



Advancing STEM Education: A Comprehensive Review and Analysis

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Abstract

STEM (Science, Technology, Engineering, and Mathematics) education plays a critical role in equipping students with the necessary skills and knowledge to thrive in the modern world. This research paper provides a comprehensive review and analysis of the current state of STEM education, focusing on its significance, challenges, and best practices. The paper synthesizes relevant literature, research studies, and educational policies to offer insights into the key components, pedagogical approaches, and impact of STEM education. It also examines the role of technology, diversity and inclusion, teacher training, and industry partnerships in fostering effective STEM learning environments. The findings of this research paper aim to inform educators, policymakers, and stakeholders to enhance the quality and accessibility of STEM education.

Keywords: STEM Education, learning environments, skills, knowledge