

THE INNOVATIVE APPROACH TO TEACHING MATERIAL CONTENTS FORMING

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In the 21 century and the new millennium educational problems have become priority all over the world. What should be taught? It is a question which has been an object of research for many generations of scientists in the educational sphere. One of the primary factors, allowing to prepare a graduate of a better quality, is the contents of education. Nowadays a huge volume of knowledge, collected by the mankind, does not allow to assert, that a person will sometime seize all of it in full even after a very long training period. According to this idea, at present one of the central problems is the problem of filling up the contents of educational training programs of all levels and steps, finding an optimal balance between the educational components at various levels.

As it follows from the works by V.A. Romanets, N.A. Selezneva, I.B. Morgunov, T.V. Nersesov (1990), A.V. Abramov (1999), N.I. Sannikova (2006), S.B. Igoshev (2008), etc. to optimize the system of a specialist's instruction is possible on the basis of mathematical methods usage. As the ground for mathematical models of education contents concepts serve the theory of sets, theories of matrixes, theories of graphs, the mathematical statistics and probability theory.

Applying mathematical methods to educational contents construction allows to present the content of a teaching material in the form of elementary educational units set for each discipline. Elementary educational unit (EEU) is understood as an educational unit which has a minimum volume of the information. In particular, one could call a EEU a concept, a definition, a statement, a term, a law, a principle, a rule, a keyword, etc.

Emphasizing EEU in a teaching material allows rationalizing the process of defining the intrasubject and intersubject relations. So, as a result of the analysis of the content of a teaching material of a theme «Physiological mechanisms of motor skills» using three textbooks for sports high schools: N.V.Zimkin (1975), J.M.Kots (1986), A.S.Solodkov, E.B.Sologub (2001), in the first source it has been found 136, in the second - 182, in the third - 126 EEU. In total in the three sources 444 EEU have been pointed out. As a result of their sorting there have been alphabetically allocated 346 non-repeated and 98 repeated EEU. The percent of teaching material coincidence has made 22 %.

In each textbook only 7 content-identical EEU (2 %) are found. In two textbooks there are only 84 content-identical EEU (24 %). The quantity of non-

content-identical EEU of a considered theme makes 255 EEU (74 %).

It should be taken into consideration, that while selecting teaching material on one subject matter one could define the inclusion of an EEU by the degree of its repeatability in the educational literature. The more often one and the same EEU is found in different sources, the higher is its probability of being included into an obligatory material for studying.

As a result of the analysis of teaching material contents of the theme «Motor skill» on such disciplines as «The theory and the methodic of physical training technique» (by the textbook of Z.K.Holodov's, V.S.Kusnetchov, 2003); «Physical training and sports physiology» (by the textbooks: N.V.Zimkin, 1975; J.M.Kots, 1986; A.S.Solodkov, E.B.Sologub, 2001); «Biomechanics» (by textbook D.D.Donskoj, V.M.Zatsiorsky's, 1979) it is established, that in «The theory and the methodic of physical training technique» there have been named 109 EEU, in «Physical training and sports physiology» - 346, in «Biomechanics» - 352 EEU. In total in the three subject matters there have been pointed out 807 EEU. Hence, the number of the found EEU on the theme «Motor skill» in «Physiology of physical training and sports» and «Biomechanics» surpasses the number of EEU in «The theory and the methodic of the physical training technique» more than in 3 times.

As a result of sorting the found EEU alphabetically it is established, that knowledge from biomechanics in the textbook on the theory and the methodic of the physical training technique is not mentioned. In «The theory and the methodic of technique of physical training» 5 EEU are considered from the position of physiology of physical training and sports. However in their content these EEU do not coincide with «The physical training and sports physiology». On the whole the percent of teaching material coincidence between these disciplines has made 0,62 %. This fact to some extent can serve as an explanation of the reason why each subject nowadays is studied as an independent one, not connected with other subjects.

It is possible to consider, that if as a result of sorting one and the same EEU repeats in different subjects it is practical for studying first of all within the limits of the subject studying which students come across this EEU for the first time. And in the following subjects this EEU should be mentioned in the form of a reference, or as a short repetition.

EEU can be a basis for working out educational specifications for a theoretical knowledge estimation. As EEU covers the minimum volume of the information, an elementary educational unit by definition can be appropriately valued as one (EEU=1). One EEU is equaled to one point. The maximum quantity of points on a theme is regulated by the quantity of EEU in it. The quantity of EEU is the basis for working out the educational specifications of a discipline.

Educational specifications are developed on the basis of the estimation theory.

So, in the subject "Biomechanics of Sports" there have been allocated 1357 EEU. Using a proportional scale, namely percentile rating scale, the educational specifications of "Biomechanics of sports" have been developed. Result 1085-1357 EEU corresponded to the mark "Excellent", 556-1084 EEU – "Good", 149-555 EEU – "Satisfactory", less than 148 points – "Unsatisfactory". By the sum of the points it is possible to define a rating of the student in a group, in a year-course, among all the years.

Depending on the used rating grade scale (progressing, regressing, sigma-like or other scales) it is possible to stimulate the students work – those who are either unsatisfactory, or good, or satisfactory.

At the same time the developed educational specifications are now approximate and serve only as reference points to show some higher results in a following semestre as not all themes of subject matters are structured, and, hence, the quantity of EEU in each theme at present is not known. On the other hand, absence of due educational specifications interferes with the search of more effective techniques of training on each theme, on a subject as a whole, it interferes with the process of the educational process individualization.

Thus, an effective direction in solving the problems of volume and content comparability of teaching material, training results comparability is the use of the developed technology for teaching material structuring on the basis of mathematical methods. Moreover, using this approach allows to solve questions of intersubject, intrasubject relations more adequately, promotes rational distribution of the teaching material contents on different educational levels.

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PERSONALITY INFLUENCE ON OBJECTIFICATION OF SOCIAL GROUPS

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Human personality can develop only in a collective, which is one of the most important patterns of upbringing. The existing scientific concepts and theories of collectives and the role of individuals within them, as well as the collective influence on the individual's development are currently regarded by pedagogics as contradictory, unstable and conditional.

One of the most important conditions of personality influence on group objectification is, that upbringing cannot be limited by teacher's personal influence on every student. It must be supported by the diverse influence of the collective, which provides freedom and security to an individual, as well as bears

positive morals and accumulates moral and artistic values in all their richness. That is why it is necessary to build a solid educational team and wisely use it for an all-round personality development. Without such collective, highly effective upbringing is hardly to be expected.

The main hallmarks of collectives are their well organized, stable and effective relations and responsibility sharing among the students. Frankpledge and indiscriminate forgiveness, often based on personal likes and dislikes, are regarded as an antipode of the collective and collectivism.

Sharing common goals and activities, group members build some interdependent relations of subordination, maintaining at the same time equal status and responsibility of all its members. This shows the main principles of the collective: common objectives and their gradual development as a condition of a constant onward progress; regular participation in different social activities; well-organized common activities. Not less important are good traditions and exciting perspectives; mutual support, trust and requirements; criticism and self-criticism, discipline and others.

Collective is a group of people, whose life and activities are motivated by positive social goals. It is effective in its self-administration and has well-organized and interdependent interpersonal relations; it aims at a common success, rich moral relations and interests, providing freedom and protection for every personality.

Creation of such collective requires time. Due to that fact, one can distinguish three stages of the collective development. A criterion of the development is the group's attitude to the educational requirements.

Each collective is, on one hand, an organization, on the other hand, a psychological group with individual influences. This let apply the regularities of a group behavior to collectives, turning them into living organisms.

Reality makes essential corrections to this model. A solid school collective originates, when the gender differences are taken into account. Gender is regarded in psychology as a social biological characteristics, which people use to define the notions «man» and «woman». As sex is a biological category, social psychologists often refer to the biologically determined differences as to «sexual». Individual socialization, including this of a child, is closely connected with the gender differences. Limitations or difficulties during joining the collective by a child are often determined by whether it corresponds with the gender norms.

Individual peculiarities of an each particular child are obviously a priority. But it is also obvious, that the gender differences are also important for the development of a child collective: «Gender differences cause gender separation in relations between the children, assuming, that there is and should always remain a barrier between boys and girls. Parents and