

## DIAGNOSTICS QUALITY PREPARATION STUDENT TO SOCIAL-ECOLOGICAL FORMATION SCHOOLBOY: ASPECT OF THE OBSERVATION AND TESTING

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A necessary element of the students training system for the schoolchildren social-ecological education is the diagnosis of quality of this training. In social-ecological diagnostics various students' characteristics are outlined on cognitive, activity, and personal level; the attitude of society to the problem of mankind and nature interconnection is defined in its global, regional, and local scale; the peculiarities of education process aimed for the formation of social-ecological readiness are revealed; necessary conditions that influence the outlined parameters are defined. For example, while defining the degree of students' readiness for social-ecological school children education we should reveal the condition of their theoretical preparation, their attitude to the natural environment, the condition of its optimization, relations with various competent social structures, personal involvement of each student into practical creative activity in nature.

Besides, it has been defined that the diagnostics include not only the content, but also the corresponding methods. An approximate complex of social-ecological diagnostic methods is represented by the means of social, psychological, pedagogic, and ecological diagnostics. And the selection of sought-for methods from the outlined groups is carried out via definition of the greatest presence of any of them in each totality. As a result, we have outlined four major method groups:

– **monitoring:** observation, evaluation, content-analysis, prognosis;

– **questioning:** questionnaire poll, conversation, interview, testing;

– **mathematic methods:** statistic methods, definition of the tested totality;

– **modeling:** analog, logical, mind experiment.

The used scientific approaches, method groups of social-ecological students' education diagnostic, as we see, will allow us to establish an actual condition of their readiness to interact with natural environment, education of different society groups in this area, especially school children. The reveal of particular diagnostic methods essence formed the content of one of the objectives of this research, the next goal is to reveal the essence and functions of each method, its approval within experimental work. The outlined social-ecological students' diagnostic methods required their testing in experimental work. On this stage *observation* and *testing* were examined. The development of these methods' content was carried out considering principles that raise their effectiveness: continuance, systematicness, diversity, objectiveness, large-scale involvement.

Let us show the major results. Thus, the *observation technology* includes the following commonly-known steps: the definition of goals and objectives, the outlining of objectives, the development of the observation scheme, registration of the results, data processing (N.V. Kuzmina and others) [2].

According to the introduced algorithm and the matter of the research, we will describe each of the steps.

### I. Observation goals.

#### 1. Natural-science block

Observation objectives:

– definition of students' motivation in the area of interaction between the society and person and nature;

– reveal of students' awareness condition in the area of social-ecological interactions (actual level of social-ecological students' knowledge);

– definition of the actual level of students' skills formation in the area of natural interaction (social-ecological skills);

– definition of the level of creative and emotional-value attitude of students towards nature.

#### 2. Psychological-pedagogic block.

Observation objectives:

– students' motivation in the area of social-ecological school children education;

– definition of the students' knowledge on social-ecological school children education formation level;

– definition of the students' level of skills formation in the area of social-ecological school children education;

– definition of the students' attitude level towards the solution of the problems of social-ecological school children education (reproductive, search, creative);

– reveal of the condition of emotional-value attitude of the students towards the social-ecological school children education.

**II. Observation object** – the students' qualification in the area of school children social-ecological education.

As an observation object we took students of Belgorod State University, particularly of pedagogic specialities.

**III. Types of observation** – direct, immediate study of an observation object and indirect, that is carried out within the process of students' self-education in the problem field.

**IV. Time and place of the observation** – studies within students' groups on courses «Pedagogy», «Social-ecological school students education», «Ecological pedagogy and psychology».

**V. Observation plan.**

Within the plan formation process a remark by N.I. Shevandryn was considered. It underlines that an observation is mostly effective in the following situations:

- acquirement of the psychic phenomenon data in its “clean” form;
- collection of the initial data that does not require large selection of the studied objects;
- evaluation of facts that have been acquired via different methods;
- recommendation check, etc [3].

In our research a collection of initial data on students' attitude towards the necessity of school children social-ecological education on motivation, emotional, cognitive, and activity level was carried out. The search was carried out at courses 4 and 5 of the Geological-geographical faculty of Belgorod State University, within the process of ecological-pedagogic disciplines mastering. An observation matter here was represented by verbal and non-verbal students' communication at classes.

**VI. Registration form** – table, which form reflects the major studied parameters.

Another method of students' readiness diagnosis in the area of social-ecological school children education that we would like to underline was the *testing*. According to the common test composition algorithm (N.V. Kuzmina and others) their content has been developed by us, and in the studied context test peculiarities have been defined. The algorithm includes: the pedagogic research goal, its objectives, objects, material on which the task is based. More detailed stages list is illustrated by A.N. Mayorov: the definition of testing goals, developers' resource abilities definition, material content selection, construction of technological matrix and its expertise, composition of test tasks and their expertise, formation of tasks' and tests' approval selection, approval tasks arranging, test tasks' approval, definition and evaluation of the test tasks' quality indexes, tasks' sorting out and test composition, test approval, definition and calculation of test indexes, definition of the test final version, text standardization, test provision [1].

Within the process of the outlined stages' passing we have also considered some definite require-

ments: content validity, or correspondence between the training content that is reflected in the logical structure and expressed in definite educative elements, in other words, in one test there must be one problem of the fixed definition level. It means that a test task must be formulated clearly and definitely, so it is equally apprehended by all the tested. Another factor is the definiteness of a stage within which complete and correct solution (or solution variants) of the problem must be contained. We should add that in the studied diagnostic achievement tests were developed as well. They are traditional evaluation tools in an education system.

So, according to the introduced full algorithm (A.N. Mayoriv) and the requirements, let us show the algorithm of the approximate tests tasks creation for the diagnostic system in the area of students' social-ecological education.

**Testing goal** – evaluate the students' readiness in the area of school children social-ecological education.

**Usage level** – professional needs.

**Resource facilities** – orientation for static evaluation methods. Need for specialists involved into the static data procession.

**Content selection** – carried out in accordance with the diagnostic blocks of students' social-ecological education. Main block: social-ecological skills and knowledge, experience in creative and emotional-value students' attitude towards nature; students' competence in the area of school children social-ecological education.

**Technological matrix (specification table, test grid)** – formed on basis of students' courses «Social ecology» and «School children social-ecological education». Test grid of the course 2Social ecology» (V.A. Sitarov, V.V. Pustovoitov, Social ecology, – Moscow, 2000) consists of two major divisions: «*Course content*» and «*The number of questions*». They include some definite content, upon which the corresponding test tasks are composed: Introduction (2 questions), Social-ecological interaction and its subjects (6 questions), Global social-ecological problems (3 questions), Ecological ethics (3 questions), Ecological culture (2 questions). In total: 16 questions.

Test grid of the course «*School children social-ecological education*» is represented as follows: Introduction (2 questions), Social-ecological concepts in philosophy thought history (38 questions), Social-ecological ideas in the pedagogic thought history (85 questions), School children social-ecological education: essence and objective aspect (13 questions), School children social-ecological education content (14 questions), The process of school children social-ecological education. Formation technology of the school children social-ecological education content (12 questions). In total: 164 questions. Afterwards a development of each test task and its expertise is carried out (up to date we have developed 70 test tasks).

To sum up the exposition of some research results, we would like to outline, that by now the testing problem is developed quite well. Here a special attention is paid to the necessity of some requirements meeting. To the number of necessary minimum of test tasks composition A.N. Mayorov refers, for example: instruction presence, task text of question, correct answer [1]. These requirements exactly were considered within the process of our tests' creation and their correspondence to the test grid was established. We should add that the major function of the testing, besides the very control function, is its educative, upbringing, and developing function. Test tasks were formed so that students obtained all the information they need from its content. That information will broaden their scientific outlook, influence their knowledge and skills level advancement, their personal qualities.

#### References

1. Mayorov A.N. Education system tests creation theory and practice. – M., 2000.
2. Methods of system pedagogic research / Ed. by N.V. Kuzmina. – M., 2001.
3. Shevandrin N.I. Social psychology in education. – M., 1995.
4. Shilova V.S. School children social-ecological education. Monograph. – M., Belgorod, 1999.

### INFORMATION TECHNOLOGY IN PROCESS OF PREPARING THE FUTURE TEACHER TO SOCIAL-ECOLOGICAL FORMATION SCHOOLBOY

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Present time is characterized by the broadening of various life and social activity areas' informatization. The informatization spreads into both science and education, including all its stages. Under informatization nowadays we mean a complex of measures of the pedagogical processes transformation based on the introduction of informative products, means, and technologies into the upbringing and education. According to a number of scientists a penetration of new information technologies into education forces us to study the didactic process as in informative one, within which a student obtain information, process it and use.

The education informatization, according to Y.S. Branovskiy, should be studied not just as usage of the computer and other electronic means in education, but as a new approach to the education organization, science branch that is called pedagogical information science. The courses of information

study, psychology, pedagogy, and quotient methods are, as points out Y.S. Branovskiy, the basis for the study of pedagogic information study. Within it the problems of computer didactics, pedagogic labor informatization, the implementation of informative environments for the common subjects learning, usage of informative study methods, informative training environments synthesis (multimedia), education systems that are based on multimedia approach, and the new education and training model creation tool are investigated. This model is based on the advancement of student to the construction of knowledge structures, the methods of electronic textbooks implementation.

Besides, Pedagogic information science is defined as a scientific-methodic direction that develops theoretical problems, methods, and technologies of informative provision and pedagogic activity automatization in order to improve the pedagogic process, individualize and optimize it. On the whole, pedagogic information science studies the problems of interaction between education and information science, reveals trends and legislations of this interaction. Pedagogic information science forms on the joint of information science and a number of pedagogic sciences, it has its own conceptual apparatus, goals, methods etc [1].

An important factor of the education informatization is, according to Y.S. Branovskiy, information culture of a pedagogue, the tutors' readiness to implement informative technologies in education. To solve this complicated problem personnel training to use new information technologies (NIT), formation of pedagogues' information culture, including social-ecological education of the studied youth are required [1].

On the whole, nowadays in Russia the Education Informatization Concept has been developed. Its main points are: mastering and introduction of new information technologies into education, training and education management on basis of research work in dialectics, information science; formation of the information culture within scholars (information knowledge, computer and other electronic devices education skills, basic programming skills); shifts in content, methods, means, and forms of education in relation with the information technologies integration into the education process; tutors' training for the implementation of electronic devices in education.

Outlining the special features of the modern Education Area Informatization Concept of Russian Federation V.A. Izvozchikova and I.V. Simonova rightfully draw our attention to the following points:

- the acknowledgement of high development potential of the information science and of its science status;
- the concept of subject information science area that corresponds to modern outlook;
- module concept of the studied subjective area in contrary to the discipline concept that has been used previously [2].