The Literature