Metacognition and self-assessment in informatics classes: exploring the impact of assessment criteria, motivation, and task complexity

Maria GUTU

Technical University of Moldova, 168 Stefan cel Mare av., Chisinau,
MD-2004, Republic of Moldova

maria.gutu.md@gmail.com

Abstract: *Metacognition and self-assessment are important in learning and cognitive development. Metacognition, the awareness and understanding of one's cognitive processes, plays a crucial factor in enhancing learning and performance by enabling students to understand how they think, plan, and monitor their thinking strategies. Self-assessment allows students to become more effective, independent, and adaptable learners.*

This research focuses on exploring the role of metacognition in the context of informatics classes, particularly aiming at self-assessment techniques. The study investigates the correlation between metacognitive awareness and self-assessment, as well as the influence of motivation, task complexity, and assessment criteria on metacognitive processes. Data was collected through a survey of 72 high school students in Chisinau, the Republic of Moldova. The results demonstrate a significant improvement in metacognitive strategies and self-assessment practices, emphasizing the importance of fostering metacognitive skills in informatics education. The study proposes evidence-based recommendations for teachers to enhance metacognition and self-assessment practices, leading to improved learning outcomes and academic achievements in informatics.

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