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**Wendy Hageman Smith\*** (smithwh@longwood.edu), 808 5th Street, Radford, VA 24141. *A Constructivist Theory of Teaching Mathematics: from concept to context.*

This paper is meant to introduce a theory of teaching mathematics based on constructivism, which has an epistemological basis. Constructivism has been used as a framework to form cognitive theory and attempts to explain the specific mechanisms by which we acquire knowledge. The basic tenet is that all knowledge is constructed by the individual, that is, it must be 'formed' in the mind and cannot simply be 'acquired' by direct transmission. This is of course directly relevant to our profession as educators, for to teach well we must be able to understand how students learn, so that we can develop and employ methods that work. The NCTM Professional Standards for Teaching Mathematics (1991) adumbrates a framework for a theory of teaching when it presents six elements of teaching that need to be addressed by educators and offer much of what a theory of teaching should include, but they do not constitute a theory of teaching, per se, because they omit the basic tenets upon which such standards should be based. My theory expands from the six areas included in the Professional Standards, and over the past few years I have been doing research on how this theory of teaching mathematics can be used by different educators in their classrooms. The results have been promising. (Received September 16, 2008)