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**FEATURES OF FORMATION OF COGNITIVE COMPETENCE IN PUPILS
IN THE SYSTEM OF INTEGRATED LESSONS IN THE STUDY OF
NATURAL DISCIPLINES**

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Annotation. Statistics show the characteristics of cognitive skills training in schoolchildren in the system of integrated lessons. The authors have developed a set of integrated geography and biology lessons on the theme: "Man and Nature" for grade 8 students. The results of the control stage of the study showed that cognitive motivation values increased in the majority of students in the experimental group. As evidenced by the data, the use of integrated learning in the experimental group contributed to a significant increase in indicators. The authors found that the essence of integrated learning is that the structure of the training course contains distinct, closely related sections.

Key words: cognitive competence, integrated lessons, natural sciences, learners, cause and effect relationships.

Introduction. In today's ever-changing, dynamic world, it is not just the student's learning of subject knowledge, skills, and abilities that comes to the fore, but the student's personality as a future activist that ensures social progress,

preservation and development of life on Earth. Modern science has developed a competency-based approach to education, adopted as a methodological basis for its improvement of the domestic education system [1]. Various types of competencies are described [4], among which the leading place is occupied by cognitive competence. The ways and means of formation of competence are defined, one of which is the integrative approach of the organization of educational process. However, the possibility of implementing this approach in teaching schoolchildren geography and biology is theoretically insufficiently substantiated. There are guidelines that define the forms, methods of cognitive competence of schoolchildren in the lessons of geography and biology [2]. But in these methodological developments, the idea of the integrity of the surrounding world picture in integrated lessons is limited.

Aim. Dosliditi and experimentally test the methodological methods of developing the cognitive competence of schoolchildren in integrated lessons of geography and biology.

Materials and methods. To solve the tasks and test the hypothesis put forward, a complex of general scientific and pedagogical research methods was used: - theoretical: study and analysis of pedagogical and methodological literature on the research problem, theoretical generalization and systematization of research materials, comparison and analysis of research results; - empirical: study, analysis of pedagogical experience, pedagogical experiment, observation, questioning, testing, methods of statistical processing of the results of a pedagogical experiment.

Results and discussion. The idea of a competence-based approach is one of the answers to the question of what result of education is necessary for an individual and is in demand in modern society. The formation of a student's competence is one of the urgent problems of education today and can be considered as a way out of a problematic situation that has arisen due to the contradiction between the need to ensure the quality of education and the inability to solve this problem in the traditional way. We are talking about competence as a new unit of human education. At the same time, attention is focused on learning outcomes, which are considered

not the sum of memorized knowledge, abilities, skills, but the ability to act in various problem situations [3].

Integrated lessons develop the potential of students, encourage active cognition of the surrounding reality, to comprehend and find cause-and-effect relationships, to the development of logic, thinking, and communication skills. To a greater extent than usual, they contribute to the development of speech, the formation of the ability to compare, generalize, draw conclusions, form integrated knowledge from the two disciplines we use [1]. The use of various types of work maintains the attention of students at a high level, which allows us to talk about the developmental effectiveness of such lessons. They relieve fatigue, overstrain of students by switching to a variety of activities, sharply increase cognitive interest, serve the development of imagination, attention, thinking, speech and memory of schoolchildren.

For the development of the cognitive competence of the 8th grade students of the gymnasium No. 31 of the humanitarian-aesthetic profile of the city of Chernigov, we have developed a set of integrated lessons in geography and biology on the topic: "Man and nature." The purpose of the complex: to form an idea of the role of factors of the natural and social environment in the formation of a person as a biosocial being, to form knowledge about the necessity and essence of protection and conservation of nature.

Educational: as a result of mastering the module, students will have knowledge about the basic physiological and morphological changes in humans in the process of evolution under the influence of the natural environment.

Developing:

1. Communication of new facts, introduction of new concepts, categories, study of new phenomena.
2. Organization of assimilation of new material, study of additional properties of already known concepts.
3. Deepening the essence of known concepts, laws and other processes, their application for the development of cognitive competence.

Educational: instill a healthy lifestyle, cultivate a respectful attitude towards their health and natural resources.

The experimental work was carried out on the basis of gymnasium No. 31 of the humanitarian-aesthetic profile of the city of Chernigov for 2 months. We conducted the research in a group of 8th grade students. Group 1 (experimental group) consisting of 15 people – 7 girls, 8 boys and group 2 (control group) –15 people: 5 girls, 10 boys.

The research was carried out in two stages. 1. At the first stage, the psychological and pedagogical characteristics of the group were given. General information about the group. Group 1 (experimental group) enrolls 15 people - 7 girls, 8 boys. Their age ranges from 13 to 15 years. At this age, the dominant desire is to apply one's capabilities, to express oneself, which leads to an active search for ways to develop practical activity. In the process of the adolescent's social development, there is a shift in emphasis from orientation to others in orientation to his own activity. Students at the age of 14 are most concerned about the problems of developing abilities, intellectual development, and developing skills. The need for self-affirmation is considered leading in adolescence. This need is based on the ability of a person to simultaneously experience himself as an object and subject of social relations. Self-affirmation is the mechanism of finding and fixing one's place on the bipolar scale "object-subject". During the internship, as a result of conversations, observations and questionnaires, it was found that the team is in the transition from the stage of cooperation to the stage of autonomy. After all, students can freely cooperate with each other. Although there are leaders in the class, each of the students can express their opinion. They independently take part in the educational process, they do not need to be forced. During the most recent observations, it was established that no such students were found who were disdainful of their class and teaching staff.

Further, the level of development of motivation for educational activities of students was determined. The results of the ascertaining stage of the study showed that the majority of pupils of both the experimental and control groups had a low

level of motivation for learning activity and motivation for studying the subject. The dominant educational motive was the social motive. Pupils are dominated by a passive attitude toward learning, characterized by avoidance of work, lack of independence in learning, and interest only in the external results of learning. For them, training is just something inevitable, temporary. Only a few students find learning fun and interesting. Based on the results of the survey, it can be stated that in the cognitive activity of students, first of all, it attracts the analysis of information, finding evidence, and the formation of conclusions (62% noted this). Knowledge of specific facts is interesting for 57% of schoolchildren, however, independent search activity is of interest to less than a quarter of the respondents. According to the students' answers, the main means of obtaining information in the classroom remain the teacher's story (84% of the students answered this way) and the work with the textbook (49%). Significantly fewer eighth-graders noted that they receive information in the classroom, independently completing individual assignments and during class discussions. Most of the students are satisfied with this situation, only 12% want to work independently, to complete individual assignments.

Analysis of the questionnaires showed that most of all schoolchildren like to listen to the teacher's story, to perform practical and creative tasks, but significantly fewer students want to independently collect additional information, process the topic, prepare a presentation; A third of the respondents categorically dislike doing this. It should be noted that the majority of schoolchildren are convinced that the teacher and the student bear the same responsibility for the quality of education, a quarter of the respondents transfer responsibility to the teacher, and only 19% believe that the student is responsible for the learning outcomes. 41% of students noted that they follow the instructions and requirements of the teacher. Only 38% of students consider themselves to be active participants in the educational process. Such answers indicate that schoolchildren are not ready to be more independent in obtaining knowledge, to take responsibility for the results of educational activities.

It is important to understand what kind of training is effective. Productive learning is associated with the acquisition of the ability to find information, work

with it, and engage in self-education (as noted by half of the students), with the formation of the ability to analyze various points of view, express and defend their opinions in a reasoned manner (42%). With just the same students, he believes that effective teaching is the acquisition of information, its memorization and reproduction. This indicates that despite the fact that innovative forms and methods of teaching are being introduced (or should be introduced) by teachers into everyday pedagogical practice, a significant part of students prefer reproductive learning. That is, a certain contradiction arises: students and teachers are familiar with the requirements that life places in front of a modern school, with the achievements of pedagogical science, but psychologically they are not ready to learn (or teach) in a new way.

As a result of the study, it can be noted that children of both the control and experimental groups showed, in the bulk, a satisfactory result. At the end of the experiment, repeated testing was carried out using similar methods. The results of the control stage of the study showed that the majority of students in the experimental group increased the values of cognitive motivation. As evidenced by the data, the use of integrated learning in the experimental group contributed to a significant increase in indicators.

The formation of educational and cognitive competence is one of the most important tasks of the school, because the ability to learn, the ability to master any subject is closely related to the formation of cognitive interests and the development of thinking of schoolchildren. The analysis of pupils' answers showed that the overwhelming majority of respondents feel a need to acquire knowledge. The motives that are guided by most of the students are social: they study in order to enter a university, learn useful, necessary, develop their abilities.

Conclusions. The essence of integrated learning is that the structure of the training course contains separate sections that are closely related. In accordance with this, the goal of such training is: the formation of a holistic view of the world around, a system of knowledge and skills in students; achieving quality, competitive education; creating optimal conditions for the development of students' thinking;

enhancing the cognitive activity of students in the classroom; effective implementation of developmental, educational functions of training. The developed complex of integrated lessons is aimed at developing skills: to determine independently the goals of one's learning, to highlight the main thing, to identify opposites, to give definitions to compare, generalize, classify, find evidence, draw conclusions, establish cause-and-effect relationships. Testing the lessons at school showed that the majority of students in the experimental group increased the values of cognitive competence. As evidenced by the data, the use of integrated learning in the experimental group contributed to a significant increase in indicators.

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