

ABSTRACT NARRATIVE

Title: Systemic Change to Improve Equity in Computer Science Student Achievement

Grant type: Early Phase

Priorities: 1: Demonstrates a Rationale; 3: Field-Initiated Innovations Promoting STEM Education, with a Focus on Computer Science (CS). Competitive Preference: Improve CS outcomes of high need students traditionally underrepresented in STEM attending schools located in majority rural locales.

Students to be served: 2,500

Grade levels to be served: Grades 7-8

Definition of high-need students

Students meeting one or more of the following criteria; economically disadvantaged (evidenced by qualification for free or reduced price lunch), English learners, and students with disabilities, situated in rural or urban districts with the majority in rural schools (as defined by locale code).

Brief project description

The project will implement, refine, and evaluate the impact of a comprehensive district change model that embeds CS coursework as a required component of the curriculum for every 7th and 8th grade student in participating districts, and provides intensive professional development and supports to foster culturally responsive and equitable teaching.

Summary of objectives and expected outcomes

Development, adoption, and implementation by 15 districts of the **Programming the Acceleration of Computing and Equity Framework (PACE Framework)** to support equitable CS access, participation and engagement by high need students, and middle school CS pathways. Evaluation will produce data on students' CS achievement, interest, and progression; and on teachers CS instructional capacity and equitable teaching practices. A PACE Toolkit will support sustainability and scaling.

Special project features

Commitment by districts to adopt and sustain CS as central component of middle school curriculum. Collaboration with MA state department of education and state association of superintendents to develop and help scale use of the PACE Framework.

Partnering organizations

EDC, MA Department of Elementary and Secondary Education, MassCAN, UMass-Boston, Code.org, MA Assn State Superintendents, 15 Massachusetts urban and rural LEAs (district locale codes 32,33,41,42,43). Evaluator: SageFox.