MAA
MATHEMATICAL ASSOCIATION OF AMERICA

Improving Student Success: Aligning Instructional Strategies in Mathematics

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CBMS Forum
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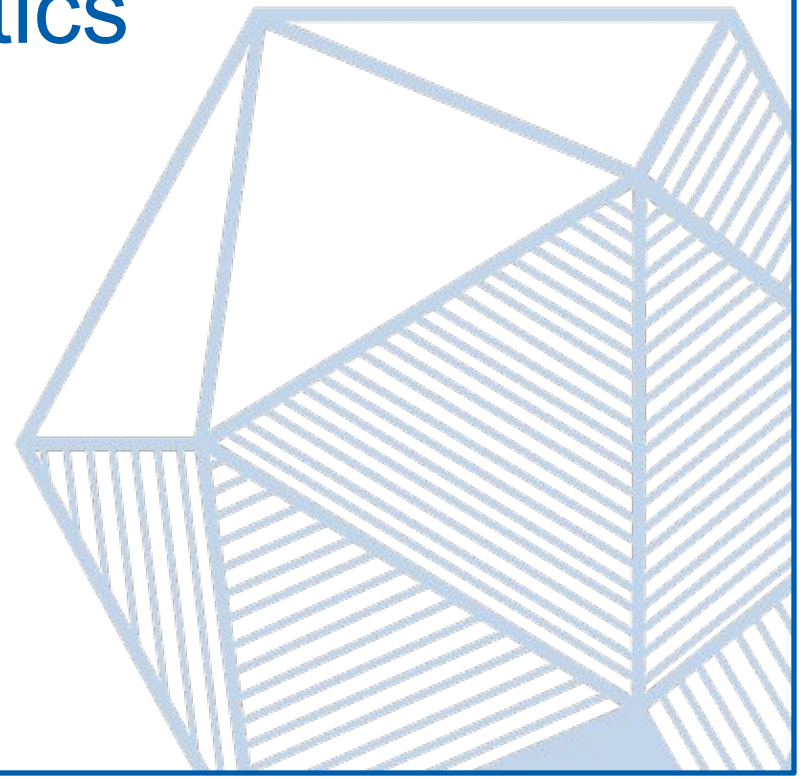

MAA Instructional Practices Guide

Effective teaching and deep learning require student engagement with content both inside and outside the classroom.

https://www.maa.org/programs-and-communities/curriculum%20resources/instructional-practices-guide

Active Learning in Post-Secondary Mathematics Education

Classroom environments in which students are provided opportunities to engage in mathematical investigation, communication, and group problem-solving, while also receiving feedback on their work from both experts and peers, have a positive effect on learning.

CBMS (2016)

https://www.cbmsweb.org/2016/07/active-learning-in-post-secondary-mathematics-education/

Engaging students intellectually in the process of learning mathematics through active and cognitive activities is fundamental for improving student achievement.

https://amatyc.site-ym.com/mpage/IMPACT

Aligning Recommendations

Alignment with NCTM recommendations: *Students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge.*

Alignment with Common Core: Standards for Mathematical Practice

Alignment Across Institutions

AAU Undergraduate STEM Education Initiative based on overwhelming existing research to influence the culture of STEM departments at AAU universities so that faculty members are encouraged to use teaching practices proven to be effective in engaging students in STEM education and in helping students learn, particularly at the first-year and sophomore levels.

AACU High-Impact Educational Practices

Characterisics of Successful Programs in College Calculus

Progress through Calculus

> *Calculus instructors were encouraged (nudged) to use and experiment with active learning strategies.*

https://www.maa.org/programs-and-communities/curriculum%20resources/progress-through-calculus