

MODERN EDUCATIONAL TECHNOLOGIES IN TEACHING NATURAL SCIENCES BASED ON VARIATIVE CONCEPTS TECHNOLOGY

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Annotation:

The use of modern educational technologies that regulate the diverse activities of students in the natural and social environment, improving students' knowledge, skills, and competencies in the formation of natural sciences on the basis of variable concepts in elementary grades, the worldview of students integrity, interrelationship of objects and events in the objective world, nature, society, technology, human interdependence through the use of modern educational technologies in the educational process, the use of methods based on natural modern educational technologies in the educational process, as well as the mutual cooperation of various sciences that research the material and spiritual world and the process of formation of students' varied concepts in the teaching of natural sciences are envisaged.

Keywords: variety, society, ecology, thinking, skill, qualification, competence.

Introduction

The use of information and communication technologies in the educational process is the need of the hour. Without the use of modern methods of teaching and information and communication technologies, the teacher cannot achieve effective results in his professional activity. However, it is important to choose the right purpose and content, methods and means, and organizational forms of education. Practice is the basis of knowledge. and information technology has its advantage in this respect. The presence of the opportunity to explain the learned theoretical knowledge in a practical way on the basis of technical means ensures more active participation of students in the educational process[5].

Usually, in the process of introduction of the novelty, a psychological idea about the novelty appears. Psychological depression is manifested in the indifference or negative attitude of the pedagogical team to the innovation. In people, it is observed that such psychological problems are encountered openly or secretly. According to the results of the research, such confusion is related to the fact that people prefer the usual way of working, are afraid of uncertainty, the appearance of redundant work, and do not understand the necessity or importance of the innovative process[1].

In particular, in the formation of the first variant concepts in the teaching of natural sciences in primary grades management style and mutual characteristics have a strong influence on the

effectiveness of applying modern pedagogical technologies to the educational process. In the teaching of natural sciences, it is necessary to organize activities aimed at forming students' alternative concepts and improving their interaction[2].

Analysis and results

Based on the analysis of the results of the research conducted in the educational process, the following main principles of the formation of alternative concepts in the teaching of natural sciences in elementary grades can be distinguished:

Forming the first alternative concepts.

To provide students with complete, reliable information about the content and importance of forming alternative concepts in the teaching of natural sciences in primary grades.

Formation of variant concepts in teaching natural sciences preparation to see and to motivate.

Formation of alternative concepts in the teaching of natural sciences in primary grades skills and positive innovation position of ownership necessity.

In fact, it is an innovation in the formation of alternative concepts in the teaching of natural sciences in primary grades processes organize of reaching the following aspects to bring can.

Innovation of activity to himself special features reflection bringer theoretical - pedagogical the rules set work exit _

Formation of alternative concepts in the teaching of natural sciences in primary education .

Formation of alternative concepts in the teaching of natural sciences in primary education main conditions as, that is this activity organize to do directed , updated management structure improvement[16].

Teachers education in the system innovation processes and innovation to the activity preparation, to himself special pedagogical problem being his based on of the teacher himself self - self professional to develop aspiration , innovation of processes importance understanding , changes and the news content - essence to understand and logically necessity acceptance to do such as factors lies[4].

Including our country education system present development stage innovative pedagogical technologies apply experience , national and historical , ideological condition - conditions answer to give, of education traditional models general education in their schools lesson system to improve possibility giver technologies apply positive the result to give no doubt[17].

Developed in countries many from technologies wide being used in cooperation training , projects style , stratified teaching , student folder such as technologies in our choice above condition - from conditions except , we are of technologies there is education technologies based on determiner in the circumstances and present education content denial not doing , work developed National study in the program students knowledge control to do to the forms suitable means coming caught[8].

Offer being done of technology again one important aspect that is , that is their present in education positive sides kept without apply of opportunity existence.

From this except this _ technologies philosophical , psychological , pedagogical, didactic to the point according to humanity to classification have. Of these humanity description only theoretical and ideological in terms of maybe practical in terms of spirituality tall , perfect a person to form in the direction of.

They are psychological and pedagogical essence with humanity to the description have has been to the individual directed technology : in cooperation training, projects style , layered teaching , student folder such as methods own content - essence in terms of mutually depends and each other _ requirement does and whole didactic the system organize is enough These are education recipients honesty, openness, to others care , generosity , sincerity , reciprocity help in the spirit educates[6].

In fact, the use of methods based on innovative pedagogical technologies is of great importance in the formation of alternative concepts in the teaching of natural sciences in primary education it helps a lot.

The teacher is the creator of the lesson, he should not become a ready executor of ready-made technologies, he should search for his own way using pedagogical technologies and engage in activities with enthusiasm[18].

It should allow students to learn the culture of directing students to practical activities, impersonation, dramatization, staging small scenes, organizing debates, asking questions, freely expressing their opinion, and at the same time conducting debates. The teacher can see the students as equal participants, respect, listen to, and count on the student's opinion, share his opinion on an equal basis with the students, not as a judgement[7].

Today, a number of developed countries have accumulated rich experience in the use of pedagogical technologies that increase the educational and creative activities of students and guarantee the effectiveness of the educational process, and the methods that form the basis of this experience are unique. is important. In other words, the teaching method is the form of interaction of the student teacher in the teaching process. The process between the teacher and the student shows that the student is actually connected with the purpose of mastering this or that knowledge, skills and abilities[19].

So, it is natural that fundamental changes will take place in the field of education at the time when science and technology are developing.

It is up to the teacher and the students to choose the technology to achieve the goal, because the main goal of both parties is to achieve a specific result, especially the level of the primary school students, the character of the team, and the conditions, the technology used is chosen. For example , to the result reach for perhaps computer with work it is necessary , but also film, multimedia and others need will be Of these all of them teacher and to the students depend. With that together study of sciences to himself special side, place and conditions, the main

thing, of the student opportunity and needs, cooperation activities that he can organize account get need Only then guaranteed to the result reach possible[9].

B is innovative in the formation of alternative concepts in the teaching of natural sciences in primary grades pedagogical technologies apply for the most first of all lesson type , purpose to the subject our suspension natural. So since , the most first of all , study technological the map make up we get needed because of the lesson technological map each one subject , har one lesson for the subject being taught, the nature of the subject, of the students opportunity and out of need come came out without is made.

Him where in appearance make up of the teacher experience , put purpose, creativity depend. Technological map how Created if not , then lesson process whole without reflection reached to be , sure defined goal , task and guaranteed the result reflection is enough Technological of the map structure the teacher of the lesson extended development from composing , from writing get rid of because such on the map lesson of the process all edges own on the contrary finds[20].

Teacher teaching of science each one subject, har one lesson training according to made up technological map to him science whole without imagination reached to approach , to understand , as a whole study of the process Beginning and from the purpose can be reached the result according to until you get it help gives Especially technological of the map students opportunity and out of need come out structure, it person as of education to the center take to exit and this with of teaching efficiency to increase chance creates[11].

Based on the above didactic games, the degree of effectiveness of the invariant functions of variation in the educational process is that the quality and efficiency of the lesson is achieved, additional questions and assignments are given during practical training, as well as students' theoretical knowledge, practical skills, used in the development of skills and competences[21]. Ensuring consistency in the teaching of natural sciences is the main lesson of the principle of consistency in the process of choosing the teaching material related to this subject in a consistent manner, placing them in their target sequence based on inter-departmental coherence and consistency, and delivering them to the minds of students in a short time. Retention is one of the main pedagogical problems of today.

Teaching natural sciences in high school it also requires the teacher's unique knowledge, skills and competence. This is the development of the scientific-methodical and organizational-methodical foundations of the introduction of effective forms of teacher training, advanced forms and methods of education, modern education and information and communication technologies in the process of retraining and professional knowledge[22], It depends on getting the skills and qualifications. It was considered important to determine what kind of knowledge and skills the primary school teacher has before and what skills should be developed in the process of professional development.

to know the properties that indicate which general concept this object belongs to. It describes the characteristics of the formation of alternative concepts in the teaching of natural sciences in primary grades. Based on this, the program is formed as a logical continuation of the knowledge acquired in the course of natural sciences, based on the first stage of generalization, that is, the understanding of specific objects and the study of the relationships between them. In the formation of these concepts, the use of a set of visual aids representing the image of objects, including: films, photographs, conventional signs, movements, schemes and diagrams, and information describing them (story, text) plays an important role in increasing the effectiveness of the lesson[23].

Because they provide students with the opportunity to master the concepts of the first stage of generalization by organizing analytical-synthetic activities based on specific information. In the course of natural sciences, the level of thinking activity, analysis and synthesis, comparison, generalization concepts of students increases. Therefore, as natural objects, events and phenomena are described on the basis of play and observation, students are first required to master natural term concepts[24].

Based on the comparative analysis of the educational content mentioned above, the specific concepts in the proposed curriculum are first explained and then the general didactic concepts are given. It serves to ensure the integrity and continuity of the teaching of "Natural Sciences". At this point, improving the content of the subjects at the level of today's demand will have a positive effect on the development of the knowledge, skills, skills and competences of the students.

In order to eliminate the problems of coherence and continuity in the context of formation of alternative concepts in the teaching of natural sciences in primary grades, the following can be mentioned:

b to ensure the consistency of the subjects studied in the teaching of natural sciences in primary grades with the essence of teaching based on the first invariant and variant concepts;

It consists of giving special attention to the most important aspects of knowledge based on demonstrative, question-answering and modern educational technologies in teaching natural sciences in primary grades about the formation of the first invariant and variant concepts[10]. The range of theoretical and practical knowledge provided in natural science education in countries with advanced education is much more complex in terms of quality and quantity than the level of knowledge that students of our national schools should learn. In countries such as Finland, Singapore, the Republic of Korea, England, and Russia, the development of education plays an important role in determining the economic development of society, and economic development directly determines the effectiveness of education[12].

the formation of variant concepts in the teaching of natural sciences in primary grades is considered an intellectually productive period. In this process, the intellectual development levels of students are checked. Its design should be based on the specific characteristics of the

educational process. It is appropriate to check a number of personal qualities of students. Because in this process, an individual educational direction aimed at the intellectual development of students is formed and the direction to which it belongs is determined[25].

of forming the first invariant and variant concepts in the teaching of natural sciences in high school classes, pedagogical opportunities that affect each student are determined. Corrections are made to the content of situations and educational tasks aimed at the intellectual development of students.

Certain tools are important in forming invariant and variant concepts based on an individual approach to students. These tools make it possible to realize the goal of the educational process, to achieve a guaranteed result in this process. Because didactic tools occupy a special place in the implementation of educational goals[3].

Conclusion

Summary. Formation of variant concepts in teaching natural sciences in elementary grades, analysis of facts, understanding of the nature of cause-effect relationships in the study of events and processes, by applying previously acquired knowledge of academic subjects in new situations prepares the ground for students to achieve conscious mastering of educational material. Including:

1. It was determined based on the analysis of the research work carried out so far that the formation of variant concepts in students during the lesson is an actual pedagogical problem.
2. The content of materials related to the formation of students' variant concepts was determined, didactic requirements and principles of selection were developed.
3. Taking into account that the formation of variant concepts in the teaching of natural sciences in primary grades is the guarantee of a mature person, it was assumed that all teachers engaged in pedagogical activities in the continuous education system should understand.
4. In the course of the lesson, in educational activities outside the classroom and outside of school, it was determined that it is necessary to create problems related to the formation of alternative concepts for the attention of students.

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