



CREATION OF PEDAGOGICAL SOFTWARE TOOLS IN SELF-DEVELOPMENT

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Annotation: This article covers the scientific and methodological foundations and methods of creating pedagogical software tools to support the process of self-development of students. The importance of pedagogical software tools in increasing the educational motivation of students, developing their interest in acquiring knowledge and supporting their independent activities has been analyzed. Also, the relevance and advantages of using modern technologies in the process of creating such tools are shown.

Keywords: self-development, pedagogical software tools, educational technologies, digital education, software products, innovative education.

As a result of the application of digital technologies in education, the opportunities of students to support the self-development process have significantly expanded. The creation of pedagogical software tools plays an important role in increasing the activity of students in the educational process and ensuring a personal approach to them. This article will consider the process of creating pedagogical software tools, their main requirements and capabilities, and practical aspects of development based on modern technologies.

The essence and role of pedagogical software tools

Definition and significance: pedagogical software tools are digital products used in the educational process, with which the process of obtaining knowledge of students is organized in an interactive, individual and interesting form.

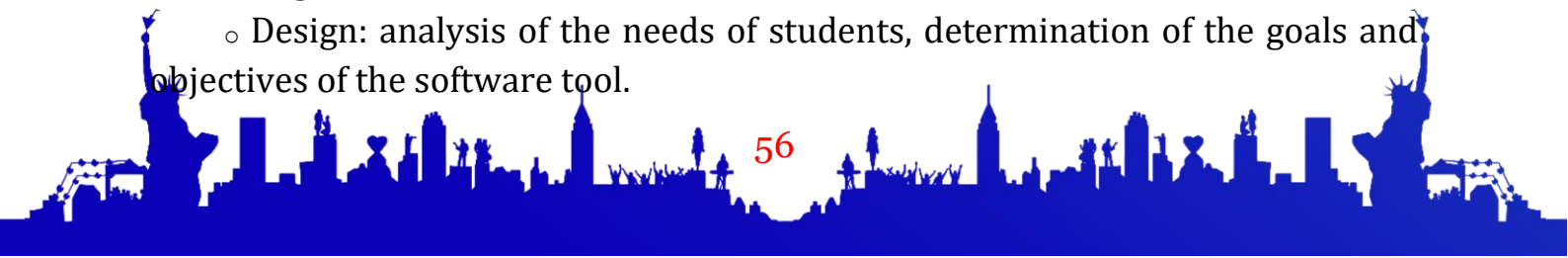
Advantages:

- Support for personalized education;
- Development of interactive communication with students;
- Increase educational motivation and strengthen knowledge.

The process of creating pedagogical software tools

Stages:

- Design: analysis of the needs of students, determination of the goals and objectives of the software tool.





- Programming: technology selection and development of a software engine.

- Testing and improvement: testing the effectiveness of the software tool and eliminating disadvantages.

- Introduction: integration of the tool into the educational process and the beginning of its use.

Requirements:

1. User-friendly interface;
2. Functionality and flexibility;
3. Digital security.

Technological foundations of pedagogical software tools

1. Artificial intelligence: the possibility of identifying the individual needs of students and offering personalized study plans.

2. Big Data: improving efficiency by analyzing large data in the educational process.

3. Virtual and augmented reality (VR/AR): the organization of practical classes and laboratory experiments in an interactive form.

4. Gamification: increasing interest by applying game elements.

Practical examples

Moodle platform: provides educational materials and tests for students in an interactive form.

Kahoot: strengthening knowledge through interactive tests and quizzes.

Labster: teaching chemistry, biology and other sciences through Virtual laboratories.

Effectiveness of pedagogical software tools

Application of software tools has observed the following results:

Student activity increased by 35-40;

The speed of mastering educational materials has increased significantly;

Efficiency in the organization of independent activities increased.

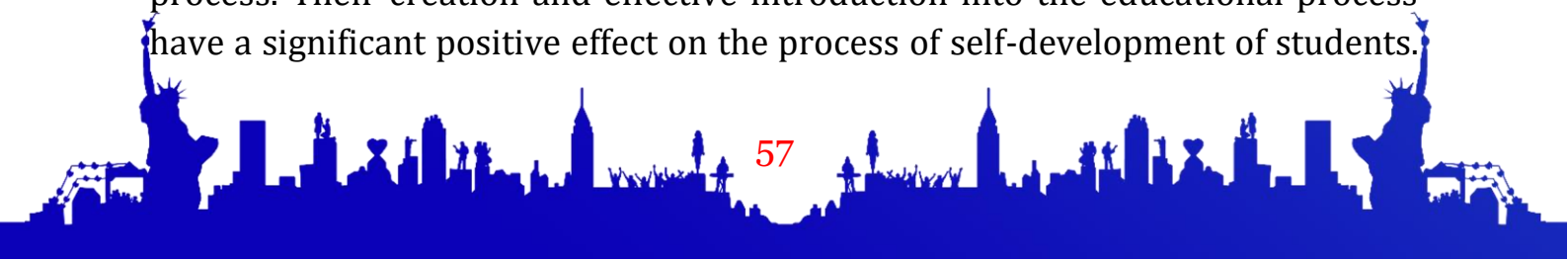
Prospects for improving pedagogical software tools in the future

- wider introduction of artificial intelligence and machine learning algorithms.

- use of IoT (Internet of Things) technologies in an educational environment.

- research and implementation of new technologies to make the learning process more interactive and flexible.

Pedagogical software tools are important tools in improving the educational process. Their creation and effective introduction into the educational process have a significant positive effect on the process of self-development of students.

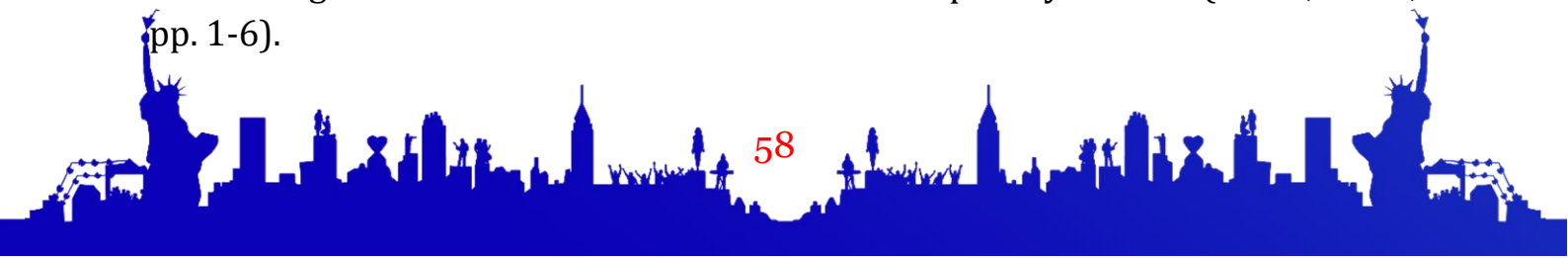




In the future, it is necessary to continue research aimed at developing such tools and increasing their effectiveness.

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