Inclusive Education Supported by Universal Design and Assistive Technologies

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Abstract

The aim of this research is to examine the impact of assistive technology (AT) and Universal Design for Learning (UDL) on the educational experiences of students with developmental disabilities within the framework of inclusive education. Inclusive education seeks to ensure equal access to learning for all students by adapting curricula, teaching methods, and learning environments, utilizing approaches such as UDL and AT. The integration of technology into educational standards is essential for creating a supportive environment that addresses the individual needs of learners.

The study was conducted at Veli Vrh Primary School in Pula and Juraj Dobrila Primary School in Rovinj, using semi-structured interviews to collect data from teachers (N = 50). The research analyzed the implementation of UDL and AT, identified challenges in technology integration, and explored how these approaches influence student inclusion and peer collaboration.

Findings indicate significant benefits of employing assistive technologies and UDL in inclusive education, such as increased accessibility of learning content and improved instructional adaptability for students with disabilities. Additionally, challenges related to implementation were identified, including insufficient resources and the need for additional teacher training. These results highlight the necessity for further research and systematic application of UDL and AT to ensure an inclusive and equitable educational environment for all students.

Keywords: digital tools، individualized approach, pedagogical strategies, students with disabilities, technology integration