

# Revolutionizing Mathematics Education in the 5.0 Era: Exploring Future-Ready Media Requirements and Competencies for Aspiring Educators

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## ***Abstract***

*In the 5.0 era, the rapid advancement of technology has transformed educational practices, especially in mathematics education. Aspiring educators must not only master mathematical concepts but also develop competencies in utilizing future-ready media that enhance teaching and learning effectiveness. This study explores the perceptions of prospective teachers regarding the media requirements necessary for revolutionizing mathematics education in the 5.0 era. Using a descriptive qualitative approach, the research surveyed 50 students from the Madrasah Ibtidaiyah Teacher Education (PGMI) program at a university in Padangsidempuan. Data were collected through a questionnaire, followed by data reduction, presentation, and conclusion drawing. The findings reveal that the integration of advanced media in mathematics education is critical for creating an engaging and efficient learning environment. Teachers, as the main facilitators of the learning process, must be adept at selecting and employing media that aligns with students' needs, curriculum content, and the demands of modern technology. In the context of 21st-century education, future educators are required to be competent in using digital tools and innovative learning platforms to foster critical thinking, creativity, and problem-solving skills among students. The study concludes that future-ready media play a vital role in enhancing the quality of mathematics education, and aspiring teachers must be equipped with the necessary skills and competencies to effectively integrate these media into their teaching practices. This will enable them to meet the challenges of educating students in a highly digitalized and interconnected world.*

**Keywords:** 5.0 Era, Future Learning Media, Teacher Competencies, Mathematics Education, Technological Integration.