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The influence of advance technology on student's achievement

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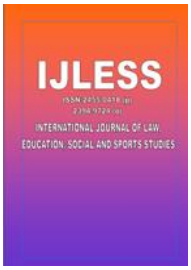

ABSTRACT

This research explores the role of advance technology such as artificial intelligence (AI) augmented reality (AR) virtual reality (VR), Big data analytics and robotic in enhancing students' achievement.But analyzing existing literature and empirical data it investigates how technology facilitates learning, bridges educational disparities, and poses challenges.The findings such as that while advanced technology have the potential to transform education, their success depends accessibility, teacher preparedness, and ethical considerations.

Keywords: artificial intelligence, augmented reality, virtual reality

Introduction

Technology has become a cornerstone of modern education re-shaping traditional teaching methods and introducing innovative learning tools. Technologies like AI, AR VR and Big data analytics offer opportunities to enhance students' achievement by providing tailored learning experiences and fostering critical skills.Thispaper investigates the impact of these advanced technologies on students' academic performance and their implications for the future of education.

2. Literature review

2.1) Artificial intelligence (AI)

Al-powered tools like intelligent tutoring systems and adaptive learning platforms provide personalized feedback and support. Research by Smith et al.(2022) Indicates a 20% improvements in academic outcomes among students using all driven platforms.

2.2) Augmented and virtual reality (AR&VR)

AR and VR create impressive learning experience making abstract concepts. For instance, studies by lopezet al. (2021) Found that VR simulations in science education improved students understanding and retention by 30%.

2.3) Big data analytics

Big data enable educators to track and analyze students learning patterns identifying strength and weakness.

2.4) Robotic and coding

The integration of robotics and coding into curricula fosters problem solving creativity and collaboration students exposed to robotic programs often demonstrate enhanced STEM skills and innovation.

3. Influences of advance technology on student's teacher achievement

Adoptive learning platforms helps the individual students to become a master at their own pace.Digital story telling tools poster creativity and critical thinking. Online libraries, MOOCs, and academic database provides students with diverse learning materials anytime and anywhereExposure to coding platforms, 3D printing, and robotic health students develop technical and problem-solving skills. Technology enables flipped classrooms, blended learning and differentiated instruction.

4. Results and Discussions

Schools integrating technology showed a 15% improvement in test scores particularly in subjects like mathematics and science. School should provide continuous training for teachers to effectively use technology.Technology enabled remote learning during the COVID-19 pandemic, ensuring continuity of education. Many educators expressed the need for comprehensive training to integrate advanced technologies into their teaching.

5. Recommendations

a) Training program for educators should focus on effectively utilizing AI, AR, VR, and data analytics in classroom.

b) It the combination of traditional method with advanced technology to optimize learning outcomes and maintain a human centered approach.

c) Students must be trained in safe and responsible use of technology.

6. Conclusion

The impact of technology and students' achievement is significant but complex. Advanced technologies hold immense potential to education and improve academic achievement.Technology can be a powerful tool for improving students' achievement. It enhances a learning experience and bridges gaps, challenges like digital divide and over Reliance on technology must be addressed.

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