1106-G1-2316 **John Hannah**, **Sepideh Stewart*** (sstewart@math.ou.edu) and **Michael Thomas**. *Teaching Linear Algebra in the embodied, symbolic and formal worlds of mathematical thinking: Is there a preferred order?*

In this research project, using Tall's three worlds of mathematical thinking as a theoretical framework, students were taught fundamental linear algebra concepts using each of the embodied, symbolic and formal dimensions. By varying the order in which these approaches were used in each topic we investigated students' perceptions of the combinations and their potential for understanding and learning. The results show that students seem to react positively to symbolic examples and embodied ideas but there is little effect overall of order on understanding. (Received September 16, 2014)