

IMPROVING THE METHODOLOGY FOR USING 3D GRAPHICS SOFTWARE IN THE TRAINING OF TECHNOLOGY TEACHERS

Musurmonkulov Qilichbek Orolovich
Teacher of Gulistan State University

Abstract

In the process of training students of Technology Science, 3-dimensional graphics programs (3D graphics programs) play an important role. This article will bring ways to improve the methodology for using 3D graphics programs. In the educational process, the advantages and pedagogical effectiveness of the application of these programs are analyzed.

Keywords. Software, 3d graphics, pedagogical practice, theory of constructive education, visualization, pedagogical technologies, methodology.

Introduction

In modern education, the training of technology teachers requires innovative approaches that use modern tools. 3D graphics software can provide visual and interactive learning experiences, making complex concepts more accessible. This article is aimed at improving the methodology for introducing 3D graphics software into the training of technology teachers, emphasizing its pedagogical influence and practical application. Technology studies effective strategies for using these tools in teacher training programs, emphasizing the benefits of 3D graphics in improving pedagogical practice and engaging students.

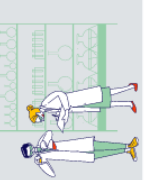
MAIN PART

Constructivist educational theory argues that knowledge is built through experience and interactions. Using 3D graphics, teachers can facilitate active learning, allowing students to engage with and manipulate visual representations of concepts. Cognitive load theory emphasizes the need to control the amount of information provided to students. 3D graphics software helps reduce extraneous cognitive load, allowing students to focus on important information and increase their understanding of complex topics. Designing efficient 3D graphic software is user-oriented design: the software must involve students in the design process to ensure that they meet their educational needs and preferences. Implementation curriculum integration in teacher training programs: to improve traditional teaching methods, the 3D graphics program must be supplemented with existing teacher training curricula. Collaborative learning: encourage group work where listeners can learn and discuss 3D graphics together, develop teamwork and shared understanding. Assessment and feedback: it is necessary to use formative assessments to assess the audience's understanding and provide constructive feedback based on their interactions with the software. Practical applications technology

teacher training 3D graphics software can reflect complex processes and systems in technological education. For example, teachers' listeners can visualize engineering designs or production processes in three dimensions, increasing their understanding and teaching capabilities. Improving pedagogical skills by adding 3D graphics to training, future teachers can develop innovative teaching strategies that use technology to attract students and facilitate active learning. Advantages of using 3D graphics software extended engagement: interactive 3D graphics play an important role in drawing students' attention and engaging them in the educational process. This technology makes education more efficient and fun with several aspects. 3D graphics are of more visual and aesthetic interest, which attracts the attention of readers. Movement and changes, such as the rotation or transformations of objects, maintain the reader's attention. Students are able to interact in a 3D environment and actively participate in the learning process. Students experience interactive experiences in the learning process where they are able to see results through their choices and actions. The ability to simulate real-life situations using 3D graphics allows students to apply theoretical knowledge in practice. 3D graphics can be applied to any subject or subject, increasing student interest. Teachers have the option to customize the 3D environment to suit their classes to help meet the needs of individual students. There is an opportunity for students to collaborate in a 3D environment so that they can work together, which develops their social skills. Improved understanding: visualization of complex ideas simplifies and helps to preserve learning, helps future teachers convey difficult concepts to their students. Developing critical thinking: manipulating 3D graphics encourages listeners to think critically and solve problems creatively. With 3D graphics applications, it is possible to visualize complex processes and systems in the technology sciences. For example, students can see engineering design or manufacturing processes in three dimensions. In teacher training, 3D graphics can provide the necessary knowledge for effective management of programs, pedagogical technologies and educational processes. Interactive 3D graphics attract students and increase the effectiveness of teaching. Increases students' understanding by visualizing complex concepts. Encourages students to solve problems and develops critical thinking skills.

CONCLUSION

The use of 3D graphics software in the training of technology teachers is a significant achievement in educational methodology. By effectively incorporating these tools into teacher training programs, teachers can increase their ability to engage in activism, understanding, and critical thinking among future teachers. Future research should focus on long-term effects and the development of the best experiments to implement 3D graphics in a variety of educational settings. The use of 3D graphics applications in the training of Technology students is important in updating the educational process and improving its effectiveness. Integrating these programs into the teaching process provides new opportunities for students and faculty. In the future, it is necessary to further improve and expand these methods.



References

1. Abdullayev, A. (2010). Innovatsion ta'lim texnologiyalari. Toshkent: O'zbekiston Respublikasi Oliy va o'rta maxsus ta'lim vazirligi.
2. Qodirov, A. (2015). Pedagogik texnologiyalar va ularning qo'llanilishi. Toshkent: Fan va texnologiya.
3. Murodov, M. (2018). 3D Grafik Dasturlar va Ta'lim. Toshkent: O'zbekiston Milliy Universiteti.
4. Tashkent State Technical University. (2017). O'qitish metodologiyasi: O'quv qo'llanma. Toshkent: O'zbekiston Respublikasi Oliy va o'rta maxsus ta'lim vazirligi.
5. Ismoilov, I. (2019). Texnologiya fanlari o'qituvchilarini tayyorlashda innovatsiyalar. Toshkent: O'zbekiston Fanlar Akademiyasi.

