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INVESTIGATING THE ADULT LEARNERS' EXPERIENCE WHEN SOLVING MATHEMATICAL WORD PROBLEMS (387 pp.)

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The purpose of the study was to understand and describe the experiences adult learners have while solving mathematical word problems. The focus of the study was on how these adult students used prior mathematical knowledge and how their past experiences with mathematics influenced solving of word problems typically found in an algebra course.

The research methodology was multiple case studies. The research sample was comprised of the students taking a Beginning Algebra class at a Midwest community college. Individual interviews with open-ended questions and observations of students solving mathematical word problems were employed to gather information about the individual's constructions and experiences. The within-case and cross-case data analyses followed the data collection.

The study found that the attitudes, feelings and beliefs that adult students in the study hold toward mathematics are an integral part of their mathematics learning experience. This study also reports on the particular pattern observed within the participants' attitude toward mathematics education during their schooling years. In addition, the study found that the majority of the participants were not ready to tackle the

traditional word problems because of the lack of necessary cognitive resources/previous knowledge of such concepts as motion and concentration. Finally, the study found that even after learning the topic in class, the participants had difficulties with applying algebraic approaches to word problem solving. The participants mostly relied on the memorization rather than conceptual understanding. In addition, the majority of the participants displayed no transfer of learning between the classroom and everyday activities.