

1116-H1-2427 **John Hannah**, , New Zealand, **Sepideh Stewart*** (sstewart@math.ou.edu), 601 Elm Ave, Norman, OK 73019, and **Mike Thomas**, , New Zealand. *Linear Algebra in the Formal World of Mathematical Thinking*. Preliminary report.

Linear algebra is a required course for many STEM majors. Although, many students follow the study of matrices and are fairly successful in solving linear systems, they struggle with grasping the more theoretical aspects of linear algebra. In this study, a group of 16 students from a first course in linear algebra were interviewed and were asked about the purpose of proof in their understanding and whether they found proofs convincing. The qualitative analysis of the data is based on Tall's three world model of embodied, symbolic and formal thinking. (Received September 22, 2015)