

# Oral Defense Announcement

## University of Missouri – St. Louis Graduate School

An oral examination in defense of the co-authored dissertation for the degree  
Doctor of Education in Educational Practice

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### Analysis of a STEM Education Professional Development Conference for Pre-Service Educators

Date: July 6, 2017

Time: 5:00 pm – 7:00 pm

Place: Monsanto Room, TLC

#### Abstract

Science, technology, engineering, and mathematics (STEM) disciplines are attracting increased attention in education. The iSTEM 2017 conference was a professional development program designed to acquaint pre-service teachers with interdisciplinary, research-based STEM instructional strategies that can transform traditional classroom instruction into dynamic learning environments.

The STEM Education Scholars (STEMES) is a Learning Community of Practice, housed in the College of Education, at a midsized midwestern public research university. The program of study focused on designing a professional development program for future Pre-K12 teachers. The iSTEM 2017 conference presented by the STEMES Community of Practice sought to inform pre-service teachers of STEM pedagogy, and focused on innovative classroom resources, hands-on learning and increasing content confidence when incorporating STEM into classroom instruction. iSTEM 2017 was held in February, 2017, and offered twenty refereed presentations and workshop sessions, a keynote address, and a closing session to over 200 pre-service teachers.

Conference participants chose sessions, participated in game-like experiences and shared their learning with each other as well as with conference organizers. Results from participant self-reported surveys were analyzed to measure the impact of the conference on improving participants' confidence in teaching STEM topics, and their attitudes about the instructional methods. These results were added to the conference proceedings, which also contain documentation of each iSTEM 2017 session. Findings suggest that the iSTEM 2017 conference had an overall positive impact on participants' familiarity with STEM education, their belief in the importance of STEM education, and their confidence to integrate STEM education into future instructional practices.

#### Defense of Dissertation Committee

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