METHODOLOGICAL FEATURES OF INTEGRATED TEACHING OF SOME SUBJECTS ON THE BASIS OF INFORMATIZATION

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ABSTRACT
The article deals with the problem of educational system of High Schools in Kazakhstan. It gives information about the development and systematization of integrated teaching. The systematization of opinions about the essence, content, and function of interdisciplinary integration indicates that interdisciplinary integration can be viewed as a condition for increasing cognitive activity of students. The idea of integrated learning based on interdisciplinary communication. While these subjects are based on the general teaching methodology, teachers often do not pay more attention to their connections. This is a matter of the need to consider the subjects of the individual subject matter in interrelations and relationships.

The need to make integration into the education system has become one of the leading trends in higher education in the development of highly qualified professionals.

The integration of disciplines at the higher school helps to increase students’ interest in learning and cognitive activity, to develop their self-esteem, thinking skills, to organize the educational process. The main contradiction in the integration process is inherent in integration and differentiation.

We focused on the development and systematization of the idea of integrated learning using the relationship between disciplines and the possibilities for the effective use of this process. In this regard, we have found that large amount of scholars are devoted to the teaching of the disciplines.

In classical didactics, the idea of integrated learning based on interdisciplinary communication starts with Y.A. Komensky. The great didactic: "The things that have to do with one another need to be trained to show that connection." He also said that the teacher could achieve the formation of a unified learning process based on interconnection between the disciplines. Many teachers have developed this idea further. The next representative of classical didactics,

K. D. Ushinsky, demonstrated the psychological and pedagogical bases and the didactic sense of effectiveness of integrated learning using links between disciplines. K. D. Ushinsky considered the idea of integrated learning as a part of systematic learning on the basis of interdisciplinary communication. The keystone of the teaching, as shown by the scientist, said: "Without knowledge of the systematic, chaotic fragments in the beginning, the master himself cannot find it. The skillful teacher focused not only on learning about the subject but also about the development of the mind".

The ideas of the Great Teacher in the integration of ideas V. Y. Stakharin, N. F. Bunakov, V. I. Vodovozov and others. The pedagogical scientists continued to integrate disciplines. The progressive methodologies of the past century have shown that teachers have the ability to master their professional skills by integrating the content of different disciplines. Although teachers and practitioners have not been able to use the best practices of advanced teachers and methodologists, they are no exception to the success of teachers and progressive teachers.

There should be substantial communication between disciplines for integrated learning subjects. There are more than 30 interdisciplinary definitions. Let's just go to some of them.

Among these definitions, I. F. Boryshenko’s interdisciplinary communication is a conceptual component of interdisciplinary concepts and is based on the concept of G. F. Fyodorov as a
pedagogical category that combines it with the use of interdisciplinary communication to emphasize the essence of the notion of "integration" we have found.

A. A. Beisenbaeva: "Integration is not simply a combination of science, but a sophisticated, newly-organized internal unity that allows for a deeper understanding of the laws of nature."

According to N. T. Kostyuk: "Integration is mutual integration, cohesion, coordination of knowledge."

Analyzing these definitions of concepts of "integration", we decided that it is a phenomenon that it is inherent in all branches of science, and its emergence in pedagogy.

The value and functional value of embedding are provided in S. I. Arkhangelsky's works. He believes that teaching is the only way to implement the principle of regularity. S. I. Arkhangel'sky always organizes the educational process with its goals and objectives; with respect to the creation and functioning of general, individual learning systems that connects learning facilities and tools. Integrating here is a systematic approach to learning. Independence of the components in the learning process. Their interaction ensures that these components work independently, creatively explore and master a particular subject, improve their own way of working and learn forms and methods. In addition, while each component of a single component is in direct contact with other components, it solves its own tasks in accordance with the general objectives of the training. As a result, interdisciplinary connections are established in the educational process, the single tasks of learning are solved and ways of effective functioning of the educational process of the general education are determined.

The systematization of opinions about the essence, content, and function of interdisciplinary integration indicates that interdisciplinary integration can be viewed as a condition for increasing cognitive activity of students.

The findings of the concept of "embedding" and the analysis of its essence, content, and research have led to the following conclusion:

- The essence of inclusion - the orientation of the well-thought-out pedagogical process in accordance with the principle of regularity of teaching;
- Contents content is based on the prevention of inappropriate theoretical repetitions. This can be achieved by building a whole educational process based on a logical basis of the program curriculum and coordinating "boundary knowledge" in teaching various subjects;
- Functional value of integration. The objective of the integrated discipline is to develop students' qualitative professional education and cognitive abilities, to form a unified scientific approach, to create the conditions for effective use of the knowledge gained in the future.

M. N. Berulova, in her research, analyzes the forms and methods of integration of the curriculum, offered the following three levels of integration:

- The whole level is characterized by the emergence of a new subject matter of inclining nature with a discipline of study;
- Didactic accumulation level - the main didactic problem here is the study of the new learning material on the basis of integration in the general lessons;
- The level of interdisciplinary communication is characterized by the solution of didactic tasks, such as the consolidation of theoretical knowledge and the generalization and systematization of data in the Integrated disciplines, in the formation of a scientific approach to the unity of the world.

There are many disciplines in the higher education institution and various forms and types of learning are used. While these subjects are based on the general teaching methodology, teachers often do not pay more attention to their connections. This is a matter of the need to consider the subjects of the individual subject matter in interrelations and relationships.

Interdisciplinary integrated training is a consideration of which subjects can be closely linked to one another in order to effectively solve learning objectives.

Many researchers are aware of the problem of integration in the form of a broad range of "integration" and orientation. They need to be organized in a variety of disciplines to make the subject of the same subject relevant to the subject of the second discipline, in which it is necessary to take into account the relative relevance of individual themes, assumptions, conclusions and laws in other disciplines.

The mechanism of interdisciplinary integration is associated with the implementation of the interpretation, design and forecasting of the discipline involved in solving problems. From a single perspective, the integration mechanism involves the preparation of the knowledge gained to students by introducing them into cognitive and professional decision-making. Complete solution of thematic issues as a result of the introduction of Interdisciplinary Integration into the learning process, the
complex requirement of the "apparatus" of students, the ability to use it and the formation of interdisciplinary skills.

Integrating various disciplines reflects general trends in modern science. This bases the general methodological unity of material world and opportunities for its comprehensive learning. That's why learning through natural sciences, including English and informatics, helps to integrate their dialectical, terminological, and systematic thinking of students.

Summing up the opinions about integration, it can be said that it is now a new stage in the organization of the learning process. It also reflects the condition, method, and outcome of the teacher's activity, aimed at improving the effectiveness of the educational process on the basis of the acquisition of knowledge and methods of learning and information accumulated by the students of Integration.

The analysis of scientific literature has shown that there is still no real system of interdisciplinary communication. Many authors, including Z. V. Zverev, V. N. Fedorova, L. Yorina and others receives content, timely and guidance criteria based on systematization. And others have links, laws and concepts. Now, there is no specific criterion for a single author, and they differentiate between common types of contacts.

From this analysis we have made the following conclusions. Interdisciplinary communication, on the one hand, is characterized by isolation of disciplines, originality, and, on the other hand, with its attitudes, integration. Based on this conclusion, the question of integration in the substantiation, definition and classification of interdisciplinary connections shows how the content of the subject can be related to the content of other disciplines.

In V. D. Simonenko's researches the requirements for today's students are grouped as follows:

- First, to continuously improve self-education, to find and learn new types of activities;
- Secondly, it has developed an intellectual, modern technology that can be mastered as an individual and can work on it;
- Thirdly, it is inventive and acting creatively;
- fourthly, the group should be the creator who uses his creative activity in the direction of society's. At the same time we drew attention to the correctness of this conclusion of academician V. V. Krayevsky; "The teacher should consider the game as a predictor of its ability to combine the theory of practice with the practice, in other words, its compilation, design, and integration of disciplines with knowledge." The content of education in pedagogical educational institutions, the purpose of pedagogical education, the indicators reflecting the teacher's personality V. R. Krayevskiy, M. A. Kudakulov, N. F. Talyzy and other scientists' works. Based on psychological research, A. F. Zeer identified the following main competencies as indicators that reflected the teacher's personality: social, professional competence; improvement of cognitive abilities; personal development skills; a good development of sensory (professional, sensory, and behavioral) qualities. The scientist draws attention to the content of education that he receives in pedagogical educational institutions, the basis of which is the competence required for the profession, and that the student who has passed such training also concludes that his competence is reflected in his work.

We emphasize that the emphasis is placed on the competence of students in higher education, education for informational purposes, interdisciplinary communication, not only programs and content, but also the development of methodologies and manuals.

REFERENCES

2. Kudakulov M. A. The main features of integrated teaching// 2012 - №5
3. Berulova M. N. The methods and forms of integration // 2010 - №86