

Formation of Independent Cognitive Activity of Students in Extracurricular Activities

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Abstract: The article deals with the problem of formation of cognitive activity of students in extracurricular activities. The article describes the importance of the development of cognitive activity among students, since in the process of this work, the formation of various personal qualities and the acquisition of knowledge and skills necessary for professional activity occurs simultaneously. There is also a study of the level of development of the components of cognitive activity, which showed the need to organize purposeful extracurricular activities aimed at developing characteristics such as motivational-volitional, content-operational and reflexive, which are criteria and indicators of the degree of formation of motivation for independent cognitive activity. The main conclusion is made based on the results of the research, which is that the effectiveness of the development of motivation for cognitive activity depends on the following factors: the correctness of the organization of this process, contributing to the qualitative development of knowledge and skills; the presence of purposefulness, consistency and control of educational and cognitive work; timely assistance to students from scientific and managerial staff of teachers and prevention possible difficulties; the objectivity of the assessment of the workflow and its result, the demands on the quality of the work performed.

Keywords: students, extracurricular activities, motivation, cognition, self-education.

1. Introduction

Modern society requires a person to develop such personal qualities as initiative, entrepreneurship, independence, as well as a high level of development of communicative and creative abilities. This task is faced by all educational institutions starting from the preschool stage and ending with a higher educational institution. All educational programs are aimed at the formation of personality in the process of educational activity. Cognitive activity is of great importance here, since cognitive activity involves thought processes at the empirical and theoretical levels that combine emotional, volitional and intellectual aspects. In addition, this task is solved in extracurricular activities. Therefore, motivation for cognitive activity is the basis for the training and development of a holistic personality, the formation of a future specialist's sustained interest in learning, the desire for independent knowledge of the surrounding world.

In this regard, there is a need to create an integrated system of extracurricular educational activities, which is closely

interrelated with the learning process in the classroom and assumes the presence of various creative approaches to planning and organizing this process. The analysis of psychological and pedagogical literature and the experience of teaching students in extracurricular activities have shown that the implementation of this direction acts as a significant factor influencing the desire to learn and gain knowledge independently, i.e., there is a development of self-education skills and a desire to gain knowledge through independent cognitive activity.

Extracurricular activities, in turn, allows creating conditions for the formation of various spheres of personality among students (intellectual, volitional, emotional), contributing to the preparation of students for obtaining and mastering professional knowledge and skills, various ways of cognitive activity, acquiring new experience of social interaction [1]. Extracurricular activities, unlike classroom lessons, do not have a clear structure, time constraints; do not require monitoring and obtaining a specific result, which indicates their wide possibilities for the variability of learning, development and education of students. The researchers claim that "Lessons are based on the interests and needs of students and teachers, as well as taking into account their capabilities, therefore, in the process of extracurricular activities; there is an opportunity for individualization of learning, the formation of partnerships between teachers and students in joint cognitive activity" [5]. Such interaction ensures the professional formation of students' personality through the acquisition of new social experience and motivates them to cognitive activity.

The relevance and problem of the study allows us to formulate a purpose, which is to analyze the significance of the correct organization of extracurricular activities in the process of forming students' cognitive activity. The research question is what forms and methods should be used in extracurricular activities in order to create conditions for motivating students to independent cognitive activity.

The cognitive activity of a student is usually understood as the desire for independent thinking, finding one's own way to solve an emerging problem (task) [14], a person's readiness to independently acquire knowledge and the formation of the ability to critically approach the assessment of one's own judgments and the judgments of other people [12].

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Cognitive activity in the process of classroom and extracurricular activities is formed from the point of view of cognitive activity, and is also consolidated and developed from the point of view of personal qualities [6].

Cognitive activity can be divided into two types [12]:

1. Intellectual activity is a process of cognitive activity aimed at assimilation, acquisition and application of the experience of an individual or humanity as a whole that is already familiar to the student.
2. Creative activity – cognitive activity that is aimed at creating a completely new experience for a particular person or society.

Scientists distinguish three levels of cognitive activity [22]:

- Level 1 is reproducing, which is characterized by the student's desire to understand, remember, reproduce the knowledge gained, master the ways of performing actions according to the pattern.
- Level 2 is interpretive, which implies a desire to comprehend the meaning of what is being studied, apply knowledge and mastered methods of activity in new educational conditions.
- Level 3 is creative, characterized by the willingness of students to theoretically comprehend knowledge, understand the connections between objects and phenomena, and independently search for solutions to problems.

At the moment, extracurricular work is considered as a resource for the formation and development of cognitive activity of students. Extracurricular work is one of the forms of extracurricular activities of students, which is more in line with their interests and needs [3]. Therefore, cognitive activity becomes not only the result of the activity of cognition, but also a whole complex of knowledge, skills, abilities, interests and abilities of the individual acquired by the student [6]. Therefore, the teacher needs to find different approaches to the organization of this work, which will create conditions for intellectual communication between students, giving the opportunity to get a new cognitive experience [5].

The problem of motivating students to cognitive activity, the formation of their cognitive activity and independence in cognition remains one of the urgent tasks of pedagogy [9], [21]. The modern education system is aimed at developing students' competencies such as a person's readiness and ability to work and communicate, which implies the creation of special conditions that will motivate the student to manifest his cognitive activity, his own position.

The increase in cognitive activity of students is carried out through the creation of the following conditions [22]:

1. Unity of content and methodological approaches to the organization of extracurricular activities, the content of which will ensure high cognitive activity and cognitive interest among students.
2. Motivation for cognitive activity of students through interest in the content of cognitive activity, including using various forms and methods of teaching, different from those used in classroom classes.
3. Cognitive activity is formed through solving various

problem situations that require students to take different approaches to finding answers to the questions posed.

4. The use of such methods and forms of classes that contribute to the emergence of students' need for cognition.
5. The opportunity to participate independently in cognitive activities, acquire their own experience and knowledge, which becomes significant for the individual and the professional growth.

Depending on how well the content of extracurricular activities is thought out, so much interest in independent cognitive activity will be formed, which plays an important role in the development of self-education skills [7]. The active interaction of students with the teacher becomes important here. The integration of formal and informal communication contributes to the emergence of co-creation, the transfer by teachers of knowledge and skills that are necessary for success in one or another type of extracurricular activity [12]. Researchers believe that “Students master various ways of organizing cognitive activity and applying them independently, these include ways of preparing for independent work, organizing the workplace, step-by-step implementation of mental and labor operations, restoration of physical and psycho-emotional forces. Cooperation with the teaching staff develops students' interest in independent cognition of the studied objects or phenomena through working with various sources of information that is necessary to achieve the goal, which increases the effectiveness of cognitive activity and rational organization of mental labor” [11].

As a rule, most forms of extracurricular work organized by teachers are competitive in nature, require independent training from students and have a creative orientation. These include various contests, quizzes, cognitive games, etc., which involve manifestations of creativity and motivate cognition through an active search for ways, methods and means of improving the process of cognition [16].

Socially significant activity also has a great influence on cognitive activity, which creates a positive emotional attitude to cognitive activity, is of a creative nature, and creates prospects for professional development of personality and continuous self-education [21]. It should be noted that first-year students are actively involved in search activities, quickly master the methods of independent search and methods of scientific cognition. Thus, already in the 2-3 year of study, most students understand the importance of their participation in public activities as a form of their personal and professional development [4].

A wide variety of possible forms and methods of extracurricular activities makes it possible to study, implement and test new ways and methods of cognitive activity [17]. This direction is effective if, in the process of extracurricular work, the teacher creates conditions for “a systematic search, methods and means of cognitive activity, motivation for independent cognition” [18]. “Due to the performance of various tasks by students (often developed jointly with the teacher), the knowledge gained at lectures is expanded and deepened.

Cognitive skills can also be obtained in a scientific circle, creative or any other student association” [18]. The creative activity of the student allows you to transform previously acquired knowledge and skills, thereby arousing interest in cognitive activity and self-education, as well as the formation of the need for deeper knowledge and expansion of knowledge and existing experience.

The interrelation of classroom and extracurricular activities ensures the realization of students' cognitive activity and motivates them to cognitive activity, since the student himself observes this connection and sees an opportunity to improve the quality of academic work [5].

In addition, extracurricular activities stimulate students to develop various personal qualities (intellectual, volitional, etc.), which also influence motivation for cognitive activity and self-education. In this regard, teachers can use such methods of extracurricular work that will require the student to demonstrate strong-willed qualities and control their own activities and results [18]. For the same purpose, it is customary to use group forms of work, where students can publicly evaluate not only the result of their own activities, but also the result of the work of other participants.

Another advantage of extracurricular activities in the process of formation of cognitive activity is the ability to vary the duration of independent activity of students, which ensures the gradual development of cognitive skills and motivates the manifestation of cognitive activity.

A significant role in the organization of extracurricular activities is played by a teacher. It is he who builds the work in such a way that it is not spontaneous, but systematic and purposeful [19]. If the inclusion of students in cognitive activity is spontaneous, it will create difficulties in understanding the significance of this activity, and in accordance with this will contribute to a decrease in interest in independent cognition. The possibility of consistency is revealed in the society work [11].

The work on the development of students' cognitive activity has a great influence on the formation of students' interest in self-education. Since in the process of performing various tasks, students have an emotional response to self-educational activities, a manifestation of emotionality in the process of independent cognition, a positive attitude to cognitive activity, an emotional response to the participation or non-participation of other people in this activity [18].

All of the above provisions on the formation of cognitive activity in students are reduced to the fact that extracurricular activities will contribute to motivation for cognition if they become significant directly for the individual and have an emotional response. In this regard, it is necessary to take into account the content component of extracurricular activities, which is based on the emotional component of the lesson [2]. The students' mastering of the material takes place in connection with various significant historical events that allow them to make new discoveries, get acquainted with inventions, biographies and activities of various scientists, and much more. The student can study the proposed material both under the guidance of the teaching staff and independently. If the teacher

uses various methods, forms and means of extracurricular work, they will stimulate students' interest in cognition [3]. Acquaintance of students with various scientific literature, inventions, scientific hypotheses and ways of proving them, the application of theoretical knowledge in practical independent activity allows students to activate cognitive activity, interest in independent and joint cognitive activity, as well as in independent educational activity [8].

In addition, “the organization of extracurricular work on the formation of students' cognitive activity involves the use of individual tasks, including creative tasks, research, and design, cognitive and applied” [20]. When they are performed, the student develops a positive emotional mood for cognitive activity, stimulates the completion of a given task to the end, without being distracted from independent cognitive activity. In the process of extracurricular work, the emotional mood of the student influences others, thereby interests peers and attracts them to participate in this process.

For students to have a positive emotional attitude to independent cognitive activity, a necessary condition is the presence of an assessment of the result, both from others and from the student himself. The teacher can show the student the positive and negative sides of his activity, pointing out the cause of their occurrence, and also revealing possible ways to overcome the difficulties encountered in the process of independent study of the material [13]. At the same time, a positive emotional attitude is formed during the public evaluation of the final and submitted work. “In addition, scientists, teachers and specialists in various fields of science and technology provide a critical but friendly analysis of the strengths and weaknesses of creative work and the process of independent creativity” [15]. The result of cognitive activity gradually becomes an object of self-assessment, which forms a student's steady interest in independent cognitive activity, allows him to reveal various ways of presenting the result of his work [16].

Cognitive activity in extracurricular work characterizes cognitive activity from the point of view of management: planning one's time for cognitive activity, planning the cognitive process as a component of independent activity, manifestations of motivation to cognition, as well as monitoring the process of activity and the result obtained [10]. Through the forms, methods and content of extracurricular activities, students develop not only the skills of organizing the process of cognition, but also the planning of their life activities, their time for cognitive activity. This allows the student to understand the value of effective use of free time through reading additional literature, visiting exhibitions, watching performances, as well as introspection of their actions.

After analyzing the literature, we came to the conclusion that independent cognitive activity can be considered as a personal integrative quality of the student, which is reflected in the desire and willingness of the student to independently organize cognitive activity, the ability to work with various sources of information, analyze them and isolate the necessary information for professional activity while operating in various ways of cognitive activity.

In order to choose the means and possible ways to solve the problem of the formation of cognitive activity, it is necessary to assess the initial level of its development using diagnostic techniques, in accordance with the selected criteria and indicators. In this connection, there is a need to select tools to assess the level of independence of cognitive activity, conduct diagnostic activities in the student group and analyze the results obtained.

In order to assess the degree of formation of cognitive activity in students, the following criteria are distinguished [15]:

- The manifestation of interest in cognitive activity, which is characterized by the degree of student participation in the discussion of emerging problems, the presence of their own position and attitude to the problem, the ability to answer questions on a given topic, the manifestation of the desire to participate in research work, the effective use of free time for independent cognition and self-education;
- The level of formation of cognitive activity skills;
- The manifestation of independence in the application of cognitive skills in the process of studying objects or phenomena;
- Formation of the student's intellectual interaction skills with teachers;
- The presence of an emotional response to cognitive activity;
- A critical approach to evaluating the process of one's activity and its result.

These criteria were selected in accordance with the characteristics of cognitive activity: motivational-volitional (motivating to the process of cognition and direct participation in it), substantive-operational (depends on the amount of knowledge and skills that the student has already mastered), reflexive (the ability to analyze his own activity and its result).

To determine the level of formation of students' interest in independent cognitive activity, a study was conducted in which 20 students of the academic group of Mali took part. The condition for the respondent's admission to the survey database was their regular participation in extracurricular activities. Diagnostic participants were involved in carrying out a number of diagnostic activities that affected various aspects of the phenomenon under consideration.

At the ascertaining stage of the study, a questionnaire was

conducted among students. For this purpose, the method of A.E. Bogoyavlenskaya was chosen, which allows identifying the formation of students' skills for independent cognition, to evaluate their activities and their results, the difficulties faced by students in the process of independent cognitive activity.

Another diagnostic tool was testing, which includes tasks aimed at determining the motivation of students for independent cognitive activity.

There was also an analysis of student papers that students performed independently for practical lessons. This made it possible to determine the level of students' mastery of theoretical material and methods of cognitive activity, the level of independent work.

In the process of observing students in extracurricular, there was an assessment of the level of interest in independent cognitive activity of students, in particular, the degree of independence of judgments during problem dialogue, the degree of possession of theoretical knowledge in academic subjects, the level of formation of general academic (educational, informational and educational-logical) skills, the level of general erudition of students. The observation also made it possible to assess the degree of manifestation of personal qualities of students in the process of individual and joint cognitive activity.

The conversation in an informal setting revealed the degree of motivation for cognitive activity of students, the desire to participate in the process of cognition, their personal attitude to independent cognitive activity and self-education. All the methods used at the ascertaining stage and a brief description of them are presented in the table 1.

The results of independent cognitive activity of students were analyzed from the point of view of reflecting in them the skills of independent application by students of their existing knowledge and skills, independent selection of skills to apply methods of cognition.

Analysis of the results of a set of diagnostic measures showed that 60% of 20 students show interest in discussing the issues raised, willingness to participate in solving problematic situations if they are related to their direct experience. At the same time, 5% of students showed a negative attitude to joint activities. 45% of students demonstrated possession of knowledge acquired earlier in the process of correlation of terms and concepts. Also, 75% of students, when answering questions, showed that they understand the importance of

Table 1
Methodology and its characteristics

Methodology	Characteristics of the Methodology
"Determining the direction of the mind"	Researchers describe "The purpose of the methodology is to determine the orientation of students' minds for the rational arrangement of micro groups in the classroom, individualization of educational tasks".
"Determining the need to achieve"	Researchers describe "The purpose of the methodology is to determine the nature of students' motivation".
"Self-assessment of students' cognitive position"	Researchers describe "The purpose of the methodology is to determine the nature of the desire for knowledge, its severity, and the propensity for activities of a certain nature".
"Determination of motivation and claims"	Researchers describe "The purpose of the methodology is to determine the nature of students' motivation, the degree of its severity, the nature of volitional regulation, and the adequacy of students' self-esteem. A number of questions are also aimed at identifying the nature of the content-operational aspect of students' cognitive activity".
A. E. Bogoyavlenskaya 's questionnaires	Researchers describe "The purpose of the methodology is a comprehensive diagnosis of the formation of students' cognitive independence in all its components, including: the nature of motivation, its severity, assessment of the nature and severity of students' volitional efforts during the educational process, learning difficulties, assessment of the formation of students' reflexive skills, etc".

independent cognitive activity, 15% of them were able to determine what knowledge and skills need to be mastered in order for independent cognitive work to be effective and contribute to self-development. At the same time, two people pointed out the need for interest in cognitive activity, three students on the volitional component, one student noted the need to think through and plan independent cognitive activity in accordance with the purpose.

A qualitative analysis of the diagnostic results also showed that the main motive for cognitive activity is an interest in cognition, which is also related to their personal experience and desires. Thus, 80% of students answered that they prefer creative activities in extracurricular activities and are interested in expanding knowledge and experience in this direction. The remaining 20% associate their future activities with science and are ready to study this issue in various aspects. At the same time, 95% of students study additional information, read literature, gain cognitive skills in the process of communication with teachers during group work. Also, the majority of diagnostic participants positively assess the organization of extracurricular activities for the possibility of independent learning. Thus, the diagnosis showed that students have an interest in independent cognitive activity, but it is not their own motive, has no personal significance.

The analysis of the answers to the questions according to the methodology of A.E. Bogoyavlenskaya revealed 65% of the students of the group who can analyze the sources of information, identify significant and draw conclusions in accordance with what they read. The observation helped to consider these aspects more deeply and to identify the difficulties that students have in the process of independent cognitive activity, in particular, they include text analysis and the allocation of the main meaning.

The formation of the reflexive component of cognitive activity is observed only in 20% of students, while the remaining 80% have a low level of self-control and self-organization. 45% of students have difficulties in assessing their activities, which is associated with difficulties in building goals and planning cognitive activity. Observation of students during extracurricular collaboration showed that difficulties arise in the process of educational dialogue, which is due to insufficient theoretical knowledge base. 15% of students have a tendency to mechanically memorize the knowledge they receive, rather than analyzing it. In general, the level of general erudition in the student group is average.

According to the results of the ascertaining stage of the experimental work, the results were summarized and the characteristics of the student group were compiled regarding the level of development of cognitive independence among students in it as a quality of the student's personality. This allows us to conclude that this student group as a whole has an interest in independent cognitive activity, but its further formation will depend entirely on the correctness of the organization of extracurricular work by means that allow the interest in knowledge to turn into a personal motive and the desire for self-education. Thus, it can be concluded that the effectiveness of motivation for cognitive activity of students in

extracurricular activities depends on the following factors:

1. The correctness of the organization of this process, contributing to the qualitative development of knowledge and skills.
2. The presence of purposefulness, consistency and control of educational and cognitive work.
3. Timely assistance to students from the scientific and managerial staff of teachers and prevention of possible difficulties.
4. The objectivity of the assessment of the workflow and its result, the exactingness to the quality of the work performed.

All the above conditions, means and forms of extracurricular work, in the process of interconnection and influence on each other contribute to the creation of the necessary prerequisites for students' interest in independent cognitive activity and self-education.

2. Conclusion

Effective formation of cognitive activity in extracurricular activities stimulates students to independent cognitive activity, which contributes to the development of interest in independent cognitive activity. Extracurricular work contributes to the formation of students' motivation to cognition through the development of interest in independent cognitive activity and self-education. At the same time, the student considers cognitive activity as a personal and social value in the process of interaction with teachers, offering him various forms and types of extracurricular activities that contribute to a conscious assessment of the value of his own activity and its result. The student's understanding of the importance of cognitive work positively adjusts to the acquisition of new knowledge and skills, forms an interest in the study and cognition of new objects and phenomena, readiness for creative individual and joint creative activity. The inclusion of a student in extracurricular cognitive work allows students to realize the importance of free time and the effectiveness of its use, while acquiring the skills of planning and self-organization of their own activities develops their personal qualities.

Motivation for cognitive activity occurs through the organization by the teaching staff of various forms and methods of extracurricular activities that are directly related to educational activities and contribute to the emergence of students' need for cognition, which will ensure the acquisition of new knowledge and skills by a person.

Independent work in the process of extracurricular activities allows the student to become a subject of learning, contributes to the formation of the mechanism of formation in the profession. This process is purposeful and indirectly organized by the teacher in order to improve students' professional knowledge, skills and abilities and contribute to the development of significant personality traits for the future specialist.

For their part, the teacher in extracurricular classes becomes a mentor and a source of knowledge and information that stimulates the development of students in various areas of personality (intellectual, volitional, emotional, etc.), as well as

the successful formation of interest in cognitive activity as a significant aspect for the personality. If a student learns all the functions of cognitive activity in extracurricular activities, this will contribute to the activation of his self-education skills.

A variety of forms and methods of organizing extracurricular activities allow you to influence the development of personal skills necessary in professional activities.

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