Abstract

Include **N**eurodiversity in **F**oundational and **A**pplied **C**omputational **T**hinking (**INFACT**) is an **early-phase** field-generated initiative to infuse Computational Thinking (CT) into STEM teaching, learning, and assessments for **grades 3–8**. The consortium of INFACT partners includes: TERC, Digital Promise, Florida State University, Looking Glass Ventures, New Knowledge Organization, University of Florida, and University of Maryland. INFACT addresses EIR's **Absolute Priority 1** by targeting the **high-needs audience of neurodiverse learners**. INFACT addresses **Absolute Priority 3** and the **Competitive Preference Priority** by designing, implementing, and studying a comprehensive program that lays a foundation for Computer Science (CS) learning and infuses CT into STEM learning and teaching. The design research and the quasi-experimental studies involved in the evaluation research of this early-phase project includes over 1000 students in grades 3–8 classes, with at least 20% identified with an Individual Education Plan (IEP status) because of issues related to learning variability. INFACT takes exceptional approaches to the absolute and competitive EIR priorities including: a) Leveraging expertise and existing research-grounded learning materials, assessments, and PD models from a national consortium of leading research teams in CT and STEM education, learning sciences, cognitive psychology, and learner variability; b) Designing, implementing, and researching an innovative, comprehensive program that aligns learning, assessment, and teaching models within a progression for grades 3–8 that builds a strong CT foundation and leads to the application of CT in STEM projects; c) Leveraging the natural overlap between CT and learning variability; and d) Studying the impact on a broad range of learners nationwide, including the potential to close the gap in STEM performance and participation that is related to learning variability.