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20 АСТАНА

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Студенттер мен жас ғалымдардың
«ҒЫЛЫМ ЖӘНЕ БІЛІМ - 2018»
XIII Халықаралық ғылыми конференциясы

СБОРНИК МАТЕРИАЛОВ

XIII Международная научная конференция
студентов и молодых ученых
«НАУКА И ОБРАЗОВАНИЕ - 2018»

The XIII International Scientific Conference
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«SCIENCE AND EDUCATION - 2018»

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    Жинаққа студенттердің, магистранттардың, докторанттардың және жас ғалымдардың жаратылыстану-техникалық және гуманитарлық ғылымдардың өзекті мәселелері бойынша баяндамалары енгізілген.

    The proceedings are the papers of students, undergraduates, doctoral students and young researchers on topical issues of natural and technical sciences and humanities.

    В сборник вошли доклады студентов, магистрантов, докторантов и молодых ученых по актуальным вопросам естественно-технических и гуманитарных наук.

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• use the acquired knowledge and skills to form their own position, theory, model (writing the final (thesis) work, doing research work).

To sum up, we see that the role of SSW is crucial in the higher education institutions, and it is shifting from being a secondary method of learning to the leading position. As the international experience shows us that the key to encourage students to be successful learners is to master the methods of SSW, and coordinate them in the right direction.

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IMPORTANCE OF TESTS IN STUDENT KNOWLEDGE ASSESSMENT

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Assessment of knowledge, skills and abilities of a student is a fundamental part of the learning process, since it allows to correctly evaluate the effectiveness of academic education. For that reason, tests attract constant attention as arguably the most effective method of knowledge examination.

The initiator of a creation of the system of testing was Wilhelm Wundt. While being the head of the first laboratory of experimental psychology, his main idea was the possibility of the application of experimental methods to the study of the psyche. American psychologist James Cattell, who was also his disciple and follower, was the first to coin the term "Test" in his work called "the Intellectual test and measurement" published in the year 1890. He proposed the idea of studying large number of individuals through tests, subject to the standard conditions, that allowed psychology to be modified into an exact science [1].

The first test that fitted his quite «modern» understanding of the new type of examination was conducted in 1904 by the French psychologists A. Binet and T. Simon. It contained 30 questions, that were put together at the increasing level of difficulty.

Progress in the military and industrial areas at the beginning of the twentieth century gave rise to the further developments of testing methods. Special tests, that possessed ability to implement professional distinction and selection into the different sectors of production and services, were created. This led to the appearance of the group testing. Later tests that were used in the army were applied, for civilian purposes, to preschoolers, schoolchildren, and students.

Examination of knowledge and required skills of students is considered as a very important component of the educational process, since its proper organization significantly affects the efficiency of administration of the educational processes and the quality of specialist training.

Education of all forms cannot be effective without some systematic and objective information about students' overall progress: how students absorbed the material, how they use the resulting material, and how it enables to assess the dynamics of learning, followed by the actual level of knowledge, skills, abilities. Based on their analysis one can make appropriate adjustments to the organization of the educational processes.

Control of the quality of knowledge and skills of students, that they perform in the process of learning validation, training, educational and methodical functioning, is the most important and specific function of the tests. Such «indicators» are the primary basis for upcoming judgments in order to address issues such as transfer to the next course, or granting of a diploma. Types of examination of knowledge and necessary skills differ by their corresponding function in the learning process.

The most common and conservative form of examination of student's knowledge still remains to be an oral exam. During such assessment, direct contact is established between an instructor and a student, in which the instructor has ample amount of opportunities to analyze the individual's characteristics and depth of his/her coverage of the material [2].

Just like oral examination, tests of the written form are an equally important method of assessment of students' knowledge, abilities and skills. Uniformity of work performed by the students, allows you to have to the same requirements for all students, which is an attempt to reach objectivity in the assessment of learning outcomes. The application of such method makes it possible to check the learning outcomes of all students at the same time, while identifying areas of individual work with each particular student, with minimal expenditure of time.

The written test is used in various situations: in classrooms or in extracurricular studying (i.e., homework).

The practical examination has a special place in the system of knowledge assessment. Main learning objectives of the students in the universities is not just absorbing certain system of knowledge, but also formation of professional readiness for solving practical production problems.

This method is used for general educational and technical purposes, but wider area of appliance is, in fact, special subjects, namely, laboratory and practical work in the end of course and diploma projects during practical training.

Standardized control requires development and use of tests. Test consists of tasks and examples. The task is given to students, naturally, to complete, but an example stands for a model of correct and consistent task performance. Comparing the example with the student's response, it is possible to objectively judge the quality of learning.

Variety of tests appeared as a result of research made by many scientists. Researcher S. A. Myshko identifies the following forms of tests:

- Correct choice is the only correct answer;
- The multiple correct answers are possible;
- Questions that have two answers, one of which is correct, while the second is wrong;
- Tasks designed for sentence completion;
- Questions on linking what is related;
- Short answer questions;

Tasks of closed form.

Test tasks of the closed form are understood as such type a task, where there are prepared answers from which the test taker has to choose.

Tasks of closed form can be differentiated into several types:

1. A test task with one correct answer;
2. A test with multiple correct answers.

The reason for the prevalence of these forms of test tasks is few, but worth mentioning: the comparative ease of completion, its traditional background, convenience for fast and automated control of knowledge.

In the process of preparation of test questions/items, the most significant part is selection of choices that are incorrect, which are supposed to be located around correct answers. It is believed that these options should be at least "plausible", in a sense. Such incorrect but plausible answers are accurately called "distracters". If there is test question with k answers, a perfect distractor is the one with 1/k probability of selection, while if the overall selection is smaller than 1/k − it is a dominant distractor in the task or question.

Test with multiple choices (with a choice of multiple correct answers). Test task as described previously is understood to be the test task of the closed form, in which you can select multiple correct answers from many other (not necessarily correct). The usefulness of this type of questions increase if:

1. Used for series of tasks;

2. The wording of the task is clear and understandable;

3. The question is not designed to detect high-level understanding, or mastering of complex elements;

4. Run time is limited and it's made to be «dense» in terms of amount of work per time unit.

Usually these tests are used to verify the extent of «absorption» of the basic notions, fundamental properties of the covered study material.

Test tasks of open form.

Tasks of the open form consist of questions without any specification possible answers. These tasks are also called open questions, or open end questions. Such tasks require a student to formulate a response rather than choose the ready. One advantage of these tasks compared to their closed form counterparts is that we can avoid a possibility of guessing.

While developing test of open form it is useful to follow the following guidelines:

- A word that is supposed to be added should be placed at the end of the question;
- Only one word is supposed to be added;
- All statements in the question is as short as possible.

The main difficulty of preparation of tests of open type is difficulty ensuring that the basic requirements to test tasks are met, which is having a definite correct answer.

Test tasks to establish link between related.

Test task for the assessment of conformity is understood to be the test task in which you want to match elements of one set with elements of another, if they are somehow related. It is desirable that the number of elements in these sets are irregular.

Test task to determine a correct sequence.

Task of compliance requires to establish compliance with each element of one set with elements of another set. The most valuable quality of such tasks is that they allow to determine associative components of knowledge, in other words, knowledge of the interrelationship of the definitions and factors of authors and works, and characteristics of various instruments and devices, relationships between the laws, formulas, etc.

In addition to the four basic shapes, there exists a group of test questions having the properties of normal test tasks and its forms, but not having ability of test items themselves. A characteristic feature of such tasks is dependence in order of solution of tasks. Such tasks are not included in pedagogical tests, but they can be successfully implemented in the educational process. Such tasks are described by V. S. Avanesov as a system of tasks in the test form. Their main species are: chain-related, theme-centered, text and situation based.

"The form of test tasks is one of the problems of testing, scientific study and resolution of which its immediate research is essential and urgent", wrote G. S. Kostyuk in 1928 [3]. However, the problem of optimal forms of the test task in different occasions, in other words optimazition in a way of better reflecting the test content and analyzing the subject area, is, undoubtedly, an important and urgent task of the modern age.

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ANALYSIS OF CONTEMPORARY LANGUAGES OF PROGRAMMING

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The technology of programming does not stand still and constantly develops taking into account new needs in the field of IT-technologies. There are two main requirements for programming languages: their proximity to the usual professional language of a certain field of activity and ease of implementation. Contradictory requirements stimulate the continuous process of creating new languages and finalizing existing ones.

The programming language is a notation system for describing algorithms and data structures, a definite artificial formal system, by means of which it is possible to express algorithms.

At present, the number of programming languages is updated annually. To date, more than two and a half thousand programming languages are known. Below are considered some of the most advanced programming languages, each of which solves its specific work.

The language Dart, developed by Google, as one of the languages of web programming.

As in JavaScript, Dart uses syntaxes and keywords similar to those used in the C language. However, one significant difference is that while JavaScript is based on prototypes, objects in Dart are defined using classes and interfaces, as in C ++ or Java.

The idea of its creation is based on making the language as familiar, flexible and dynamic as JavaScript. But so far, that this language is very few possible to use because it is designed to run on the client, or on the server.

The next new programming language developed by Google is Go. This general-purpose language is designed for easy programming, suitable for everything from application development to system programming.

The language is more like C or C ++ than Java or C #. However, like the last languages, Go includes such advanced functions as clearing memory of unnecessary data, reflecting current execution processes and supporting parallelism.

In the Go language, the concepts of classes, constructors and destructors are completely absent. However, there are structures borrowed from the C language, to which functions can be linked, in this connection, in the Go language, programs based on object-oriented programming can be created. Having a function to clear memory from unnecessary data simplifies the work, in comparison with C and C ++. The Go language is still in development, but nevertheless you can already work with it.

Web programming is complicated by the fact that for the client, server, databases, etc., their individual programming languages. Engineers developed a new language for Opa. This language is created with the idea of linking the user interface, the server logic and the I / O database. The compiler independently decides where the program is running and executes the written code.