

# Exploiting Artificial Intelligence for Personalized Assistance Technology in Learning Disabilities

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**Abstract:** *This research is to explore the profound impacts of AI-driven personalized assistive technology on the area of learning impairments within the Saudi Arabian setting. The aim of this study is to evaluate the potential benefits of technology in enhancing the reading comprehension, mathematics skills, and cognitive abilities of children who struggle with learning. Strictly quantitative research methodology was used in this study, and academic performance was thoroughly evaluated both before and after the intervention. Following the intervention, the individuals' performance in all three areas significantly improved. Furthermore, the qualitative data analysis revealed a multitude of favorable thoughts and experiences given by students engaging with the cutting-edge AI-powered technology. The results show how crucial it is to prioritize user-centric design principles and shed light on the fascinating possibilities of using AI-driven technology to help kids with learning disabilities succeed academically. The findings of this study point to the use of AI-powered solutions in classroom environments to support students who struggle with learning, which has significant implications for the creation of customized assistive technology*

**Keywords:** AI-powered technology, personalized assistive technology, learning disabilities

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