HARNESSING AI-POWERED PODCASTS FOR KNOWLEDGE MANAGEMENT AND ACTIVE LEARNING IN BIG DATA EDUCATION

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Abstract - The increasing dominance of artificial intelligence (AI) in education presents new opportunities for knowledge management and the study of complex subjects such as Big Data. This study explores the integration of AI-powered podcasts as an interactive learning tool that enables students to engage with Big Data concepts actively. Through NotebookLM, an AI-based platform, students interacted with an intelligent podcast that allowed them to ask questions, receive tailored responses, and refine their understanding dynamically. This approach highlights the potential of AI to support knowledge management and facilitate more profound learning experiences. The methodology involved students using an AI-driven podcast in a Big Data course, working in groups to explore topics, interact with the podcast, and build structured insights. A mixed-methods design included pre- and post-surveys and qualitative reflections. Preliminary findings show enhanced knowledge structuring, adaptive learning, and collaborative synthesis. The study underscores AI's transformative potential in higher education and suggests further exploration into its broader pedagogical applications.

Keywords - AI in Education, Podcasts, Big Data, NotebookLM, Knowledge Management, Active Learning