

Abstract – Rural Math Innovation Network (RMIN)

Virginia Advanced Study Strategies, Inc. (VASS), a 501c(3) nonprofit organization, and 20 rural LEAs in Virginia propose a development project to address the i3 *Absolute Priority 5—Serving Rural Communities and Absolute Priority 4—Influencing the Development of Non-Cognitive Factors*. The goal is to develop a process using a networked improvement community (NIC) of pre-Algebra and Algebra 1 teachers to incorporate non-cognitive, social-emotional learning (SEL) factors of academic self-efficacy and growth mindset into lesson plans for teaching math competencies used by technicians in STEM-H occupations.

Objectives are (1) to prepare all teachers in the NIC to innovate lesson plans with SEL strategies that address self-efficacy and growth mindset needs of students for learning mathematics required in STEM-H technician careers; (2) to provide supports for each teacher in the NIC to innovate 5 SEL math lessons and implement 10 SEL math lessons into instruction; (3) to establish technology capacity for NIC teachers to develop and implement SEL math lessons; (4) to achieve a student passage rate increase of 25% on the career readiness math assessments: VA pre-Algebra test, VA Algebra 1 test, Work Keys math test, and community college math assessment; and (5) to broadly disseminate information that results in four schools as teacher innovation sites and a 125% increase in the NIC math teacher membership.

Teachers receive training on SEL theory and practices for developing the lesson plans. NIC facilitators support teacher collaboration, access to instructional supports for the lessons, and sharing of lessons learned. Teacher video tape the SEL lessons and improve lesson plans through “critical friend” reflection activities. Implementation of the lessons is to increase student success on four math career readiness assessments. This result impacts the students’ and the rural region’s workforce readiness, economic security, and sustainability of the NIC. More than 4,500 students will be served. Project partners include VASS, Inc., the 20 rural LEAs in Virginia, the Southern VA Higher Education Foundation, personnel associated with the James Madison University Motivation Research Institute and College of Education, and the external evaluator ICF International.