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**STEMENTOR: TRANSFORMING LEARNING BY DEVELOPING  
AN AI POWERED TUTORING ASSISTANT ON  
CAPSTONE RESEARCH**

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**ABSTRACT**

This research paper explores and determine how STEMentor, an AI powered tutoring assistant enhances the critical and researching skills of Grade eleven (11) and twelve (12) students of Tuy Senior High School. This study aims to address the challenges that the students faced in the Capstone Research subject a specialized Research subject of Science, Technology, Engineering, and Mathematics (STEM) strand. Additionally, it demonstrates the effectiveness of AI-apps as tutoring assistant. The researchers used a quantitative research approach, that employs surveys to evaluate the impact of STEMentor on the academic performance, engagement, and understanding of STEM subjects. This study investigates the possible challenges in implementing the STEMentor AI-app. The findings on the research paper shows that the STEMentor has a positive Impact on students' learning, particularly in the Capstone Research. The app appears to positively influence the students' critical and researching skills. This study identifies the potential challenges that are related to accessibility and usability of the app. But these are manageable with appropriate intervention strategies.

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The researchers conclude that STEMentor holds promise as valuable tool to enhance learning in capstone research. The study recommends further development such as additional lessons, trivia, and features to make it more engaging and accessible to a wider range of student.



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