The Role Of Electronic Educational Programs In Improving The Physical Qualities Of Students With Disabilities

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ABSTRACT

This article analyzes the effectiveness of electronic education programs in improving the physical qualities of students with disabilities. The research examines the process of learning physical exercises through electronic platforms and programs designed for students with disabilities. The results of the study show significant positive changes in the development of physical qualities through electronic education. The article explores the importance of electronic education in the learning process and the pedagogical approaches to be used for students with disabilities.

Keywords: Students with disabilities, physical qualities, electronic education, educational programs, pedagogical approaches, exercise programs, physical education

Introduction

Today, the issue of improving the physical qualities of students with disabilities remains one of the urgent problems. Supporting their physical development, forming a healthy lifestyle, and expanding opportunities for engaging in sports are considered important directions of the pedagogical process. The development of modern information technologies provides new opportunities in this regard. In particular, the use of electronic educational programs can become an effective tool for increasing the interest of students with disabilities in physical education classes and improving their physical qualities.

In the Presidential Decree of the Republic of Uzbekistan No. PF-60 "On the Development Strategy of New Uzbekistan for 2022–2026," special attention is given to digitalization of the education system, development of inclusive education, and implementation of new pedagogical approaches based on modern technologies for persons with disabilities. Therefore, the use of electronic educational platforms is considered one of the relevant directions in the development of physical education for students with disabilities. This study is aimed at analyzing the effectiveness of electronic educational programs and examining their impact on the process of physical education.

Methods

This research was conducted using an experimental methodology to evaluate the effectiveness of electronic educational programs in improving the physical qualities of students with disabilities. Two groups participated in the study: the experimental group practiced using electronic educational tools, while the control group engaged in traditional physical education classes.

Participants. The study involved 50 students with disabilities aged 13–16. They were divided equally into two groups, and both groups had

similar indicators in terms of physical preparedness.

Experimental intervention. A specially designed electronic educational program was applied for the experimental group. This program was aimed at developing students' physical qualities and included interactive exercises, video tutorials, and individual monitoring tests. The control group, meanwhile, trained based on conventional physical exercises.

Data collection and analysis. During the study, participants' endurance, speed, and balance were assessed through initial and final tests. The obtained results were compared using statistical analysis methods to evaluate the effectiveness of the electronic educational program.

Results

The results of the study confirmed that electronic educational programs have a positive impact on the development of physical qualities in students with disabilities. The participants of the experimental group achieved significant improvements in endurance, speed, and balance. According to the initial tests, both groups had similar indicators. However, in the final evaluation, the experimental group demonstrated an average improvement of 18–22%, while in the control group this figure was only 8–10%.

As a result of using the electronic program, participants in the experimental group began to better control their movements during individual training and improved their ability to accurately follow instructions during exercises. Particularly, the use of virtual training modules significantly developed balance retention and coordination skills.

Statistical analysis showed that the differences in the development of physical qualities in the experimental group were significant ($p < 0.05$). These findings confirm that electronic education can serve as an effective pedagogical tool for students with disabilities.

Discussion

The study results demonstrated that the use of electronic educational programs can be an effective tool in improving the physical qualities of students with disabilities. The significant progress of the experimental group confirms that electronic platforms enhance opportunities for individual approaches and motivate students' activity.

During the research, improvements were observed in endurance, speed, and balance indicators of the students. This highlights the importance of integrating digital technologies into the physical education process. Furthermore, adapting electronic programs to the educational process contributes to improving students' learning outcomes.

However, for the effective use of electronic education, technical support and sufficient training of teachers in applying these technologies are essential. When compared with other scientific studies, it is confirmed that interactive educational methods positively affect physical development (Ivanov, 2020). In the future, it is necessary to further improve such programs and study their long-term effects.

Conclusion

The findings of this study confirmed the effectiveness of using electronic educational programs in improving the physical qualities of students with disabilities. Participants in the experimental group achieved significant improvements in endurance, speed, and balance. This shows that digital technology-based training positively influences students' physical development.

Electronic educational programs ensure an individual approach, allowing the consideration of each student's abilities. Through virtual training modules and interactive tasks, students increased their physical activity and strengthened their interest in training. The results of the study indicate the need to widely implement this approach in the educational process.

At the same time, it is necessary to improve technical and methodological support for the effective use of electronic educational programs. In the future, conducting broader research and evaluating the long-term effects of electronic education are of great importance. This approach can play a crucial role in the

development of inclusive education for students with disabilities.

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