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Teaching, Leadership, and
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**MERGING CONTENT AND PEDAGOGY: AN INVESTIGATION OF THE SPECIFIC
FACTORS OF AN INNOVATIVE MASTER'S DEGREE PROGRAM FOR
SECONDARY MATHEMATICS TEACHERS THAT CONTRIBUTE TO REPORTED
CHANGES IN BELIEFS AND INSTRUCTIONAL PRACTICES (253 PP.)**

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The purpose of this study was to determine the factors of an innovative master's degree program for secondary mathematics teachers that contributed to reported changes in beliefs and instructional practices. The program under investigation was specifically designed as an attempt at true collaboration in order to merge content and pedagogy. This collaborative effort was an answer to the many calls by professional mathematics and teaching organizations to create more practical programs for teachers. Each course in the program was designed by a team of one mathematician, one mathematics educator, and one practicing secondary school mathematics teacher. More specifically, this research was an answer to the calls for a careful examination of the beliefs and instructional practices of the participants in these programs, and to determine the factors of the program that contributed to reported changes in beliefs and instructional practices.

The desired product of this longitudinal study was a theory that attempted to explain the factors that contributed to reported changes in beliefs and instructional practices of secondary mathematics teachers who participate in the Partnership in Preparing Master Mathematics Teachers at Clarion University of Pennsylvania. After quantitative research methods were used to determine which beliefs and instructional

practices significantly changed due to participants' responses on surveys that were repeatedly given, the qualitative research method of Grounded Theory was used to allow the factors contributing to these changes to emerge from interview data. The surveys consisted of twenty-nine beliefs statements and one-hundred five instructional practices statements.

Results of this study revealed that this program positively contributed to changing many of the participants' beliefs and instructional practices consistent with current reform efforts in mathematics education. Furthermore, the factors that emerged as contributing to these changes were: (a) collaboration with other teachers and course instructors, (b) specific connections made to the secondary classroom, (c) pedagogical methods encouraged and employed by the instructors, and (d) reflection on their own beliefs and instructional practices.