



CLUSTER INNOVATION CENTRE
(UNIVERSITY OF DELHI)
M.Sc. (Mathematics Education)
A Joint Degree under the Meta University Concept by
University of Delhi & Jamia Millia Islamia



**EFFECTIVENESS OF USING AUGMENTED REALITY IN INDIAN
MATHEMATICS CLASSROOM: An Exploratory Study**

(A research dissertation submitted at Cluster Innovation Centre, University of Delhi)

Abstract

The objective of this study is to examine the efficacy of utilizing Augmented Reality (AR) technology in Indian classrooms to facilitate the comprehension of mathematical concepts, specifically focusing on the topic of fractions. The study is conducted in accordance with the recommendations outlined in the National Education Policy (NEP) of 2020 and the National Curriculum Framework (NCF) of 2022, which emphasize the need for child-centric, activity-based, and hands-on approaches to mathematics education. To assess the effectiveness of mobile-based AR as a learning tool for fractions, a pre-test and post-test are administered to measure the learning outcomes achieved through the implementation of this technology in regular classroom settings. Additionally, an attitude cum response questionnaire is utilized to gather detailed insights into students' experiences with the AR learning method. The educational content for teaching fractions using AR was generated by Vorphy, aligning with the syllabus and textbooks provided by the National Council of Educational Research and Training (NCERT). Based on the results obtained, the null hypothesis and alternative hypothesis were evaluated to determine whether incorporating AR into regular classrooms can enhance students' learning outcomes. The findings will provide support for the use of AR technology alongside traditional teaching methods, indicating that it can contribute to improved learning outcomes in mathematics. The study suggests that further research should be conducted to explore the impact of AR on learning outcomes in relation to different mathematical topics. As technology continues to play an increasingly significant role in education, it is crucial to thoroughly examine its effectiveness in diverse mathematics education contexts.

by

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2021-2023