1145-L1-542 **Razieh Shahriari** (rshahria@uark.edu) and **Nama Namakshi*** (namakshi@uark.edu). *An investigation into college algebra students' learning logarithm concepts using smartphone apps.*

This mixed-methods study reports on the effectiveness of using apps in teaching logarithms to students in college algebra classes. In this study, two smartphone applications (apps) were used to investigate students' understanding of logarithm concepts. 150 students enrolled in four different college algebra sections in fall 2016 participated in this study. Students in two sections were asked to use two educational apps as class activities (treatment sections), and two sections (control sections) worked on worksheet. Written tests and interviews were used to discover students' understanding and misunderstanding. Written test questions were designed based on Bloom's six levels of learning. Data from students' written tests and interviews were collected and analyzed. Students understanding of logarithms concepts categorized in five levels. In addition, students' errors were identified and categorized. The result of the study indicates that students who used apps made accurate connections between logarithms and exponential functions and performed better in applying some logarithm properties. However, students performed equivalently on questions that require higher level of understanding and reasoning. (Received September 09, 2018)