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TEACHING, LEADERSHIP AND
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THE EFFECT OF A MODIFIED MOORE METHOD ON CONCEPTUALIZATION OF
PROOF AMONG COLLEGE STUDENTS (701 pp.)

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Research projects have long indicated incompetence in justification of mathematical arguments among students of high school as well as college level. This research sought to understand the mental proof schemes that students possess, and to determine if these schemes progress when the Moore method is used in teaching a mathematics course.

This study is significant in two major ways: First, it confirmed the mental schemes of proofs proposed by Harel & Sowder. Second, the study examined the effect of the Moore method on students' learning and appreciation of proofs. Using a qualitative analysis design the study showed that the Moore method has positive affects on students' conceptualization of mathematical proof, their self-confidence in their abilities, their appreciation of the relevance of proofs, and their ability to think autonomously. The Moore method allowed students to experience mathematics first hand. They built a coherent body of knowledge in which they created their own proofs.