

APPLICATION OF VOICE ASSISTANT AND STEM APPROACHES IN COMPUTER MODELING AND INFORMATION TECHNOLOGY EDUCATION FOR STUDENTS WITH SPECIAL EDUCATIONAL NEEDS

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Abstract. *In the context of digital transformation and the growing role of technology in education, the STEM approach and artificial intelligence are establishing themselves not only as cognitive, but also as empathetic tools of modern learning. The subject Computer Modeling and Information Technologies (CMIT) provides a unique opportunity for integration between logical thinking, visual perception, and digital creativity. This synthesis between the exact sciences and emotional intelligence opens up new pedagogical avenues for working with students with special educational needs (SEN) – including children with auto-aggressive behavior, unstable attention, and difficulties in emotional regulation. In contemporary pedagogical practice, it is the meeting between mathematical structure, digital literacy, and human emotionality that acquires deep meaning. When a student with auto-aggressive tendencies and unstable attention is confronted with the order and predictability of an algorithm or graphical structure, it can provide them with a sense of security and control. The inclusion of visual elements, voice assistants, and artificial intelligence enrich this process with empathy and support.*

Key words: STEM Approach, Computer Modeling and Information Technology, Empathic Learning Tools, Artificial Intelligence, Voice Assistant.

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