

Students as Partners: Building Learner Success Tools in Your Course

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Brief Description for Conference Program

Abstract: This NSF-funded two-phased research study examines a key aspect of the Scholarship of Teaching and Learning (SoTL) theory: engagement of students as learning partners. A causal-comparative investigation, it tests a holistic intervention to improve learner performance at a Historically Black College and University (HBCU). The first phase involves faculty training incorporating diverse instructional methods to increase student engagement. The second-phase focuses the holistic intervention targeting student accountability and partnership called “Grandma’s Recipe” to help increase learner performance. The aim of this three-year study is to determine the efficacy of the approach as a generalized pedagogical model for cross-discipline implementation.

Literature Review

Felten (2013) identifies five SoTL ‘good practice’ principles; inquiry focused on student learning, grounded in context, methodologically sound, conducted in partnership with students, and appropriately public. Psychologists and contemporary pedagogy theorists (Biggs 1999, Bloom 1953, Bruner 1961, Piaget 1950, Vygotsky 1978) have articulated that as a contextualized action, learning is an active process of constructing knowledge. Yet others (Apple 1992-present, Dweck 2006, McGuire 2018) have researched, tested and analyzed multiple elements including metacognition, growth mindset, and layered learning techniques to pique learner participation through engaged, accountable partnership, the focus of our undertaking.

Research Methodology

This research study investigates the cause-and-effect relationship between the experiment and control group of learners using “Grandma’s Recipe” (GR) as the intervention that integrates a holistic technique to engage student partnership and accountability in increasing learner achievement.

The research question, “Does faculty partnership with learners result in students’ higher academic achievement?” leads to the hypothetical assumption that faculty partnership with students does result in higher academic achievement, where:

Independent Variable = method of learning (GR as intervention)

Dependent Variable = Academic achievement

Control Variables = Semester duration, semester start/stop dates, race, gender

The second phase of the study involves an initial target population of 250 STEM students along with an end-of-semester survey establishing the sample population from those using the GR intervention. Faculty will present and encourage student adoption of GR at key time-periods, i.e., at the beginning, after the first exam, and at midterm. Data will consist of students’ academic performance for comparison with those who indicated they used GR versus those who did not. Semester scores will serve as a measure to compare both groups’ achievements for analysis and determination of significance using a t-test analysis.

Discussion

The first of this two-phased approach involved institution-wide recruitment of volunteers for a pilot program to develop the initial Metacognitive Community of Practice with consultants training 25 volunteer faculty over a two-day period. Subsequently, competition-based selection of a five-faculty cohort began collaborating with PI/Co-PIs in combining Project Knowledge, Supplemental Instruction, and Process Education with GR as the intervention technique. GR integrates Bloom's taxonomy, metacognition, growth mindset, and positive emotions and motivation emphasizing student accountability through a layered method of learning. Engaging train-the-trainer concept in May 2021, the initially trained cohort helped recruit an additional ten-faculty cohort. The AY 2021-2022 plan focuses incorporation of GR in cohorts' classroom instruction along with data collection of students' academic performance in both, the experiment and control groups.

Outcomes from this research are expected to indicate that students who engaged and adopted GR, either in part or as a whole, will perform to a greater academic level than those who did not. Since the NSF grant was secured prior to the COVID-19 pandemic, the unforeseeable constraints could not be envisioned. While each phase of the project obligates adjustments as appropriate, the findings will offer full impact of constraints including those from the virtual learning modality. On the other hand, the findings also promise additional possibilities for further research.

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Acknowledgments:

This research is partially supported by the National Science Foundation Education and Human Resources (IUSE: EHR) Award, STAR (Successful Transition to the Academic Realm) Program 2.0, to Virginia State University - Award ID 1915022, PI Dr. Leslie Y. Whiteman.

The presenters wish to thank their VSU peer faculty from Cohort One: Dr. Cheryl Adeyemi, Dr. Chaya Jain, Dr. Paul Kaseloo, Dr. Kenneth Lewis, Dr. Cecil Morris, and Dr. Grace Ndip, as well as Dr. Rosianna R. Gray, University of Alabama at Birmingham for her student engagement technique called "Grandma's Recipe."