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INCREASE IN NATURAL-SCIENTIFIC LITERACY OF STUDENTS IN THE NATURAL SCIENCES IN INTERNATIONAL ASSESSMENT

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Abstract
In this article, the general understanding of PISA, the role of the PISA program in the life of students, the competencies that are formed in a person who is scientifically literate, the need for an active and interactive approach to education in the formation of scientific literacy competencies, the importance of the international PISA program were analyzed.

Keywords: PISA, natural-scientific literacy, competence, science of phenomena, relevant forecasts, scientific research, hypothesis, hypothesis, observations.

Аннотация:
В данной статье рассмотрены общее понимание PISA, роль программы PISA в жизни студентов, компетенции, которые формируются у научно грамотного человека, необходимость активного и интерактивного подхода к обучению при формировании научной грамотности, проанализирована значимость международной программы PISA.

Ключевые слова: PISA, естественно научная грамотность, компетентность, наука о явлениях, релевантные прогнозы, научное исследование, гипотеза, гипотеза, наблюдения.

The natural scientific literacy of students is evaluated in the natural – scientific Sciences direction of the Pisa study. Natural scientific literacy is understood as a person's knowledge of concepts related to the natural sciences, being able to solve problem situations related to the natural sciences as an active citizen.
In a person with a natural – scientific literacy, lower congestions will be formed:
- Scientific explanation of phenomena;
- Design and evaluation of scientific research;
- Scientific interpretation of data and evidence;

Being a regular participant in the Pisa study, the main goal of teaching natural–oriented subjects in the high-performing state of Singapore is defined as the formation of natural-scientific literacy of students.[1.194.199] In the educational process, special attention is paid to the content of the skills of students ' natural–scientific literacy clinics. Natural-scientific literacy competencies include a number of skills. In particular, the competence to explain phenomena scientifically includes skills below. [2.157.158]

- Memorizing and using relevant knowledge from natural sciences;
- Identification, creation and use of interpretive models and images;
- Making and justifying appropriate forecasts;
- Propose explanatory hypotheses;
- Explanation of the practical importance of scientific knowledge for society;

Skills related to the competence of the design and evaluation of scientific research are below:

- Evaluation of methods of scientific research of the given problem;
- Description and evaluation of the methods used by scientists in ensuring the objectivity and reliability of the data;
- Distinguish between questions that can be studied scientifically;
- To propose a method of scientific research of a given problem;
- Identification of the problem under study in a given scientific study;

Skills on the competence of scientific interpretation of data and evidence are below:

- Analysis and interpretation of data and drawing relevant conclusions;
- Representation of information in a given view in another view;

-Being able to distinguish between scientific evidence and theory-based reasoning from non-scientific views;

- Determination of hypotheses and conclusions in texts from scientific literature;
- Evaluation of scientific feedback and evidence from various sources (e.g. Journal, newspaper;

Knowledge below is necessary to form the natural – scientific literacy of students:

-Knowledge of the content of Sciences related to natural knowledge (chemistry, biology, physics, geography), living systems (biology), Earth and Space Systems (Geography Geology, Astronomy;

– Knowledge of epistemic knowledge, that is, the result of our understanding of the possibilities of scientific research methods, as well as the content of such concepts as hypothesis, hypothesis and observation. The subject area (context) to which real, life problem situations belong, expressed in PISA assignments, covers those below: Health, Natural Resources, Environment, risk, Science new knowledge in the field of

technology. [3.56.58] In turn, contexts come in three levels: personal, local – scientific, global. While personal – level contexts reflect situations in which the reader is related to his family, comrades, local-scientific-level contexts are related to a country, territory. Also, the attitude of students towards natural sciences (interest in Natural Sciences, scientific approach to the issue under study, awareness of issues related to the environment) is considered important in the formation of competencies of natural – scientific literacy in them. [4.46]

In the formation of competencies of natural –scientific literacy in students, an active and interactive approach to education is necessary. In a passive approach, the teacher outlines the topic. The reader will listen to them and write down the relevant parts. Home works his tasks from the manual, textbooks. In the process, a complete connection is established between the student and the teacher. The student is at his level, that is, ability, Interest, Desire, assimilates at the level of desire. It does not guarantee mastering the content of Education. Competencies in students are not formed by the information that the teacher has ready-told. Active approach. The teacher tries to explain with the help of evidence, visual weapons, didactic handouts, putting all his strength, skills into the SIH to describe the content of Education. The teacher exchanges ideas with students on the topic, gives creative works and practical assignments. [5.113.199] Students do housework through independent work, repetition. In the process, two complete connections are made between the student and the teacher. A unambiguous assimilation of the content of education is achieved. In such an approach, students have the elements of the competencies of the base and science, although they are not complete, form. It is said that communicative competence is" able to listen to the responses of group members in the process of working with small groups"," explain information about elements to one's fellow "or that socially active civic competence" is actively involved in the process of knowing specific aspects of natural systems, teaching their main aspects, sides to young people younger than oneself", national and – the formation of elements such as Dignity, Health, respect for other people's worldview is achieved only when the collaborative activities of students are organized. And the active approach will be in the form of communication between the teacher and the one-on-one student. [6.42.48]

Interactive approach. Students are allowed to exchange fiction: they discuss, solve in harmony the issues waiting for their solution, find a collaborative solution in the output of the situation. They demonstrate their knowledge to each other based on the information they receive. Inspired by each other, they create spiritual satisfaction. Complete assimilation of educational content is achieved. An interactive approach fully allows students to increase their natural – scientific literacy.

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