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# PROBLEMS IN FORMATION OF COGNITIVE INDEPENDENCE OF PRIMARY SCHOOL STUDENTS IN THE PROCESS OF TEACHING PHYSICS

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Abstract

This article discusses the psychological characteristics of reading in independent learning in the scientific work of pedagogical-psychologist scientists and researchers. In the interest of students in education is given information about the specific actions of independent learning, research, loading events without the help of a teacher, the performance of tasks and the release of independent production.

Key words: pedagogics, pschology, independence, teach, research, independent work, independent thinking.

## Introduction

The formation of cognitive independence of students is one of the important problems of the theory and methodology of teaching. Independence as a necessary quality of personality is included in the integrated concept of I. concept. <It is associated with the processes of reflexin, self-organization, self-regulation, self-determination, self-realization, self-affirmation, etc.>

Independence includes two components: first, a set of means to achieve the goals of cognitive activity; secondly, the attitude of the individual to the process of activity, its results and conditions implementation, as well as connections with other people in the process of activity. In accordance with the modern concept of education, the learning process is based on the recognition of the student as the subject of his own development. In this regard, many researchers have turned to problems that are to some extent related to solving the problem of the formation of cognitive independence in the process of teaching physics.

At the same time, the need to address the problem of the formation of cognitive independence of students is caused by the following contradictions: -Between the

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proclamation of the leading role of students' independent activity in achieving the results of the learning process and the student's actually passive position in practice;

-between the directive focus of the educational process on acquisition by students knowledge, skills and skills and the real desire of students to have the desired mark;

-between the teacher's need for certain methodological knowledge for formation of cognitive independence of students and the lack of methodological and didactic materials.

## Analysis of psychological and pedagogical approaches to the cognitive independence of students.

In a theoretical study of the formation cognitive independence of students, it is necessary to highlight the main components that make up this integrated quality of the individual. To solve this problem, independent work", "independence", "independence in cognitive activity". definition cognitive independence of students, it is necessary to highlight the main components that make up this integrated quality of the individual. To solve this problem, independent work", "independence", "independence in cognitive activity.

Let us analyze the existing approaches in the definition Two alternative concepts have been recorded in the history of pedagogy. One considered a teaching passive object of influence, in which it is necessary to invest a certain amount of knowledge, skills and abilities. Such views had J. Locke, I.F. Herbart. In the opposite concept of J.J. Rousseau, J. Dion, the initial idea was the development of the student as a spontaneous process. The central idea of the second CONCEPT is not to interfere with the spontaneous manifestation of independence. At the meantime, in the task there was no purposeful formation of cognitive independence.

Famous psychologists and teachers L.S. Vygotsky, A.N. Leontiev H N.F. Dobrynin, S.L. Rubinshtein expand the idea of development as the assimilation of the culture accumulated by mankind in active cognitive activity. They argue that the formation of independence is one of the ultimate goals of schooling. To achieve this goal, it is important to develop the following main provisions:

- ideas about different levels of autonomy,

-representation of the role of the teacher in the process of formation independence.

The first steps in this direction were made by K. Koffka, O. Selz, M. Wertheier, K. Dunker. They divided the educational activity of reproductive - reproducing and productive - creative. When characterizing independence, not only

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the type of the problem being solved is important, but also the degree of its complexity. V.P. Bespalko identifies four levels of possible activity, depending on the didactic tasks feasible for the student.

1) the level of activity is characterized by the fact that a person is only able to recognize objects of study in a number of other objects.

2) the level of activity is characterized by actions to reproduce information about the objects of study at the level of memory or the level of understanding.

3) the level of activity can be characterized by the degree of mastery of the ability to apply information in the practical sphere to solve a certain class of problems based on the use of a mastered sample.

4) the level of activity can be called the level of transformation, which characterizes such a mastery of information, when the student acquires the ability to solve problems of a different class by transferring the acquired skills.

We believe that the identified levels of cognitive activity can serve as guidelines for the teacher in the formation of cognitive independence. Didactic tasks of the joint activity of the teacher and students with students, and determine the sequence of teaching physics. But we doubt the fact that one (second) level includes two opposite, in our opinion, types of activity, reproduction at the level of memory and reproduction at the level of understanding. We believe that the level of understanding of the content of cognitive activity should be singled out and correlated with the understanding of cognitive activity in the study of a particular subject.

P.I. Pidkasisty considers the independent work of students from two sides, on the one hand, as an educational task, that is, what the student, the object of his activity, must complete, on the other hand, a form of manifestation of the corresponding activity: memory, thinking, creative imagination when performing student of the learning task.

Therefore, independent work is such a means of learning, which:

-forms the student at each stage of his movement from ignorance to knowledge;

- in each specific situation, assimilation corresponds to a specific didactic goal and task;

- develops in students a psychological attitude towards independent systematic replenishment of their knowledge and the development of skills to navigate the flow of scientific and social information when solving new cognitive problems;

- is the most important instrument of pedagogical leadership and management independent cognitive activity student in the learning process.

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A.E. Orel highlights the main features of independent activity of schoolchildren:

- work on a specific task developed by the teacher and under his guidance and control;

- work without the direct participation of the teacher;

- work during the time that is specially allotted for this type of activity.

To achieve results, the student actively uses his knowledge, skills, beliefs, life experience.

In a pedagogical study by H.O. Rakhmonov, we meet the following definition: "Independent work is an activity that takes place on the instructions of the teacher, under his control with his direct presence". The above definitions independent cognitive activity of schoolchildren, in our opinion, does not contain:

-conditions for the inclusion of students in independent cognitive activity,

-the structure of the motive of independent cognitive activity,

-features of knowledge, skills and abilities that students must possess in order to be able to perform independent work.

In the pedagogical study of I.I. Geinbikhner on the formation and development of rational methods of independent work in extracurricular classes in physics, a different understanding of independent educational work is indicated: <<Independent learning is a conscious, purposeful and mentally or physically active work of students with literary or other sources knowledge based on their experience and supported by social and personal motives>>.

S.V. Anofrikova connects the cognitive independence of students with the satisfaction of personal motives: “For centuries, the process learning was built as a process of transferring information from teacher to student; Unfortunately, this is fundamentally contrary to human nature.

The fact is that people are active beings: only through their own activity does everyone know the world around them, create certain living conditions for themselves, look for ways to solve life, personal and professional problems; the internal motive of this activity is connected with the satisfaction of personal needs. There is only one way to prepare a graduate for independent life and work: to build the educational process in accordance with human nature.This means that the following thesis should be accepted as an axiom: a person cannot be taught, developed, educated: he can only teach himself, that is, learn, develop, educate. For this to happen, it will be necessary to change the idea of the role of the teacher in the educational process; he should act not as a source of information, but as an

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organizer of students' activities" In our opinion, it is advisable to organize the learning activities of students for self-education, self-development and self-education. Based on this position, it is necessary to expand the activities of students, involving them in the process of goal-setting, planning, structuring, and self-control of the process of teaching physics.Therefore, the tasks of the teacher are:

-to teach students to define and formulate the goals of their educational activities (to achieve success in self-learning, in self-development, in self-education), -to teach methods of cognitive activity;

-to teach to plan educational activities;

-to help students realize their needs for development, in cognitive activity as the main means of development, education and training;

-organize the cognitive activity of students to master the means of achieving goals;

- to teach methods of self-control in achieving success and correcting the goals and objectives of students' cognitive activity.

The cognitive independence of the student becomes the result of purposeful joint activities of the teacher and students and at the same time a criterion for the effectiveness of the methodology of teaching physics. Finding out the conditions for the formation of independence as a personality trait is one of the main tasks. Independence is not an abstract characteristic of a person in general, but a characteristic correlated with the behavior of a person. A person who is independent in some areas of activity may not be independent in others.

One of the simplest forms of creative independence is an activity with a combination of previously given separately means, for example, when a student uses physical laws in solving problems that were explained by the teacher at different times of training.

A higher level of independence is manifested when the student begins to restructure the material given to him for study, for example, draws up a plan for studying the material, attracts additional material. An even higher level of independence is manifested when the student solves the tasks assigned to him, without the help of a teacher, masters new knowledge for himself, develops new skills and abilities. The highest level of independence is the desire for independent formulation of problems and their solution, independence in the implementation of search activities.

Analysis of pedagogical research and educational and methodological literature on the problem of the formation of cognitive independence of students in teaching physics.

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Let us analyze the state of the problem of the formation of cognitive independence, reflected in pedagogical research, we will highlight the main guidelines for developing a methodology for the formation of cognitive independence. The difficulty of this task lies in the fact that this problem requires a generalization of solutions to many related problems put forward in pedagogical research.

In a study by Usoltsev, A.P. important, in our opinion, are the use of various visual aids according to the principle <<from abstract to the concrete" in teaching mechanics; organization of reflection (self-analysis) of students in the preparation of reference notes, the methodology for the advanced use of generalizing tables.

Podolsky, A.I. he selects the content of education on the basis of principles - the ascent from the concrete to the abstract and from the abstract to the concrete, which is demonstrated on the content of the course of physics 7 - ro pedagogical research, the teacher and student are characterized by him from the position of their new status in the pedagogical system of developing education: teacher - technologist and student subject of educational activity.

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