



Transforming Global Education through Humanities, Information Technology, and Mathematics: Innovations, Challenges, and Opportunities

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Abstract

Global education is undergoing significant transformation due to rapid technological advancements, evolving societal needs, and the growing demand for multidisciplinary knowledge. The integration of Humanities, Information Technology (IT), and Mathematics offers a comprehensive framework for enhancing educational quality, fostering innovation, and preparing learners for the challenges of the modern world. Humanities contribute critical thinking, ethical awareness, communication skills, and cultural understanding, while Information Technology facilitates digital learning, knowledge accessibility, and collaborative educational environments. Mathematics provides the analytical and quantitative foundations necessary for scientific inquiry, technological development, and evidence-based decision-making. Together, these disciplines create innovative learning ecosystems that promote creativity, problem-solving, adaptability, and lifelong learning. However, challenges such as curriculum integration, digital inequality, inadequate infrastructure, and teacher preparedness continue to affect the effective implementation of interdisciplinary education. This paper explores the innovations, challenges, and opportunities associated with integrating Humanities, IT, and Mathematics in global education systems. It highlights the importance of inclusive educational policies, technological adoption, and collaborative learning approaches in developing future-ready graduates capable of contributing to sustainable social and economic development in an increasingly interconnected world.

Keywords: Global Education, Humanities, Information Technology, Mathematics, Interdisciplinary Learning, Digital Transformation, Innovation, Educational Technology, Sustainable Development, Future Skills.