

METHODOLOGY FOR ENHANCING THE EFFICIENCY OF STUDENTS' INDEPENDENT LEARNING BASED ON AN INTERDISCIPLINARY APPROACH

Ochilov Ulug'bek Olimovich

Asian International University 1st year Master's degree student

Djalilova Zarnigor Obidovna

Associate Professor of the Department of Fundamental Medicine, PhD

Asia International University

Razakov G'ulomjon Abduvoxidovich

Associate professor of the Department of Chemistry and methods of teaching at the National Pedagogical University of Uzbekistan named after Nizami, PhD

Annotation: *Analysis of literature shows that some interdisciplinary learning models emphasize its benefits, while others question its effectiveness compared to traditional teaching, citing limited didactic possibilities. A survey of young teachers (with less than five years of experience) found that over 10% do not conduct integrated lessons. Challenges include insufficient preparation time, lack of teacher collaboration, scarce resources for integrated lessons, and restrictive curricula. The findings can foster discussion and experience-sharing at teacher and methodologist seminars and conferences.*

Keywords: *effective ways, pedagogical universities, independent work*

The urgency of the problem of introducing an integrated approach into school education is due to the processes that are taking place in the world. Most countries are in the process of changing the nature and content of economic development, which are associated with the expansion and strengthening of the role of the so- called knowledge

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economy. Changing the role of knowledge in society requires the restructuring of the education system, which is based on the interdisciplinary integration of various fields of knowledge. The ability to use different types of knowledge in solving practical and theoretical problems is becoming a fundamental resource of post-industrial societies. The integration of scientific knowledge imposes new requirements: there is an increasing need for people who possess multi-subject knowledge and are able to apply it in solving various tasks. Integrated learning is one of the most effective ways to improve the quality of student training. Integrated academic courses have been developed and successfully applied in Europe and America, the content of which includes material from several natural sciences and humanities: physics, mathematics, chemistry, history, world art culture, linguistics, literature, etc. For example, students are offered the course "Sence" (science), combining physics, chemistry and biology. The Integrated Content and Language Learning (CLIL) project was launched in the United States and the European Union, which aims to introduce students to new areas of knowledge and concepts within the framework of already known subjects using a foreign language. The main objective of such interdisciplinary courses is to help students comprehend the learning material. With the introduction of interdisciplinary learning, every education system has become.

The idea of integrated study abroad began to develop much earlier than in Russia. The idea of creating modular educational programs (philosophy - literature, mathematics - natural sciences, etc.) is at the heart of the development of integration. "Integrated days" and "integrated weeks" have become widespread in foreign pedagogical practice. The authors of this idea claim that this approach is effective, as it allows students to develop the skills necessary in the modern world:

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critical thinking, the ability to work in a team, analyze, generalize and propose non-standard solutions. In addition, the integrated methodology is based on a meta-subject approach, which is often associated with teamwork on projects, and this, in turn, contributes to the development of scientific thinking and improves communication skills. Despite the fact that this method is considered in the works of many The idea of integrated study abroad began to develop much earlier than in Russia. The idea of creating modular educational programs (philosophy - literature, mathematics -natural sciences, etc.) is at the heart of the development of integration. "Integrated days" and "integrated weeks" have become widespread in foreign pedagogical practice. The authors of this idea claim that this approach is effective, as it allows students to develop the skills necessary in the modern world: critical thinking, the ability to work in a team, analyze, generalize and propose non-standard solutions. In addition, the integrated methodology is based on a meta-subject approach, which is often associated with teamwork on projects, and this, in turn, contributes to the development of scientific thinking and improves communication skills. Despite the fact that this method is considered in the works of many researchers, it has not been widely used. This is partly due to the education policy and the role of the teacher.

The integration of academic subjects within the framework of socio-humanitarian, natural science, or technological cycles can reduce the constant increase in an already crowded curriculum by integrating learning experiences in an in-depth, holistic manner, providing students with the skills to generalize in one situation and apply this principle to another. According to advocates of antidiscrimination, secondary schools that implement a student-centered integrative curriculum had students

who outperformed students in traditional classrooms on national and state standardized tests and program-based assessments.

The survey was based on the understanding of interdisciplinary knowledge of the pedagogical content of S. A. Anna. Interdisciplinary knowledge is the ability of teachers to perform the following tasks:

1) Work with interdisciplinary content that includes an understanding of concepts using topics outside the scope of the curriculum;

2) apply pedagogical methods and interdisciplinary skills from multiple subjects;

3) identify connections within and between individual subjects, as well as create lessons based on the interdisciplinary interaction of several subjects;

4) Use knowledge about how interdisciplinary research can be used in an educational process in which students connect existing knowledge with curricula while simultaneously presenting new knowledge through contexts from multiple subjects

One of the factors hindering the introduction of integrative curricula in Russian schools is the teachers themselves - their own ideas and their views on themselves as "subject teachers". The main difficulties in implementing integrated lessons in practice include a large waste of time on preparation; insufficient methodological material; due to the fact that the curriculum is very loaded, it is very difficult to include lessons of this type in it; passivity on the part of other teachers, as many are accustomed to conduct standard lessons and it is difficult for them to apply other methods. It is important to promote the professional development of teachers who are able to implement integrated curricula. The training of subject teachers should be complemented by integrated university education, project and research work, which will allow

teachers to successfully apply their acquired skills in practice. Teacher training programs should reflect the best practices and needs of 21st century society, therefore pedagogical universities should implement programs focused on the school integrated curriculum model. Thus, in order to form the teacher's self-determination as an integrator of the curriculum, special emphasis should be placed in teacher training on competencies that contribute to the integration of the curriculum, and teachers should be encouraged to create appropriate curricula. However, it should be remembered that interdisciplinary training programs can promote the development of superficial disciplinary ties or give preference to some disciplines over others.

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