

PR Award #: S422B220010

Organization Name: Purdue University

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Title: Project RIS

Project Description: Purdue University, in collaboration with North Carolina State University seeks funding for five years (2022-2027) to develop and implement innovative culturally relevant digital civics instruction aligned with American History, Civics, and Government courses, along with learning strategies, and teacher professional development opportunities to improve the quality of teaching and to enhance the civic readiness (i.e. civic purpose, civic knowledge and skills, political behaviors and attitudes, and empathy) of middle and/or high school students. We seek to integrate engineering design approaches to help teachers support their students in understanding and addressing systemic inequities in their communities and demonstrate how civics education and civic readiness can influence public policy to solve such problems.

Objectives: *Obj. 1:* To develop and design culturally relevant digital civics instruction modules and learning strategies (via mobile App) steeped in design-based thinking that highlight historical grand challenges; *Obj. 2:* To gauge the usability and feasibility of such culturally relevant digital civics instruction modules and learning strategies (via mobile App) through field tests; *Obj. 3:* To measure teacher quality/improvement as a result of professional development experiences; *Obj. 4:* To measure the effect of the culturally relevant digital civics instruction modules and learning strategies (via mobile App) on student outcomes.

Expected Outcomes: Culturally relevant digital civics instruction modules and mobile App steeped in engineering design-based thinking will help teachers increase the quality/improvement of their instruction and support the civic readiness of students.

Contributions for Research, Policy, and Practice: The social justice lens of Project RISE addresses shortcomings of current civics education, as it localizes abstract concepts and anchors them in and beyond learner communities. Connecting digital civics learning directly with students' lived experiences enhances the potential to create and foster learners and communities eager to develop solutions with long-term positive community- and democracy-enhancing impacts.

Sample Populations: The study sample will consist of approximately 800 students, 40 teachers.

Overview of Methodology: The proposed research will take place in suburban and urban public schools in Indiana, North Carolina, and Georgia. A randomized controlled trial will be conducted, with computerized randomization at the teacher level and student outcomes. Standardized data collection and final analysis of data will also occur. The Work Task Motivation Scale for Teachers (WTMST) will measure teacher outcome (teacher motivation); a constructed instrument will measure student outcomes of civic purpose, civic knowledge and skills, and academic self-efficacy. State standardized tests will measure academic success.

Data Analytic Strategy: *Qualitative Analysis.* Thematic coding analysis using NVIVO will be used to summarize think-aloud assessment with brief interviews with students, focus group data

from students/teachers and open-ended questions from surveys. *Quantitative Analysis.* The primary hypothesis-testing analyses will involve fitting conditional mixed effects ANCOVA models (HLM or multilevel models), with an additional term to account for the nesting of students within classes. Potential fixed effects include treatment group, baseline measures of student outcome variables, and other observed covariates such as free/reduced lunch status, ethnicity, and gender. Mixed effect models will also be used to examine how use of curricula is related to student performance in intercultural competence. Covariates will be included for # of modules teachers complete and student app usage.