

1096-D1-1639      **Katherine J. Mawhinney\*** (mawhinneykj@appstate.edu), 330 Walker Hall, 121 Bodenheimer Dr., Boone, NC 28608. *Using Formal and Informal Proof Writing in an Introduction to Proofs Course.*

The *Techniques of Proof* course at Appalachian State University includes propositional and predicate calculus in the axiom systems of L and K. This exploration into formal axiomatic systems is intended to build students' ability to create logical arguments that are concise and complete, by focusing on the structure and sequencing of logical formulas. The structure and sequencing of formulas is then connected to mathematical proofs beyond the formal axiomatic systems, as students write proofs about specific mathematics content. Another benefit of the exploration is that it acts as a bridge from traditional student practices to mathematical practices, by providing a manageable number of building blocks with which students can prove many logical statements. This session will highlight some of these connections along with the inquiry-based nature of exploration in L and K. Student opinion on the usefulness of the course in the transition to advanced mathematics courses will also be shared. (Received September 16, 2013)