

**ZMATH 2009f.00649**

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**Variable relationships among different science learners in elementary science-methods courses.**

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Summary: The purpose of this study was to examine the relationships among science content knowledge, understanding the Learning Cycle, and self-efficacy among preservice teachers. Preservice teachers enrolled in an elementary science-methods course were categorized as Fearful, Disinterested, Successful, or Enthusiastic science learners based on differing background characteristics in the variables of science interest, performance in science courses methods courses. Analysis revealed that the four categories increased differentially in their science content knowledge, understanding of the Learning Cycle, science teaching self-efficacy, and confidence to learn science. Fearful science learners demonstrated less increases in science content knowledge and understanding of the Learning Cycle than the other three categories. Disinterested science learners demonstrated fewer gains in science content knowledge than Enthusiastic science learners. Fearful science learners were less confident to learn science than other categories.

*Classification:* M55 M59 B50 C25 C29 D45 D49

*Keywords:* learning cycle; preservice teachers; science teachers; science content knowledge; self-efficacy; empirical investigations; quantitative research

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