

## Stages of Organizing Research Activity in Students

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In this article, the author highlighted the ability to develop students' inner desire to acquire knowledge, to develop independence and activity, to be interested in practical

ABSTRACT

Keywords:

activities, to strive for a goal, and to act freely

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One of the most important resources of society's development is its intellectual potential, the innovative knowledge and creative-organizational ability of a person is a source of material and spiritual wealth. Today, the world community is undergoing multifaceted changes in all spheres of life, which, in turn, requires a new approach to the formation of future teachers. Changes in the field of educational goals in our country, as in the whole world, correspond to global issues aimed at ensuring the entry of a person into the social world. It is the personnel with intellectual potential who play the main role in the development of the state and society. In particular. in the documents on the improvement of the educational system, the qualities of creativity are recognized as an important conceptual condition for updating the educational content. To develop creative qualities in the educational system, one of the necessary tasks is to train personnel who will have the ability to apply their basic competence in real life and professional practice.

Research activities of students have the character of gradual development.

Research activities of students are organized based on a certain logic. The first stage is to create a theoretical-experimental situation in the lesson, in which an attempt is made to stabilize students' interest in research activities. Students understand the importance of research in ensuring the success of educational activities. At this stage, the following conditions are followed: formation of students' internal desire to acquire knowledge; development of independence and activity in students; such as getting students interested in practical activities.

At this stage, the students are assigned tasks related to research that have accuracy in terms of content. The teacher determines the directions of research and directs the students. addition, teachers should be able to In anticipate and predict the results that students will achieve. As a result of studying such situations, students understand the interrelationship between scientific phenomena and information. It is important to know scientific phenomena, to understand their importance, to understand the level of of acquired knowledge importance and competences. Students' imaginations are stabilized when they achieve certain results in research activities. In this process, students' interests and needs for knowledge are formed, and they, in turn, create other interests and needs. As a result of this, they develop

competencies necessary for research activities. The cognitive activity of students, which has arisen as a result of studying scientific phenomena and information, reduces their physical and mental load, and makes it easier for them to understand the content of educational materials. Students are always given new tasks to develop their cognitive activities.

It was observed that the performance of such tasks related to research was high. As a result of setting research tasks in front of students in class and extracurricular activities, they feel like scientists. They consider themselves capable of breaking news.

As students acquire new knowledge independently in the process of research, they believe in their naturalness and authenticity. Such knowledge will be logically connected with the scientific information available in the minds of students. This directs them to a new research activity. Their level of theoretical knowledge, scientific concepts and information perception will be accelerated and their understanding of their content will have a logical basis. Productive competencies are formed in them. They pay special attention to students' cognitive activities.

In the second stage, a research situation with a partial research character is created. Students learn examples of research activities with the help of the new scientific information they have acquired. In this process, teachers clearly imagine the directions of research, but cannot predict their results. They set one or more problems for students to solve independently.

At this stage, it is necessary to solve the following tasks: to follow the principle of historicity in acquiring knowledge; development of students' independence and activities; creating an internal desire to master knowledge; interest students in practical activities.

Research activities of students are the basis for creating research situations. In this process, they are required to work creatively on the content of educational materials. As a result of this, students develop the competence of creative thinking about their personal activities. Students will have the competence to ask questions using the answers. As a result of developing students' interest in their activities, thev develop the competencies of inquisitiveness. In this process, it is important for students to communicate with each other about the research experiences of different scientists. As a result of the comparative study of the work methods of scientists who conducted research on the same issue in different periods, students learn research methods. In the process of interaction, students discuss the ways and methods of conducting research of the scientist they have chosen. They thus discuss in detail the rationale of research. its essence, the reasons for success and failure. and apply these experiences in their research activities. In the process, they learn to find their own mistakes and defend their opinions. They also acquire the competence to listen patiently to the opinions of their classmates. Therefore, it is appropriate for teachers to organize frequent discussions and debates in classes and extracurricular optional hours and group activities.

In this process, students approach theoretical knowledge, scientific concepts and information based on a specific choice. They also identify scientific phenomena that are important and irrelevant to the progress of the research. Students compare the scientific evidence they understand with their own and their peers' points of view. In this, students begin to evaluate the social importance of theoretical knowledge, scientific concepts and information. Students will make use of the experiences they have applied during their activities in their research and practice.

Working in small groups is effective for proper organization of students' research activities. Discussion of the results of students' research activities is carried out in the form of a dialogue. In this process, students exchange information and share their opinions about research results. In this way, they understand the essence of scientific phenomena. They determine the direction of future research. For this, they define their fields of activity. As a result, they develop the competencies of analysis, classification, generalization, popularization. This type of work is recognized as educational research activity of students.

They try to use knowledge from other academic subjects to support their views. This creates logical connections and logical observation in the minds of students. The students' level of theoretical knowledge, scientific concepts and understanding of information expands, and the theoretical knowledge they acquire begins to acquire a professional character. They acquire the competence to evaluate scientific phenomena in a truthful and generalized way.

The third stage is the situation of inquirybased research. In this, students carry out research activities with an ambiguous content. As a result, the research competences that students have are demonstrated in an individual way. They acquire the competence to make a true assessment of scientific phenomena. They set goals for themselves in order to carrv out certain scientific experiments in the future and work towards achieving this goal. At this stage, the teacher knows well the methods of scientific research, but he, along with the students, is also unaware of the ways and results of research. To achieve success in this process, the teacher must activate the inner senses of the students.

At the end of the stage, students claim high evaluation of the results of their activities. For this, they have a strong desire. They try to prove the importance of their actions, they want the results of their research to be fully applied to practice.

The following tasks are set before this stage: to give a social direction to the knowledge acquired by the students; follow the principle of gradualism in acquiring knowledge; increasing independence and activity of students; to create an inner desire in students to acquire knowledge and think about it; such as applying acquired knowledge to students' practical activities.

All such tasks are carried out in the process of tests and communications. Students exchange ideas during discussions, debates, open discussions. It ensures students' personal participation in research activities. It allows students to socially orient the acquired knowledge, acquire knowledge, competences and skills during the educational process, and develop research and research abilities. In this process, students acquire the competencies of solving scientific problems, understanding them, analyzing scientific phenomena, and critically approaching the obtained results.

In this way, a new meaningful activity is formed in students. Scientific phenomena and information are firmly established in the minds of students. They learn to justify their point of view logically with full conviction. Their methodological culture is stabilized, because the knowledge independently acquired by students is socially oriented. In this, the learning process based on collective distribution is organized among students. This creates favorable conditions for students to conduct collaborative research. This eliminates the organization of students' research activities on the basis of one-size-fits-all templates. Such educational processes have an open nature, in which completely new results are obtained. Although such results are evident in science, from the students' point of view they are new and unique. They compare their views with those of their classmates to justify the novelty and validity of their findings. They compare their individual goals with the goals of the students in their group.

Students do not pit their decisions against the decisions of their classmates to avoid embarrassment. If they feel the need to do so, they will begin to defend their point of view, following the norms of scientific debate and dialogue.

In the fourth stage of scientific research, students' subjective attitude towards the studied scientific evidence is formed. Students independently approach conflicting scientific problems and seek their solutions. This ensures the emergence of conflicting situations and scientific points of view in the educational process and extracurricular situations. In this process, he himself determines how ready the student is for research activities. They define research problems independently. They set specific goals for their research activities and independently choose the ways to achieve them. The following tasks are set before this

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process: to form students' competence to justify their points of view scientifically; such as convincing them that all their conclusions are logically based and do not contain contradictions.

In the minds of students, scientific phenomena are reflected in a holistic way. Their methodological culture is unique and bright. They can successfully combine their new knowledge with their existing knowledge. Such students have a stable interest in their activities. They can effectively use creative and intellectual competences in the process of conducting research. As a result of such creative intellectual activity, students' knowledge needs are satisfied.

The formation of a stable methodological culture among students is evident at the first stage of the development of educational situations. In this process, students with great interest begin to master theoretical knowledge, scientific concepts and information that are completely new to them. At the last, concluding stage, students clearly demonstrate their readiness for research activities based on logical foundations.

A number of difficulties are observed in the organization of students' research activities. In the process of overcoming these difficulties, the methodological culture of students is stabilized. These challenges include:

- intellectual difficulties;
- experience difficulties;
- technical difficulties;
- demonstration difficulties;

- difficulties in interpersonal communication.

Students' research activities are their independent activities. This process is led by the teacher. It helps students overcome difficulties and predicts the results of activities. In this way, during the learning process, the teacher stabilizes the methodological culture of the students. Pedagogically supports students in determining specific tasks and methodical methods based on their characteristics, analyzes their successes, shows ways to overcome difficulties, and encourages them to look for shortcomings and mistakes. Teaches students to understand their problems and shortcomings. This makes students active in research. As a result, their readiness to make independent decisions increases. Students acquire general directions of research activities. They include qualities such as independence, responsibility, openness to communication, activity, striving for a goal, hard work, not being afraid of difficulties, and entrepreneurship.

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