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**Eden M Badertscher\*** (edenmb@alumni.princeton.edu). *Developing Middle School Teachers' Content Knowledge Through Inquiry In and About Mathematics.*

In a new research-based Masters program in middle school mathematics, in-service teachers participate in a variety of traditional and novel content experiences. One such experience is an inquiry strand focusing both in mathematics (e.g. an exploration of teachers' conjectures) and about mathematics (e.g. the nature and role of proof). Conventionally, content is primarily defined in terms of propositional knowledge. Inquiry in mathematics takes the stance that mathematical activity is essential and powerful content. Moreover, inquiry about mathematics allows teachers to improve their understanding of mathematical engagement by considering issues such as the nature of mathematics and how mathematical knowledge develops— questions typically reserved for philosophers of mathematics. Since middle school teachers, unlike those who pursue advanced mathematical study, rarely have access to the practices and perspectives of the discipline, inquiry in and about mathematics is particularly crucial. In this presentation, I will briefly describe the inquiry strand, highlight examples of teachers' work, and report on current research on how various content experiences both mediate and are impacted by teachers' relationships with mathematics. (Received September 07, 2006)