

# THE ROLE OF INTERACTIVE TEACHING METHODS IN THE DEVELOPMENT OF MENTAL ACTIVITY AND THE ASSIMILATION OF STUDENTS' KNOWLEDGE AT A UNIVERSITY

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**Abstract.** *This article is written with the aim of theoretically substantiating the role of interactive teaching methods in the development of mental activity and the assimilation of students' knowledge at a university. The following tasks were identified and solved: to study the psychological and pedagogical foundations of the development of mental activity of students of 1-2 courses; to identify the relationship between the development of mental activity with teaching methods and the development of students' knowledge; to develop a methodology aimed at the effective assimilation of knowledge using interactive teaching methods of students in universities; to determine the features of the development of knowledge in girls and guys in the process of introducing interactive teaching methods; to carry out experimental work to verify the effectiveness of the proposed methodology in improving the development of knowledge by students in the process of implementing interactive teaching methods.*

**Keywords:** *interactive ways of teaching, thinking activity, knowledge, higher educational institutions.*



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## INTRODUCTION

In modern pedagogical science, there is a need to create an ideal model of learning in which the essence of learning is a reasonable combination of pedagogical management with its own initiative and independence, student activity. Such a learning model is based on the totality of current knowledge about the mechanisms of learning, goals and motives of cognitive activity and is suitable for the realization of the main goal - the comprehensive and harmonious development of the individual.

In modern pedagogical science, the teaching method is a complex, multidimensional, high-quality education. I.P. Podlasiy notes that "If we could build his spatial model, then we would see a bizarre crystal sparkling with many faces and constantly changing its color" [7]. It should be noted that the teaching method reflects the goals, objectives, content, principles and forms of training at all levels of educational institutions. Learning is an extremely agile and dialectical process, and teaching methods take into account this mobility, changes that constantly occur in practice. Proceeding from this, the introduction of interactive teaching methods in modern higher education is considered inevitable, and the relevance of the research topic is determined by the obvious importance and urgency of optimizing the learning process and studying the psychological and pedagogical factors that affect students' learning.

## Literature Review

The theoretical, methodological and practical issues of interactive learning, computerization of education are the subject of numerous studies by Uzbek, Russian and foreign academic teachers. The work is devoted to the issues of training personnel for the computerization of the educational process and the use of interactive teaching methods, new information technologies, the development of creativity with the help of innovative teaching technologies, including the theory and practice of teaching vitagenic technology A.A.Abdukadirov [1], R.H. Dzhuraev [5] N.N. Azizhodzhaeva [2], I.P.Podlasiy [7], E. G. Babaskina [3], U.Begimkulov [4], P.Ja. Gal'perin [6], N.D. Galskova [7], B.S. Gershunskij [8], Dzh. Gilford [9], Makhmudova D. [15, 16], [16], Isyanov R. [11], K.Rustamov [11], H.Sharifhodjaeva [11] N.R.Rustamova [11, 18, 19, 20, 21], U.K.Tolipov [25], Gaipov Dj.N. [17], D.I.Ruzieva. [22, 23], N.Veraksa [27], Kadirova M. [12, 13], M.Rifati [17], L.S.Vigotskiy [28], I.Ja.Lerner [14], I.N. Ilhamova [10] and others.

The studies made a significant contribution to the development of the theory and practice of learning. They contained original ideas, theoretical generalizations, practical recommendations aimed at improving teaching methods, the development of students' mental activity. At the same time, an analysis of theoretical and practical research has shown that the role of interactive teaching methods in assimilating the knowledge of university students is still poorly understood.

## Methodology

An analysis of the scientific literature and the practice of the educational process in the educational sphere made it possible to single out the following contradictions:

- between the needs of modern society to increase the level of knowledge by students and the theoretical lack of development of the connection of teaching methods in the development of mental activity and communication;
- between the need to establish the mutual influence of mental activity in the assimilation of knowledge by students.

All these contradictions influenced the assimilation of knowledge, increasing the level of mental activity of students.

The above contradictions made it possible to identify the research problem, which consists in updating, searching and choosing teaching methods in improving the learning of students in universities of the Republic of Uzbekistan.

The problem predetermined the choice of the topic of the dissertation research "The role of interactive teaching methods in the development of mental activity and the assimilation of students' knowledge at the university."

The objectives of the study are to study the role of interactive teaching methods in the assimilation of educational material and the development of students' mental activity at a university, and the determination of types of mental activity.

The object of study is the learning process in universities of the Republic of Uzbekistan.

The subject of the study is the role of interactive teaching methods in the development of mental activity and the

assimilation of educational material by students in the classroom.

The hypotheses of the study of the activity of mental activity, and the assimilation of knowledge by students is provided if:

- correctly applied interactive methods in the learning process;
- A link will be established between interactive teaching methods and the process of mastering knowledge.
- conduct experimental work to identify the role of the interactive teaching method in the development of mental activity and the development of knowledge by students.

To achieve this goal and test the hypothesis, it was necessary to solve the following problems:

1. To study the psychological and pedagogical foundations of the development of mental activity of students of 1-4-year courses.
2. To identify the relationship between the development of mental activity with teaching methods and the development of students' knowledge.
3. To develop a methodology aimed at the effective assimilation of knowledge using interactive teaching methods for students in universities.
4. To determine the features of mastering the knowledge of girls and guys in the process of introducing interactive teaching methods.
5. To carry out experimental work to verify the effectiveness of the proposed methodology in improving the development of knowledge by students in the process of implementing interactive teaching methods.

To solve the tasks and test the hypothesis, the following research methods were used:

- theoretical analysis of scientific literature on philosophy, pedagogy, developmental and educational psychology;
- study and generalization of advanced pedagogical experience in the development of students' mental activity in the use of interactive methods in the learning process.
- experimental work with the introduction of questionnaires and questionnaires to determine the types of mental activity of students.
- approbation of interactive teaching methods for the development of students' mental activity;
- statistical analysis of the results.

## Theory

Optimization and implementation of the principle of humanization of the educational process requires not only a review of the entire content of training, but also recognition of the creative nature of the personality of each student. The presence of internal activity in it leads to the rejection of the assimilation of a certain amount of relevant knowledge as the main goal of the educational process. The main goal is the holistic development of the student's personality. Independent, cognitive and mental activity is a means of personality development, revealing its potential internal abilities. Therefore, the task of the teacher is to provide such activities in the classroom, which is facilitated by modern interactive technologies. In this case, the student himself opens the path to knowledge. The assimilation of knowledge is the result of his activity.

Active or interactive methods involve stimulating cognitive activity and student self-reliance. This model assumes the presence of creative assignments and communication in the student-teacher system, as mandatory. This method is characterized by its one-sided orientation, namely, for technologies of independent activity, self-education, self-education, self-development, and does not at all teach the ability to exchange experience and interact in groups.

The interactive model aims to organize comfortable learning conditions in which all students actively interact with each other. It is the use of this model of teaching by the teacher in his classes that speaks of his innovative activities.

Interactive technologies are based on the direct interaction of students with the learning environment. The learning environment is the real environment from which students learn for themselves a certain amount of knowledge and experience. The student's experience is the central activator of educational knowledge and the student's personality is the main value in it. The main thing in a personality is the desire for the future, for the free realization of one's own capabilities, especially creative ones, for strengthening faith in oneself and the possibility of achieving an ideal "I".

The creative orientation of training and education allows for a personality-oriented education as a process of development and satisfaction of human needs, as a subject of life, culture and history. The main value of a humanistic personality-oriented learning is creativity, as a way of human development in culture.

The organization of the educational process, the use of interactive teaching methods is aimed at increasing the importance for the student of learning the material, individualizing learning and activating the thinking process.

Therefore, in the process of research, we paid special attention to the correlative relationship between the factors of assimilation of educational material by students and what can facilitate this process.

The leading factor in the assimilation of educational material is the intellectual development of students. The study of the processes of mental activity is considered one of the main elements. In the process of studying mental activity, they provide an opportunity to develop the ability to distinguish the main and secondary signs of each educational material.

A student who can distinguish between the main and the secondary can recognize this educational material among the rest. So, we distinguish cognitive activity as the leading processes of analysis and synthesis. The ability to highlight the essential aspects of the studied object is an indicator of developed thinking. These are such types of mental activity as the ability to independently and competently formulate goals, the presence of creative thinking, the expression of one's own point of view, resourcefulness, and speed of thinking.

The study of mental activity and the assimilation of educational material by students is a rather complicated problem, which involves solving the most important methodological issues of the nature of creativity. sources of development of mental activity, the ratio in this process of biological and social, objective and subjective, individual and social, etc. The complexity of the problem lies in the fact that the internal essence of the phenomenon is inaccessible to direct investigation. Therefore, despite a long history, the study of mental activity and the assimilation of educational material by students remains insufficiently studied.

## Experimental Results

The main stages of the study:

Stage I - search. The current state of the problem was studied in the theory and practice of education, the theoretical and practical prerequisites for the development of mental activity in the educational process of students were identified and made out in the form of pedagogical conditions, the subject, task and hypothesis of the study were specified, its theoretical and methodological base was determined, and the methodology of experimental work.

Stage II experimental work. First, a stating experiment was conducted in order to identify the level of development of students' mental activity, a model was developed for the development of students' mental activity and the technology of its implementation in the university, through a formative experiment, their implementation and testing were carried out, during which the effectiveness of the changes was revealed.

Stage III - generalizing. The analysis and theoretical generalization of the data of the experimental work was carried out, the testing and implementation in the form of scientifically based recommendations for university teachers were carried out to create conditions for the successful development of mental activity and the assimilation of knowledge by students in academic studies, testing materials of the dissertation research in the practical activities of teachers of universities.

Students were selected using cluster sampling. Thus, a task force of four courses was created. Two groups were selected from each course, also by random sampling. As an initial stage, before the introduction of the study, a test was conducted on a sample of respondents. Given the observed variance in each group, the sample size was calculated. The total sample included 240 people, of which 122 were girls and 118 boys.

The scientific novelty of the study is as follows:

1. A scientific analysis of existing theories about the development of students' mental activity in modern psychological and pedagogical science is carried out.

2. Interactive teaching methods and the development of mental activity aimed at the assimilation of knowledge by students are presented.

3. The features of students' mental activity on the basis of gender differences - gender, as well as the ratio of teaching methods to students are highlighted.

4. Based on the regression analysis (dependent variable), the effectiveness of teaching methods in assimilating knowledge and the development of students' mental activity, which are divided into three types, is proved.

Theoretical significance: at the system level, the foundations of the development of mental activity in the classroom are disclosed; The possibilities of traditional and interactive teaching methods on the development of mental activity in the conditions of Uzbek universities have been identified; The mechanism of modeling educational goals and objectives, a set of criteria for the development of mental activity of students by the system of developing education is shown.

The specific results of the study complement the psychological and pedagogical theory and practice on the relationship of mental activity and the development of communication in the assimilation of knowledge by students, and is important in the further improvement of teaching methods in universities.

The practical significance of the study lies in the fact that the developed methods of introducing interactive methods in conjunction with the development of communication, university teachers can use to increase the level of

students' knowledge. The materials of the dissertation can be included in the program of centers for advanced training and retraining of teachers, university professors when giving a course of lectures on "Pedagogy", "Pedagogical Psychology".

The reliability and validity of the results and conclusions are provided by the methodological and theoretical validity of its initial positions, using interconnected complexes, teaching methods adequate to its goal, object, subject and tasks associated with a holistic system-structural, personal-active approach. It is confirmed by the results of experimental work, testifying to the role of types of mental activity in the assimilation of knowledge by students.

## CONCLUSION

In conclusion of the study, the following conclusions are formulated:

1. The actualization of the study of the problem of using interactive teaching methods in the development of mental activity and the development of knowledge of students in universities of the Republic of Uzbekistan proceeds from the following statement:

1) in modern psychological and pedagogical science, rethinking, improving traditional teaching methods and developing, introducing new active, interactive methods contribute to the development, formation of students' mental activity;

2) it is the introduction, improvement of interactive teaching methods that contributes to the development of scientific knowledge, practical skills by students in the classroom;

3) there was a need to use interactive teaching methods, taking into account the types of mental activity of students;

4) through the experimental work to identify the role of interactive teaching methods on the development of students' mental activity.

2. The problem of the development of thinking and thinking activity of students in modern psychological and pedagogical science is one of the urgent, as it is a socially determined process and develops in training, reflects cognitive interests, abilities, levels of students' intellectual strategies.

3. A correct understanding of the learning process itself as a specially organized educational activity in the interaction of a student and teacher, as a result of which social experience is transmitted. Education contributes to the development of the student's mental activity. Existing concepts of mental activity are based on a person's ability to know the world around him under the influence of an adult, in accordance with goals, objectives, principles, methods and forms of learning.

4. The analysis of individual differences in the mental activity of students in the educational process allows us to identify the types of mental activity (synthetic, idealistic, pragmatic, analytical, rationalistic). The student's individuality is manifested not only in the features of temperament, character, abilities, habits, but also in mental activity and communication. It is the differentiation of categories of an individual, personality and individuality for educators that is the methodological basis for the organization of pedagogical activity.

5. In the development of mental activity and the assimilation of knowledge, the role of communication is great. During communication, a dynamic flow of information is exchanged, accompanied by experiences. This stream, in its content and form, has a huge impact on students, forming an attitude towards others, ways to solve problems and shaping a personality.

6. The use of interactive teaching methods in the educational process changes the interaction of the teacher and students, ensures the activity of students, encourages independent search, forms life skills, promotes changes in behavior, attitudes, the formation of new relationships, creative, active personality.

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