Monica R. Geist* (monica.geist@frontrange.edu), Front Range Community College, Campus Box 23, 3645 W. 112th Ave., Westminster, CO 80031, and David C. Webb and Henk van der Kooij. The Impact of Curriculum Change on Teacher Practice: The Case of College Algebra. Preliminary report.

Community college teachers are presented with a challenge: how to promote deep understanding of College Algebra material when faced with uninterested or underprepared students who only need the class to fulfill their math requirement. This paper describes a pilot study in which Realistic Mathematics Education (RME) principles were implemented in a two-and-a-half week unit on exponential and logarithmic functions. RME is a content-specific theory of teaching and learning mathematics proposed by the Dutch mathematician, Hans Freudenthal, over 30 years ago. At the heart of the RME design principles is a deliberate sequence of activities that elicit students' prior knowledge in meaningful contexts. Students in this pilot study were initially challenged with the approach, but they quickly became engaged at a level not seen before by the teacher. The re-awakening of her students, who previously had limited access to mathematics, became the catalyst for a major change of curriculum and pedagogy. The focus of this paper is on how the cognitive and psychological experiences from this pilot study profoundly changed the teachers' views on learning and instruction. Also discussed is a new initiative for faculty development to promote student centered pedagogical changes among other teachers. (Received September 16, 2007)