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STAGES OF CREATING SOFTWARE FOR THE FORMATION OF PROFESSIONAL READINESS OF STUDENTS BASED ON AN INTEGRATIVE APPROACH

Babayeva M.A.
Termez University of Economics and Service Department
of Preschool and Primary Education (Ph.D.)
E-mail: maxfuzabobyeva7961@gmail.com
Phone: +998992019044

Abstract
Students are required to acquire certain knowledge, skills and competencies, as well as support them in various life situations. This goal can be achieved through integrated software applications, lessons, and extracurricular activities.

Keywords: integrative approach, software, student, interdisciplinary, education, lesson, knowledge.

Introduction

To master the basics of science, to fully understand the content and essence of the phenomena and processes being studied, it is necessary to use the achievements of various disciplines. In the process of a radical transformation of the education sector based on improving the quality of education, the implementation of interdisciplinary links is even elevated to the rank of state policy. In this regard, our State and Government are adopting a number of laws and regulations. Lessons in integrated software applications help to increase efficiency and make the lesson non-standard. Software is a tool designed to perform a specific type of task on a computer. Software is understood as a set of software tools and documentation for the creation and use of information processing systems using computer technology. The content of the software consists of the following. These are:

The Content of the Training

The program should clearly define the knowledge, concepts and competencies that students need to master. This knowledge and competencies should be aimed at providing a link between different disciplines based on an integrative approach.

Teaching Materials

Teaching materials on each designated topic must meet pedagogical standards. The materials should be presented in an interesting and understandable form for students.

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Student Activity

The software should encourage student activity and provide a variety of interactive elements and exercises.

The curriculum should clearly define the knowledge, concepts, and competencies required by students. This educational content should be aimed at teaching students to understand the connections between different disciplines and apply this connection in practice. By combining related concepts from different disciplines, students learn to think more systematically. Educational materials on each topic must meet pedagogical standards. These materials should be interesting, understandable and practical for students. For example, various diagrams, graphs, practical examples, and tasks taken from real-life situations may be included. The software should provide a variety of interactive elements and exercises to stimulate student activity. Thanks to these interactive elements, students have the opportunity to learn independently, experiment and consolidate their knowledge. For example, simulations, virtual labs, games, and multiple-choice tests can increase student engagement.

It is advisable to organize the content of the software into three main sections: integrated content, interactive tools, and an integrative evaluation system. - Integrated content: The software takes into account the relationship between different disciplines and clearly demonstrates their complementary aspects. This integration helps students develop systems thinking and problem-solving skills through an interdisciplinary approach. It is important to show how disciplines complement each other in terms of content, that is, how one discipline supports the other. Interactive tools: Interactive elements should be used in the software to engage students and keep them interested. This includes interactive games, virtual labs, and practical exercises. With these tools, students can test their theoretical knowledge in practice and thereby strengthen their knowledge. For example, it is necessary to create opportunities for interactive solving of mathematical problems. - Integrative assessment system: The software should include various tests and assignments to assess how well students have mastered interdisciplinary knowledge. This assessment system is designed to track students' progress, identify areas where they need the most help, and help them develop customized learning plans. It is recommended to use various assessment methods such as multiple choice tests, practice assignments, open-ended questions, and laboratory work. When implementing software, it is important to take into account the following requirements: pedagogical — electronic educational resources assume that they are adapted to the cognitive development of students and the educational process, help teachers take into account the individual needs of students, enable students to achieve results, and provide more effective learning for students; didactic - an electronic resource is formed on the basis of the purpose, methodology and technology of teaching, meets the needs of a social order, provides students with interactive learning opportunities (video tutorials, interactive exercises, online tests); Psychological - is based on motivation and psychological support for students, creating an environment that allows them to independently manage themselves, self—evaluate and feel successful.

Students' interests and learning styles may vary. Some students respond well to visual learning materials, while others prefer practical methods. Therefore, the software must take into account different learning styles and interests. The process of creating software that develops professional readiness based on an integrative approach was carried out in the following stages, based on specific goals and objectives:

1. Analytical stage: identification of students' needs and capabilities - taking into account the interests of students and their current level of knowledge; Study of interdisciplinarity - it is necessary to determine which disciplines are interrelated in software. This stage of analysis plays an important role in software development, as it helps to create effective and targeted materials for students.
2. Design stage: Software architecture: the overall structure of the software and the interdependence of each section are determined; Interface design: it is necessary to create a user-friendly, simple and intuitive interface. Content preparation: Preparation of educational materials for each subject and their integration.
3. Development stage: development of the software part of the software: creation of software based on selected programming languages and platforms; addition of interactive elements: integration of interactive games, laboratory work and tests into the software.
4. Testing and debugging stage: software testing: checking the functionality of the created software and correcting identified errors; Testing with students: testing the software with the participation of real students and receiving their feedback.
5. Implementation and maintenance stage: Software implementation: implementation of ready-made software in educational institutions; Support and updates: regular software updates and solving problems raised by students. Regular software updates and technical support can extend the life of the software and improve the user experience.

Conclusion

One of the main conditions for improving the quality of continuing education and scientific productivity is to achieve high results through the effective use of achievements in related disciplines and the implementation of interdisciplinary links. The integrative approach influences the manifestation of new aspects of learning, the level of assimilation of interdisciplinary knowledge, generalizes the components of education — content, form, methods and means — into a single whole. It follows from this that the study of new information develops based on the connection between disciplines.

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