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BRIDGING BIOLOGY AND TECHNICAL-VOCATIONAL SKILLS: TRANSFORMING SENIOR HIGH SCHOOL EDUCATION THROUGH CAREER-FOCUSED TEACHING

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Abstract

The ongoing job mismatch among senior high school graduates in the Philippines, despite the implementation of the K-12 curriculum in 2012, emphasizes the need for more innovative instructional approaches. This study examines the effect of the Career-Focused Teaching Approach (CFTA) on enhancing Biology-Technical-Vocational-Fused Skills (BTVFS), which integrate cognitive, technical, and interpersonal competencies essential for the 21st-century workforce. A quasi-experimental pretest-posttest design was used, involving two Grade 11 classes ($n = 35$ each)—one exposed to CFTA and the other receiving conventional instruction. Quantitative analysis of BTVFS scores, measured through a researcher-made questionnaire, revealed statistically significant improvements in all skill subcomponents, $t(68) = 3.670$, $p < 0.036$, favoring the CFTA group. Additionally, qualitative data from student reflective journals aligned with the quantitative findings, showcasing enhanced metacognition, communication, problem-solving, and collaboration skills. These competencies are critical for equipping students with workforce-ready skills and reducing the risk of job mismatch. The study's findings underscore the transformative potential of CFTA in bridging technical-vocational and core subject skills, advocating for its inclusion in senior high school curricula. By incorporating CFTA, schools can foster a learning environment that cultivates both academic and technical proficiencies in students, thereby enhancing their employability and

future career success. Moreover, integrating CFTA into the senior high school framework offers a practical solution to align better the skills of K-12 graduates with labor market demands. The results strongly recommend adopting CFTA as a standard instructional approach to prepare senior high school students for the complexities of the modern workforce and address persistent employment challenges in the Philippines.

Keywords:

Career-Focused Teaching, 21st-Century Skills, Biology-Technical-Vocational Integration, Senior High School Innovation, Workforce Readiness