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Conceptual writing in college-level mathematics courses and its impact on performance and attitude.

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Summary: This study looks at the impact of college students' writing on a regular basis about mathematical concepts. Specifically we examine the effect of this practice on performance and attitude while controlling for confounding factors. Two professors and a total of 97 students in four different classes participated in the study. Students in the writing groups were required to write a total of eight papers, each concentrating on an important concept in the course. All students were given a visual skills assessment at the beginning and end of the course. Students in the writing group were assessed to determine their attitude toward the writing assignments. Positive trends were associated with the writing group over the non-writing group in overall score and in all but one of six individual components. However, within the writing group, students' attitude toward writing in mathematics class was negative.

Classification: D45 C35 C25

Keywords: writing to learn; conceptual understanding; visual assessment; calculus; finite mathematics; statistical analysis

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