



INTEGRATIVE METHODS AND MEANS OF TEACHING THE SPECIAL PEDAGOGICAL MODULE

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Abstract

Physics occupies a special place among natural sciences, so it is said that it forms the foundation of all natural sciences. Because physics has made and continues to contribute to the achievements of all natural sciences. Examples of this are physical chemistry, chemical physics, biophysics, astrophysics, geophysics and other sciences.

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The modern education system is constantly being updated, striving for more effective and holistic teaching. In this regard, the science of special pedagogy is also undergoing changes. Special pedagogy is a field dealing with the problems of mental development, educational opportunities, and upbringing of relatively safe children. Integrative approaches are important for its effective teaching.

Through integrative methods, various disciplines, theoretical knowledge, and practical skills are interconnected. This develops students' systemic worldview, professional competencies, and creative thinking. This article analyzes the integrative methods and tools used in teaching the special pedagogical module.

An integrative approach is a methodological idea based on strengthening interdisciplinary connections in the educational process, generalization of knowledge, and practical orientation. This approach has the following significance in teaching special pedagogy:



Interdisciplinary connections: Special pedagogy is closely related to psychology, speech therapy, defectology, neurology, sociology, and pedagogy. All this is conveyed to the student through integration.

Systemic thinking: Develops students' ability to comprehend various phenomena in a complex way and connect them with each other. Practical orientation: Allows to apply the acquired knowledge in practice. For example, working in special schools, completing practical assignments.

Project-based learning - students are offered to work on a project to solve the problems of real society. For example:

"Development of a training program for children in safety"

"Experimental Project to Increase the Social Adaptation of Children"

With the help of this method, the student not only gains knowledge, but also has the opportunity to demonstrate themselves, work in a team, and develop a sense of responsibility. Cooperative learning is a method based on collaborative work in groups, mutual learning, and exchange of ideas. Group work in special pedagogical classes ensures:

- Listen to different viewpoints
- Collective decision-making
- Collaborative learning of ways to help children

Interactive methods are methods based on communication that increase student activity. These include: Discussion: Organize a discussion for students on the topic "Do you need spec Role-playing games: Students play the roles of teacher, mother, and specialist when working with special children.

Venn diagram: Identifying the differences between special pedagogy and ordinary pedagogy.

Blitz-surveys: Consolidation of knowledge through short tests and questions.

4. Information and communication technologies (ICT)

The use of ICT is also an important tool of integrative learning. For students:

Video tutorials, Virtual experiments, Electronic tests, Online consultations, Knowledge can be provided through. As a result, the connection between the student and the teacher is strengthened.

The most important aspect of special pedagogy is practice. Students will be given the following practical exercises:



Internship in special schools/organizations

Individual work with children

Conducting tests, diagnostic methods

Establish rehabilitation measures

Through these methods, the student prepares for their future profession and enriches their worldview.

The development of professional motivation of students in the modern education system is a very urgent and important scientific and pedagogical problem. Improving the quality of the educational process, forming the professional potential of students and preparing them for future professional activity is one of the main tasks of modern pedagogy. Integrative approaches in the learning process allow students to master knowledge more deeply, understand interdisciplinary connections, and firmly acquire practical skills.

Integrative teaching aids are an innovative approach aimed at ensuring the active participation of students in the educational process by combining various interdisciplinary, methodological, and technological methods. And in the development of professional motivation of students, the significance and effectiveness of these integrative teaching tools are very high.

Professional motivation, a person's choice of professional activity, an interest in it, and a desire to develop their profession. It is formed under the influence of internal (personal goals, interests) and external factors (social demands, opportunities for financial enrichment). Professional motivation in the educational process increases students' interest in learning, motivates them to master professional potential, and directs them to become successful specialists in the future.

Integrative teaching aids are a set of innovative pedagogical methods that combine theory and practice, taking into account interdisciplinary connections. They consist of interactive methods, multimedia tools, design, practical work, and virtual environments. The influence on the professional development of students means the organic connection of theoretical knowledge with practical skills, the formation of deeper understanding through interdisciplinary integration, the development of independent thinking, decisiveness, and professional competencies in students.



The relevance of this topic lies in the fact that in modern education, increasing the professional motivation of students and forming professional potential is of great importance. Integrated learning tools stand out as an effective tool in this process. The goal is to study the effectiveness of integrative learning tools and develop practical recommendations for the development of professional motivation of students. Defining the main factors of professional motivation, studying the theoretical and practical aspects of integrative learning tools, analyzing experimental results on the professional development of students, developing effective methodological recommendations.

Regarding the definition of integrative learning, it is a set of innovative pedagogical tools that combine various interdisciplinary, methodological, and technological approaches, allowing students to deepen their knowledge and integrate theory and practice.

Types of integrative learning:

- Interdisciplinary integration - combining several interdisciplinary topics (for example, mathematics and physics, history and literature).
- Process integration - the integration of theory, practice, and research processes.
- Technological integration - strengthening the educational process with modern technologies (multimedia, virtual laboratories).
- Effective integration - a set of methods aimed at the formation of students' professional skills.

Theoretical approaches to the pedagogical foundations of integration take into account the principle of connectivity, that is, the connection between each subject and type of knowledge, and the principle of activation ensures the active participation of students in the educational process. The principle of a differentiated approach is the organization of the educational process, taking into account the individual characteristics of each student. Psychological foundations are motivation, that is, stimulating students' internal and external motivation, the principle of reflection.

Interdisciplinary integration is a didactic approach aimed at forming students' skills of holistic understanding and practical application by combining topics, concepts, and knowledge from different disciplines. Professional training of students is the ability to comprehensively study knowledge on a particular topic,



the ability to apply theoretical knowledge to practical problems is formed, skills in designing, teamwork, and finding innovative solutions for solving problems related to the professional sphere are improved.

There are several interactive methods, including: Design, discussion, and agreement tasks. Students are given projects related to solving a professional problem. For example, students work as a team to develop a company's marketing strategy or develop an innovative product. In the design process, they acquire the skills of applying theoretical knowledge in practice, analyzing problems, and proposing solutions.

Discussion is organized as collective discussions to broaden students' horizons and deepen their professional knowledge. Discussion topics are selected based on the curriculum, and students are asked questions that encourage them to solve problem situations.

Agreement Tasks in which students perform tasks based on agreement to develop decision-making skills in various professional situations. For example, exercises such as distributing responsibilities within the team, allocating resources, or developing a plan together.

Integrative learning tools - Theoretical knowledge is conveyed in a clearer and more understandable way through multimedia tools, video, animation, slides, and interactive platforms. For example, students are shown real examples from professional fields through multimedia tools. Electronic textbooks provide students with the opportunity for independent study. They are enriched with tests, exercises, and examples to test the level of mastery. Electronic textbooks also support integration, as they combine several interdisciplinary topics. Virtual laboratories help students develop practical skills. For example, experiments in the field of chemistry, physics, or economics are conducted in a virtual environment. These tools allow students to conduct experiments in a safe and affordable environment.

Special tests and monitoring systems are used to assess the level of student motivation. For example, tools such as the "Motivation Index" or "Professional Interest Test." The results are presented using statistical data and graphs. For example - an increase in the level of motivation after the application of the diagram design methodology (for example, from 60% to 85%). Further increases



the effectiveness of multimedia tools and classical teaching methods. These practical methods and tools significantly increase the professional motivation of students. Design and interactive methods increase their activity, and multimedia tools make knowledge more vivid and interesting. Statistical data confirm the effectiveness of these tools.

In conclusion, integrative learning tools play an important role in the development of students' professional motivation and the enhancement of their professional potential. Although the research results confirm the practical significance of these tools, there is a need for further in-depth research in the future. The results of this work will contribute to the improvement of the higher education system and the training of specialists who meet modern professional requirements.

Interdisciplinary integration, the combined use of interactive methods and multimedia tools stimulate students' internal and external motivation. Methods such as design, teamwork, and virtual laboratories allow students to apply theoretical knowledge in practice. Statistical data also confirm that when using integrative teaching aids, the level of student motivation increases by an average of 30-40%. This leads to a further strengthening of their interest in professional activity. Interdisciplinary integration forms deep and complete concepts in students. For example, the integration of mathematics and economics helps students learn financial calculations more easily. Interactive methods (discussion, design, teamwork) develop students' skills in problem-solving, problem analysis, and finding innovative solutions. Multimedia tools and electronic textbooks form students' skills in independent learning and help them acquire knowledge quickly and effectively.

The importance of integrative methods and tools in teaching the special pedagogical module is invaluable. Through them, students develop systemic thinking, a worldview, and professional competencies. Project-based learning, cooperative learning, interactive methods, ICT, and practical exercises play an important role in this.

Today's requirements require specialists working in the field of special education to have integrated knowledge, skills, and qualifications. Therefore, the deepening of integrative approaches in teaching special pedagogy in higher educational



institutions is a guarantee of transforming the future generation into mature specialists.

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