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Making online homework work.

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Summary: Online homework systems, which deliver homework assignments to students and provide real-time feedback on their responses, have the potential to increase student learning in college mathematics classes. However, current research on their effectiveness is inconclusive, with some studies showing gains in student achievement, whereas others report only that the systems “do no harm.” Our own experience has convinced us that online homework systems can increase student engagement and achievement, especially in lower-level classes, such as statistics, precalculus, and calculus. Successfully integrating online homework systems into face-to-face mathematics classes requires instructors to confront several issues, including the differing natures of online homework and in-class assessments such as tests. We explore these issues, and offer guidelines gleaned from our experience, which can help instructors and students maximize the benefits offered by these systems to improve student learning.

Classification: U55 D65

Keywords: online homework; computer-aided learning; technology in the classroom; formative assessment; summative assessment

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