



STEM EDUCATION AND CAREER READINESS OF SENIOR HIGH SCHOOL STUDENTS TOWARDS A HOLISTIC PROGRAM

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ABSTRACT

As the demand for STEM professionals grows, understanding how learning practices, curricula, industry partnerships, and technology integration contribute to career readiness is essential. The study focuses on the critical role of STEM education in preparing students for future careers by enhancing their technical, problem-solving, and collaborative skills, particularly in senior high school students in Batangas, Philippines. Through a quantitative descriptive research approach, data was gathered from 70 teachers using a structured questionnaire, and statistical tools such as t-tests, ANOVA, and Pearson's correlation were applied. The findings indicate that while STEM education is essential for career preparedness, educators face significant challenges, including inadequate resources, insufficient industry partnerships, and curriculum misalignment with current technological advancements. Furthermore, the study found a significant relationship between educators' profiles such as age, sex, educational background, and years of service and the effectiveness of STEM education in promoting career readiness. Based on these insights, the study concludes that a multifaceted strategy is needed, one that strengthens curriculum relevance, fosters stronger

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industry collaborations, incorporates advanced technologies, and emphasizes continuous teacher professional development. The proposed strategy, titled "Holistic Approaches to Advancing STEM Education," aims to bridge the gap between education and industry, ensuring students are better prepared for the demands of the 21st-century workforce.

Keywords: *STEM education, Career readiness, Curriculum enhancement, Workforce preparedness, Educational challenges*



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