

A feasibility study on children's self-regulation of attention in a virtual classroom environment

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INTRODUCTION

The global shift toward virtual learning environments, accelerated by the COVID-19 pandemic, has significantly transformed traditional educational settings. With this transformation, new challenges and opportunities have emerged, particularly concerning children's ability to self-regulate their attention in virtual classrooms. Self-regulation of attention is a critical skill for academic success, involving the capacity to maintain focus, manage distractions, and persist in tasks. This feasibility study explores the potential for children to develop and apply self-regulation strategies within virtual learning contexts, aiming to understand the efficacy, challenges, and supports necessary for effective implementation. Self-regulation refers to the processes by which individuals control their thoughts, emotions, and behaviors to achieve goals. In educational contexts, self-regulation encompasses setting goals, monitoring progress, and adjusting behaviors to optimize learning outcomes. Research has consistently demonstrated that students with strong self-regulation skills tend to achieve higher academic performance, exhibit better problem-solving abilities, and show greater resilience in the face of challenges [1-3].

Virtual Learning Environments (VLEs) provide a platform for delivering educational content and facilitating interactions between students and instructors through digital means. These environments offer flexibility and accessibility but also present unique challenges, such as increased distractions and the need for higher levels of self-motivation and self-regulation. Several studies have highlighted the difficulties students face in virtual classrooms, particularly regarding attention management. The absence of physical presence and immediate supervision can lead to decreased engagement and increased susceptibility to distractions. Younger students, in particular, may struggle more with these challenges due to their developmental stage and limited experience with self-regulation. This study employs a mixed-methods approach, combining quantitative and qualitative data to provide a comprehensive understanding of children's self-regulation in virtual classrooms. The study is conducted in three phases: a preliminary survey, an intervention phase, and a post-intervention evaluation. Participants are drawn from a diverse population of elementary school students, aged 8-12, enrolled in virtual learning programs. A sample size of 100 students is targeted to ensure a representative and statistically significant analysis. A preliminary survey is conducted to gather baseline data on students' current self-regulation skills, learning habits, and challenges faced in virtual classrooms. The survey includes standardized questionnaires such as the Children's Behavior Questionnaire (CBQ) and teacher and parent reports. Based on the preliminary survey findings, an intervention program is designed to enhance self-regulation skills.

DESCRIPTION

The preliminary survey reveals significant variability in

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students' self-regulation skills and challenges. Common issues identified include difficulty maintaining focus, managing time effectively, and dealing with distractions from home environments. Teachers and parents report a need for additional support and resources to help students adapt to virtual learning. Improved self-regulation skills. Students show enhanced ability to set goals, monitor their progress, and manage distractions effectively the use of gamified learning platforms and attention-tracking tools helps maintain student interest and participation. The study underscores the potential of targeted interventions to improve self-regulation skills among children in virtual classrooms. Strategies such as goal setting and mindfulness exercises are particularly effective in helping students manage their attention and stay focused [4].

Technological tools play a crucial role in supporting self-regulation. Attention-tracking software provides real-time feedback to students, helping them become more aware of their focus levels and adjust their behaviors accordingly. Gamified learning platforms make the learning process more engaging and motivating for students. Despite the positive outcomes, several challenges remain. The variability in students' home environments and access to technology can affect the effectiveness of the intervention. Additionally, the need for ongoing support and reinforcement of self-regulation skills highlights the importance of a collaborative effort between teachers, parents, and students. This feasibility study provides valuable insights into the potential for enhancing children's self-regulation of attention in virtual classrooms. The findings suggest that with appropriate strategies and technological supports, students can develop the skills necessary to thrive in virtual learning environments. Future research should continue to explore the long-term impacts of these interventions and identify additional factors that can support successful self-regulation in diverse educational contexts [5].

CONCLUSION

Schools should incorporate regular training sessions on self-regulation strategies to help students develop these critical skills. Schools and educators should utilize attention-tracking software and gamified learning platforms to enhance engagement and support self-regulation. Continuous feedback and support from teachers and parents are essential to reinforce self-regulation skills and address any challenges that arise. Efforts should be made to ensure all students have access to the necessary technology and resources to participate fully in virtual learning environments. Examining how self-regulation strategies can be tailored to meet the needs of students from diverse backgrounds and with varying levels of access to technology. Exploring the roles of teachers and parents in supporting self-regulation and identifying best practices for collaboration. The transition to virtual learning environments presents both challenges and opportunities for developing children's self-regulation skills. This feasibility study demonstrates that with targeted interventions and appropriate technological supports, students can enhance their ability to self-regulate their attention, leading to improved engagement and academic outcomes. By integrating these strategies into virtual learning curricula and providing ongoing support, educators can help students navigate the complexities of virtual learning and achieve their full potential. Future research and continuous improvement of these interventions will be essential to address the diverse needs of students and ensure equitable access to quality education in the digital age.

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CONFLICT OF INTEREST

None.

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