

CONTROL-MEASURING MATERIALS FOR ASSESSING STUDENTS AT SCHOOL ON THE EXAMPLE OF THE SUBJECT "BOTANY"

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Annotation:

The scientific article is devoted to some control-measuring materials in school on the example of the 6th grade on the subject of "Botany", their practical application in general education and the effectiveness of application. The concept of innovative control-measurement materials is given, examples of such tasks are given, applying applications of tasks at school within subject the Botany.

Keys words: PISA, TIMSS, PIRLS, botany, training, evaluation, control and measuring material.

Today, the employee of pedagogical labor is entrusted with a huge task of the republican scale - the improvement of the pedagogical system by introducing innovative forms, methods and funds to the educational process.

One of the most important steps to do this is the use of innovative control-measuring materials in the general education practice, since they are the main part of the design of the educational process and largely determine the further action plan of the teacher - whether it should continue to implement the introduction of any innovations or past methods and more efficient for students [3]. Among the innovative control-measuring materials have proven tasks for the type PISA, TIMSS and PIRLS. All these assessment systems have been developed not for continuous use in school practice, and for regular evaluation of the effectiveness of the education system of entire countries, nevertheless, the use of similar CMM (control-measuring materials) for the intermediate and final assessment of local results is gaining momentum [1-2].

Own study of the effectiveness of the use of Pisa testing system was carried out on the basis of secondary school No. 221 of the city of Tashkent Mirzo Ulugbek district of the Republic of Uzbekistan.

6 "A", 6 "B", 6 "V", 6 "G", 6 "D" classes were selected for research. 6 "A" class was elected as the control class, because it was recognized as the most promising class last year. Earlier in any of the listed class teams classic type of control and measuring materials were not used. Teachers who taught in classes, as well as the class team members themselves reported that to evaluate control work in the class were conducted with the help of testing, questioning and an open survey and the tasks of classic type of control and measuring materials were not applied.

To estimate the level of anxiety, the method of self-examination of the internal state after testing was used. To estimate the state of anxiety, the following categories were selected: 1 - I feel anxiety, I'm afraid for my results ("anxiety"); 2 - I'm in confusion, I'm not sure that I answered correctly ("Easy Anxiety"); 3 - I, for the most part, calm, I am sure that I answered most of the questions correctly ("doubt"); 4 - I am absolutely sure that I answered all the questions correctly ("Calm")

To estimate the accuracy of responses, a ball system is used as in the original research programs. As a result, the maximum score was transformed into an estimated form to comply with the criteria for the educational system of the Republic of Uzbekistan.

As control- measuring tasks for evaluating the effectiveness, our own developed tasks of the PISA type were used, which will be given below to confirm compliance with the criteria of the international PISA format.

Task Characteristics:

Age Category: Students of the 6th grade

Containable area: live systems;

Type of knowledge: meaningful knowledge;

Quest format: with a choice of several correct answers;

Context : Environment, Natural Resources;

Difficulty: (level of natural science literacy- 2)

Task formulation:

"Why is this happening?"

Recent years, scientists of the whole world are strongly concerned about the problem of the disappearance of the species diversity of plant species of land. Uzbekistan scientists are also anxiously observed as the Red Book of the Republic is replenished with new types of disappearing plants. Highlight among the following reasons for the disappearance of species which are the result of a direct economic impact of a person, which are indirect factors, and which are only by-natural factors and have no strong influence on the reduction rate of species diversity.

No	Factor	Factor type
1	Changing of the climate	A) Direct human factor
2	Building of natural reservoirs of biodiversity	B) Indirect human factor
3	Competition for soil resources	C) Natural factor
4	Increase the number of pasture land	
5	Deletion and salinity of soil	
6	Displacing invasive types of natural flora	

Модельный ответ:

1	2	3	4	5	6
B)	A)	C)	A)	B)	C)

Based on the data, it can be concluded that a person is more responsible in reducing the biological diversity of plants.

Evaluation criteria:

Evaluation criteria	Scores
The answer includes all true compliance and reflects the fully interconnection of the direct, indirect influence of man and natural factors for reducing the diversity of species, additional examples are given and the conclusion is made.	3
One error is allowed in accordance, the justification is done correctly and an example is given or there are all true compliance, there is a justification, but the example is not given	2
The answer includes only true compliance without justification and an example, but contains non-unbound biological errors.	1
2 and more errors are allowed according to, regardless of whether it is a justification or an example is given or not	0
Maximum score	3

Task Characteristics:

Age Category: Students of the 6th grade

Containable area: live systems;

Type of knowledge: Procedural knowledge;

Quest format: short response;

Context: Global;

Difficulty: (level of natural science literacy- 2)

"Do we have to be concerned about it?"

The disappearance of the species diversity of plants is one of the problems of the whole world, but is it worthwhile to fear in Uzbekistan, because, around us still surround hundreds of various flowers and herbs? Take a look at the distribution map of the disappearing and rare plant species and try to give an answer, is the danger of the Republic of Uzbekistan threaten and how dangerous the situation with the disappearance of plant species is globally?

Model answer:

According to the data provided by the Uzbekistan map in a relatively safe zone in comparison with other countries of the world, nevertheless, the level of the Tashkent region in the number of disappearing species is lower than throughout the country, which indicates that over time, the situation in the regions will deteriorate due to globalization, So, active measures to preserve plant diversity must be taken today.

Evaluation criteria:

Evaluation criteria:	Scores
The results are analyzed, the corresponding conclusion was made.	2
Only the results of the analysis are given, the output was not done	1
The results of the analysis are distorted or not given	0

Maximum score	2
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Task Characteristics:

Age Category: Students of the 6th grade

Containable area: live systems;

Type of knowledge: Procedural knowledge;

Quest format: short response;

Context: Personal;

Difficulty: (level of natural science literacy- 2)

The problem of preserving plant biodiversity is not only the problem of the state, but also the personal problem of every citizen. Offer instructions for classmates - how to help the country to preserve plant variety at the local level in various life situations.

Model answer:

1. Having during any excursion to nature with himself an atlas-determinant of plant and animal species in Red Book, in order to avoid the destruction of these species;
2. Avoid breaking, taping, other damage to the representatives of wild flora, especially in close proximity to nature reserves;
3. Being careful, while on an excursion in nature, not kindling fires, not littering the natural habitats of plants;
4. If any poaching activity is found among other people, report the case of law enforcement or state environmental control.
5. In any professional or personal activity, strive to find a harmonious solution on natural approach to implement our own goals and tasks.

Evaluation criteria:

Evaluation criteria	Scores
5 or more points of instructions are given, including various aspects of life from domestic, to human rights advocacy.	3
Less than 5 points are given, including several aspects of students' life	2
There are less than 5 points excluding many aspects of the life of students, the instructions of the same type	1
The instruction is not compiled or composed with rude violations of biodiversity conservation rules..	0
Maximum score	3

Medium scores According to the results of traditional testing methods for class research are presented in Table 1.

Table 1

Medium scores of students for the I term of 2021

Class	6 «A» (control)	6 «B» (experimental)	6 «V» (experimental)	6 «G» (experimental)	6 «D» (experimental)
Medium score	4,4	3,93	3,75	4,14	4,32

The experimental method of assessing the achievements of students, conducted at the II quarter of 2021 was the method of evaluation using Pisa tasks. Since the tasks of this type are designed to estimate one of the important criteria for a modern person - the ability to analyze verbal and mathematical data and project the corresponding conclusions.

In terms of anxiety, the experimental technique turned out to be relatively more effective in comparison with traditional methods in succeeding classes, but less effective in lagging. The overwhelming part of students of the experimental classes replied that they were confident that most of the questions were noted right. The table is attached below with the results of the level estimation (LE) Anxiety (Table 2).

Table 2.

Evaluation of the level of anxiety of students after testing based on students' responses.

Class	6 «A» (control)	6 «B» (experimental)	6 «V» (experimental)	6 «G» (experimental)	6 «D» (experimental)
The ratio of levels	LE.1: 6% LE.2: 17% LE.3: 38% LE.4: 39%	LE.1: 4% LE.2: 20% LE.3: 27% LE.4: 49%	LE.1: 12% LE.2: 15% LE.3: 53% LE.4: 20%	LE.1: 2% LE.2: 23% LE.3: 24% LE.4: 51%	LE.1: 6% LE.2: 12% LE.3: 37% LE.4: 45%

As can be seen from Table 2, the results in terms of anxiety did not differ too much between the traditional and experimental assessment methods in the successful classes, where the guys were absolutely confident in their own conclusions. In turn, in the lagging class, the stress level was significantly higher than the norm and% of the class, the selection of the " anxiety " option was almost 2 times more than in the control class. In turn, successful classes (6 "G" and 6 "D") were noted even by a better level of "calm".

The effectiveness of the assessment has also remained at about an equal level with a bias in favor of successful classes. This applies not only to the average estimated point, but also general practical and independent work, which were called upon to demonstrate the student AKSA (Assessment of knowledge, skills and abilities) in non-standard conditions. In addition, potentially, such tasks are able to develop the accompanying professional success of quality among students, such as creativity, mathematical, abstract, spatial thinking, etc. [4].

Conclusion:

In this way, it can be said that the level of stress using the Pisa type control measuring tools is not much changed, if the class is sufficiently prepared, and the use of such a method does not affect the quality assessment of students' knowledge, but in turn, in contrast to standard assessment methods, it prepares students to solve complex professional and vital tasks.

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