

SP - (16710) - STEAM SORSOGON: DEVELOPING A COMMUNITY-BASED, INNOVATION-FOCUSED INTEGRATED STEM RESEARCH CURRICULUM FOR SENIOR HIGH SCHOOL

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Short Abstract

This study focuses on the development of an integrated STEM curriculum for senior high school research for resource-challenged rural public schools. Some of the challenges that beset STEM curriculum reform include the lack of provision for authentic STEM learning experiences and difficulties in integration across the disciplines of science, technology, engineering and mathematics. The Enhanced Design Thinking Curriculum that we designed responds to these challenges by: (1) incorporating Agriculture in STEM (hence the name STEAM) as a target for innovation research that attends to the needs of the community in which the schools are situated; and (2) positioning design thinking, an engineering practice, as the central driver of integration across disciplines. We adopted a design-based implementation research (DBIR) methodology to engage multiple stakeholders in collaborative efforts to construct knowledge and build capacities for equitable and sustainable outcomes for students, schools and the community. The initial enactment of the STEAM curriculum in classrooms has surfaced not only promising gains but also dilemmas that would have to be addressed in through the continuing research-practice partnership.