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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Comparison Between the Effectiveness of mySci 5E and OpenSciEd Curricula on the
Achievement and Attitudes of Eighth Grade Science Students

Date: June 8, 2023
Time: 2:00 pm to 5:00 pm
Place: Boeing Room, TLC

Abstract
Educators have struggled with maintaining student engagement in science, especially as students transition from primary to middle school and upper grades (Vedder-Weiss & Fortus, 2012). A recent push in science education has been the adoption of the Next Generation Science Standards (NGSS), released in 2013, whose development was guided by A K-12 Framework for Science Education (NGSS Lead States, 2013). As a result, more educators have been incorporating curricula that require students to ascertain disciplinary core ideas using lenses of cross cutting concepts while engaged in science and engineering practices; the three dimensions of NGSS performance expectations (PE) also known as three-dimensional learning when in practice. Two curricula, mySci 5E (Washington University in St. Louis Institute for School Partnership, 2020) and OpenSciEd storylines (OpenSciEd, 2021), were compared in terms of student academic achievement and attitudes toward science. The research questions were: (1) To what extent is there a difference between achievement in science by eighth grade students experiencing the OpenSciEd storyline science curriculum and those experiencing MySci 5E as measured by end of unit assessment scores? (2) To what extent is the difference between attitudes toward science by eighth grade students experiencing the OpenSciEd storyline science curriculum and those experiencing MySci 5E as measured by My Attitudes Toward Science (MATS) surveys (Hillman et al., 2016)?

Defense of Dissertation Committee
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