



## **INTERACTION OF INNOVATION AND INTEGRATION IN THE EDUCATIONAL PROCESS**

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### **ABSTRACT**

One of the important conditions for improving the quality of theoretical and methodological training of teachers in pedagogical activity is the systematic unity of general education and special disciplines, which is carried out in interdisciplinary communication. In a number of studies conducted in recent years, the need for an integrated approach to the educational process is noted.

### **KEYWORDS**

Interaction, innovation, integration, educational process.

### **Introduction**

The effective assimilation of scientific knowledge by future teachers in them, in combination with the formation of pedagogical knowledge and skills, also helps to study the relevance in the educational process, which belongs to individual sections of the sciences. Such integration between individual sections of the subjects taught in the process of pedagogical education reflects holistic concepts about the theory and practice of pedagogical activity, as well as the inter-subject essence.

From a philosophical point of view, integration is not a simple Union of elements into one whole, but its development, a system that contributes to the emergence of new properties that were previously not characteristic of these elements, as well as their activation, interrelationship. And interdependence means interaction. In modern research, it is believed that integration, on the one hand, determines the role of an internal reserve for the development of scientific knowledge, and, on the other hand, integration is a qualitatively new type of mutual development of Sciences, characteristic of modern conditions for the content of Sciences.

It is noted that "integration is directly related to the development of scientific and technical progress." Integration is also recognized as a factor in ensuring the interrelationship of the sciences [2]. In our opinion, this range of thoughts in question is a multifunctional phenomenon, differing in content depending on the area of application.

This is due to an increase in the number of complex problems that can only be solved at an interdisciplinary level. The holistic construction of the didactic process has great technological capabilities. The existing experience in the systematic implementation of Education based on an integrative approach has not yet been widely introduced in the practice of higher educational institutions. Also, the perception of students in the process of teaching specialist subjects is largely adapted to a limited range of phenomena under consideration. This, along with creating a tendency

towards stereotypical thinking, limits students ability to acquire holistic knowledge, theoretical-methodological-creative activity.

Modern education cannot be imagined today without comprehensive computer technologies. Because information and communication technologies take the field as an effective means of solving theoretical and methodological problems. Therefore, it is important to form the theoretical and methodological training of students on the basis of an integrative approach in an informed educational environment. Also, interdisciplinary connection can also serve as the basis for the formation of a qualified specialist capable of creative activity.

In the process of preparing for pedagogical theoretical and methodological activities, on the basis of an integrative approach, the opportunity is created to develop and develop excellent educational content, which is scientifically and methodically based, together with the formation of skills for training in professional activities.

Zero the main task of modern education is to reveal the abilities of future specialists on the basis of high technologies, prepare for life and theoretical-methodological activities, release competitive personnel into the world arena. It should also prepare each student so that he can independently set serious goals for himself and achieve them, skillfully respond to various theoretical and methodological situations. And it is desirable to achieve this on the basis of an integrative approach to the pedagogical process.

In the current new socio-economic conditions, achieving effect in an educational system that meets the requirements of changes in the market economy is more relevant than ever. This is because the wide range of information that is directly presented to the Today's learner also raises the needs of training them on the basis of an integrative approach.

We expressed it as follows: by the integration of educational content we came to the understanding that the strong connection between the contents, their transition to each other is jaraèni and their corresponding results and the synthesis of knowledge, types of activities and a holistic system of abilities in this jaraèn.

The integrative approach included the organization of integration work in the educational process, the systematization of skills and competencies related to professional activity, synthesized knowledge. This approach develops the student's ability to apply his knowledge to unexpected conditions.

The term "integration" is understood in the encyclopedic and scientific literature as a process of development in which parts and elements of different genders are united into one whole. Integration of Mathematical Sciences, in particular their composition, refers to the transfer and interaction between each other. The school is described as an analysis of problems related to the integration of Mathematical Sciences, mainly the implementation of internal and interdisciplinary communication. In the dictionary of pedagogical terms, "integration" is the interrelationship of the subjects of study; derived from the Latin word "integratio" meaning rebuilding, restoration, filling; "integral" means complete, whole, holistic. Integration is significant in that it expresses the meaning of organic fusion with each other, mutual absorption, merging with each other to form a new, single stable generalized-holistic idea[3;29 p].

Integration in the Encyclopedia of pedagogy (lot. integratio — from the word recovery, replenishment, integer — whole) - 1) a concept that represents the state of interdependence of parts and functions of a system or organism, as well as the process leading to such a state; 2) the process of convergence and

interaction of Sciences; accompanied by differentiation; 3) interpreted in the way of mutual coordination and unification of the economy.

Organized integratively, the classes serve to comprehensively develop the worldview of students, while incorporating interdisciplinary connections. This process can be carried out both within the framework of the traditional educational system and in the modern educational process. And the specificity of the interaction process-implies qualitative changes in the essence of each component of the Integrative system.

So the Integrative lesson is from the usual lessons:

- any city, compactness, dense scope of the material of the injection;
- the logical conditionality of all-round learning subjects integrated in each boskich of the lesson;
- characterized by having a wide range of information in the teaching material being given.

The problems of the integrative approach in pedagogy are considered in different ways in the works of many researchers.

Fariddin Attor describes his interaction with Tuban thought in his time as: "there is no small thing in this row floor itself, everything is interconnected and complementary" [3; 5-6 p].

So it seems to us that each science is interconnected, and the basis of it is nature.

Founder of didactics Y.A. In his "great didactics", Komensky argued that: "the totality of the interaction, must be studied in the same connection" [4; 54 - p]. From this it follows that any knowledge to be learned must necessarily be carried out on the basis of relatedness, connected. Only then will Nature +man realize one whole.

I.G. Pestalotsi, in opening up the diverse nebula of the interdependence of academic disciplines, puts forward the idea that "in essence, in your mind, all interconnected disciplines should be brought into contact exactly as they relate to reality in nature."

Using data from a number of series of subjects, it is advisable to be able to introduce students to speech styles. In this process, it is necessary for students to study the artistic style in communication with literature, the scientific method in biology, chemistry, physics, mathematics, the method of working papers on the basis of materials from the basics of law. [3;38-p].

In the research carried out, the problem of the interaction of pedagogy with other disciplines is considered, in this process, in addition to the specific aspects of each discipline, elements of dependence are described.

The problems of integrating integration in the educational process into the content of education, revealing opportunities for interaction, an integrative approach to the educational process, the unification of all factors in the educational impact on the student are the problem of most studies.

As a result of the analysis of studies, we can cite the fact that scientists have distinguished a number of categories of integrative education in pedagogy: integrative system, integration process, integrative approach, principles of integration, integrative factors, forms of integration. It is noted that these categories are expressed in their content as follows.

The principles of integration - imply the interconnection of all components of the educational process, the connection between the systems. It is also primary in determining the purpose of education, in organizing the content of teaching, its forms and methods in communication.

An integrative approach is the implementation of the principle of integration in any component of the pedagogical process. Ensures the integrity and consistency of the pedagogical process.

Integral processes are the process of qualitative transformation of individual elements of a system or the entire system.

In our opinion, source analysis is a prerequisite for the successful achievement of research goals of any type. But first of all, this applies to theoretical and methodological research, which has "knowledge of reality "and" reality of knowledge". Therefore, the sources under consideration for the problem of an integrated approach can be covered in the form of the following groups:

1. Group that highlights and analyzes theoretical issues of integration
2. a group that studies the relationship between certain branches and topics of science.

In this regard, in the article "Integralism - the path from simple to complex in the knowledge of life phenomena", three stages of parts and holistic integration are distinguished (the emergence of the system). In this, integration is the connection between parts; when entering the entire composition, the loss of elements of their specific properties (one whole);

it is characterized as a manifestation of the emerging integrity of new properties, both due to the properties of parts and due to the emergence of inter-divisional connections.

In this regard, opinions are expressed about the elements of integration and the features of integrated integration. When integration enters the composition, it is characterized as a manifestation of the emerging integrity of new properties, both due to the properties of the parts and due to the emergence of interdependent connections.

It is important to realize that any integration involves a process of division, that teachers should not look at integration as "absolute good", and "differentiation" as "absolute evil", and to understand these thoughts. Because, the multidimensional view of integration illuminating the specificity of integration and stratification processes in the educational process, the content of differentiation and differential relations, contributes to the angab-understanding of integration[5; 27 p.]

It is also significant that the terms "integration", "process", "integration and innovation " are included in science. This raises the position that "old ones should not be allowed to fall apart, while the integration of the new system is on the agenda". Also, reflections on the relationship of integration, assimilation and dissimilarity, the Integrative side of adaptation, the unified whole and various stages of integration, the interaction of concepts contribute significantly to the understanding of the essence of integration in the educational process[5; 27 p.]

It seems to us that these proposed ideas are used when considering the invariable properties of integration in the context of modern teaching.

Genetic aspects of integration are also analyzed in the scientific literature. In particular, approaches to determining the types, baseline, levels of integration are more prominent.

Representatives of the second group, in turn, are represented by the emphasis on the areas of the Integrative sphere-the connection of socio-humanitarian, natural-scientific knowledge and the thinking of the technical-social sciences. "The main thing here is illuminated through the content of the relationship of mutual cooperation [5; p.108].

Highlighting the problem of interaction of the humanities in the development of Natural Sciences, as well as revealing the objective foundations of the relationship between technical and Social Sciences, is a research problem of representatives of this group.

Many scholars have commented on technology and its effective effect on educational efficiency, initially suggesting and using technology "without human adaptation" was not possible, but this later influenced the development of a conceptual apparatus that included a number of terms of an

“anthropomorphic” nature, and thus gave rise to views on “the interrelationship and dependence of human and technical existence”. The work, titled “ways of interaction of social and Technical Sciences”, reflects on the foundations of the relationship of interaction between the general sciences and, in particular, social and technical sciences. Also, attention will be paid to the main essence of this relationship in relation to each other.

Taking into account philosophical and scientific, psychological sources makes it possible to understand the pedagogical aspects of integration. It is argued that the formation of a holistic picture is important in research pertaining to the group. Also “ ” final isolation and self-isolation would be harmful for the sciences to demand “I” because it adversely affects the development of theoretical-methodological activities” [5; 272-p].

From pedagogical research, it is known that at the end of the 20th century, the emphasis on a holistic approach to the study and description of a person increased. In the works of domestic philosophers, attempts are observed to combine the rational and irrational aspects of human activity.

In the philosophical and scientific literature, there are different views on the problems of pedagogical integration and its solution. Since human thought in this regard is saturated with an increase in knowledge of the origins of various disciplines, it sets the task of learning to take effective countermeasures that give them the opportunity for synthetic perception. Accordingly, the measures are expressed in the following:

- a) solving both practical problems and scientific-theoretical problems in the educational process in interdisciplinary communication;
- b) to attach importance to the widespread use of cybernetic machines in the educational process;
- C) the use of methods that ensure the absorption of skills of independent acquisition of knowledge in communication at all stages of education, etc.k.[4; 132 P.]:

Strengthening the Integrative trend L.S. Forming the content of vigotsky's “thinking and speech”, the fact that in childhood in the work the relationship of emotional and mental components in its development, a holistic whole structure of a person, in its initial and subsequent development, was evidenced by the inseparability of rational and irrational. From philosophical views, it is known that with the emergence of rationalistic and irrational paradigms of understanding and explaining the world and man, scientists began to have the task of determining their potential for influence in interaction. This is important for several reasons. [4; 224 P.].

The first appearance of this reason is significant in the fact that within the framework of several concepts, ideas, holistic knowledge, divided between different forms, the main ideas of different disciplines are formed. Because such concepts are characterized by commonality, constancy, and variability. [4; 60-66 P.].

The second reason for the task of determining the possibilities of influence in interaction is that nature and society are initially one whole: they combine both rationalistic and irrational components. The lack of awareness of their interdependence may make it impossible to use acquired concepts in unforeseen situations. This situation causes partial, only unilateral inefficient application of knowledge. Therefore, it is desirable that the study of personality is carried out in the interconnection of classical and modern methods of logic.

The irrational world cannot be studied by the usual methods of formal logic. Because it was deemed “defeated “and” accidental”. The question of intelligent and irrational synthesis in the understanding of human essence is considered in Philosophical Research, and classical philosophical thought is



revived through the open fusion of rational and irrational. It is in turn based on the language of scientific ideas, while being free from strict restrictions. [7; 208 P.].

To some extent, the synergistic paradigm helps the individual overcome the difficulties of the interaction of rationalistic and irrational approaches in the development and implementation of integration categories. Hence " at present, any truly creative process is associated with the integration of traditional and non-traditional knowledge. It is at their junction that great advances are made in new areas, often offering vivid and original solutions to the most complex problems" [7; 208-P.208]. In the content and essence of integration, the emphasis is placed on the "subject of education"-the acquisition of personality traits. To this end, the terms" integrity"," harmony "and derivatives from them – " harmonious (holistic )personality"," harmonious thinking"," general pedagogy " and other terms are actively used. The concepts of" integrity"," harmony "and" integration " bind to a single semantic node[8;p. 93].

Integration is"important to consider both in the broad sense of the word and in the narrow sense". In the first case," integration " means to bring the content of education into a single didactic form for the preparation of a wide range of professions that are available in modern production and training of personnel, combined on the basis of scientific and technical, socio - technical, psycho-physiological peculiarities. [4; 43 p.].

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