INTEGRATING STEM AND LITERACY WITH COMPUTATION IN ELEMENTARY EDUCATION (i-SLICEE)

PR Award #: U336S180038
Organization Name: East Tennessee State University
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Project Model: Pre-bac Model
Competitive Preference Priorities: (1) *Promoting STEM Education, (2) Promoting Effective Instruction in Classrooms and Schools, and (3) Novice Applicant*
Requested Total Award Amount: $*1,000,000.00*

Project Description: The vision of this project, Integrating STEM and LIteracy with Computation in Elementary Education (i-SLICEE), is to create an effective and innovative model of teacher preparation at the pre-baccalaureate level through the implementation of integrating STEM and English Language Arts with computation in elementary education (K-5). The program will also provide follow-up support for program student teachers, program graduates, new teachers, and in-service mentor teachers to become effective teachers to advance their students'academic performances in partner LEAs.

Project Expected Outcomes: The goals of the project are to: (1) create a model teacher preparation program that enables K-5 pre-service teachers to integrate Science, Technology, Engineering and Mathematics (STEM) and English Language Arts (ELA) with Computation (C) during the teacher preparation program, (2) implement the i-SLICEE curriculum by collaborating with pre-service teachers, in-service mentor teachers, and faculty members of an institute of higher education (IHE) during the student teaching residency period occurring in the partner local education agents (LEAs), and (3) enable mentor teachers and program graduates who are new teachers to reach excellence in teaching and implement the i-SLICEE curriculum in partner LEAs.

Project Special Features: The project intends for pre-service teachers, program graduates, new teachers and in-service mentor teachers to gain a deeper understanding of the subject matter in STEM, English Language Arts, and computation (STEM+ELA+C); integrate and implement STEM+ELA+C activities in elementary education; utilize Practice Standards promoted in Next Generation Science Standards (NGSS, 2013), Common Core English Languages Arts and Mathematics (CCSS, 2010), and use NGSS crossing-cutting concepts to bridge STEM, ELA and computation. Also, it intends to advance the pedagogical skills for pre-service teachers, program graduates, and in-service mentor teachers to increase student overall academic performance and reduce the achievement gap in the partner LEAs.

Project Partners: LEAs - Bristol City, Elizabethton City, Greene County, Greeneville City, Hawkins County, Johnson City, Kingsport City, Sullivan County, and Washington County. IHEs - College of Arts & Sciences, College of Education, and School of Graduate Studies. STEM Organization: Northeast Tennessee STEM HUB.