KEY CHALLENGES ASSOCIATED WITH SCHOOL LEADERSHIP ROLES AT FOUR STEM ELEMENTARY SCHOOLS: ADMINISTRATOR VIEWPOINTS ON STEM CURRICULUM IMPLEMENTATION

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This qualitative multiple case study comprised an investigation of the beliefs, understandings, and experiences of school principals charged with overseeing the curricular innovations and implementations taking place at four STEM elementary schools. The study was organized around a proposition based on five factors adopted from the Framework of Essential Supports for School Improvement: (a) leadership, (b) parent-community ties, (c) professional capacity of faculty and staff, (d) a student-centered learning climate, and (e) ambitious instruction. The topics of primary interest were the principals’ perceptions regarding essential characteristics of an effective STEM elementary school leader and elementary-level STEM education program, the challenges associated with implementing new elementary school curriculum programs in general, the challenges that the participant principals identify as specific to implementing STEM-emphasis curricular programs, and the principals’ ideas regarding solutions to the challenges of administering STEM education programs. An over-arching objective of the research was the construction of a definition of STEM education and model of the STEM school as viewed from the participants’ particular standpoints. The results of the study will serve as an information source for STEM school principals or as lessons learned that may be useful in the design and implementation of elementary school STEM education programs.