

Overcoming Barriers in Math Teaching and Learning: The Case of a Visually Impaired University Student

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Abstract:

The study explores the effectiveness of teaching and learning practices of math related content for visually impaired learners, based on the case of a Management student at a University in Mauritius. Traditional teaching methods for mathematics and related subjects are heavily reliant on written text, graphical and tabular representations, equations and other visual aids. Learning or practicing mathematics therefore demands highly visual abilities, posing significant barriers for visually impaired learners. The primary focus of this study is to assess the teaching and learning practices and uncover the instructional barriers of math related content of visually impaired learners with the aim of enhancing inclusive and equitable education in line with the SDG 4, of the United Nations Sustainable Development Goals. The research adopts a case study approach where data is collected through interviews, focus group, observations and documents. A purposive sampling strategy is used and the sample comprises the visually impaired student, four lecturers who have taught the math-related modules, the programme coordinator and the Examinations officer. Data has been thematically analysed and reveals significant barriers for the visually impaired student, including inadequate resources and assistive technologies and lack of adapted teaching practices and assessments. Furthermore, lecturers are found to struggle with uncertainty and lack of specialized training, while the student faces anxiety and disengagement. The findings underscore the need for more effective policy implementation to improve inclusivity. The outcomes provide insights for capacity building and the setting up of a more supportive learning environment for the visually impaired.

Keywords:

Math teaching and learning, Visual impairment, Inclusive Education, University Education.