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Trends in Mathematical and Physical Sciences Education in South Africa

The South African education system has had difficulties in delivering quality mathematics and physical science instruction to all students, as demonstrated by the nation's performance in international assessments such as the Trends in International Mathematics and Science Study (TIMSS). Almost three decades post-apartheid, the education system still fails to ensure fair access to STEM education, especially in mathematics and physical sciences. This project seeks to investigate and analyze the performance of South African learners in mathematics and physical science, scrutinizing the pre- and post-pandemic school curricula to assess their alignment with 21st-century skills expectations through a data collection method that explores national assessment reports for insights. The investigation concentrated on factors affecting learners' performance in mathematics and science, including teaching quality, resource availability, learners' socio-economic backgrounds, and curriculum and assessment policies. Through the analysis of these aspects, the study sought to elucidate the present condition of STEM education in South Africa and has effectively pinpointed areas necessitating enhancement. This project's findings further the efforts to improve the quality and accessibility of mathematics and physical science education in South Africa, thereby equipping learners for the challenges and opportunities of the 21st century.

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