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## Perceptions of Students toward Flipped Learning in the STEM Courses at a Two-Year and a Four-Year Institution

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### Abstract

Flipped teaching (FT) is shown to actively engage the learner in comparison to passive learning experience of traditional teaching (TT) by shifting lecture outside the classroom to allow in-class time on activities at higher levels of Bloom's taxonomy. The impact of FT on STEM students in a two-year institution (2-YI) and a four-year institution (4-YI), male and female students, and Freshmen to Senior years were examined in this study. Twelve STEM faculty, six per cohort, from a 4-YI and six per cohort from a 2-YI were selected to receive faculty development and to implement FT in their classrooms. During the first semester of FT, students at the 4-YI responded more favorably than students at the 2-YI ( $p=0.0004$ ), and female students rated FT greater than male students ( $p=0.04$ ). In the second semester of implementation, all students equally favored FT. Furthermore, Juniors and Seniors were more likely to report a better experience than Freshmen and Sophomores in the subsequent semester ( $p<0.05$ ). These results suggest that students in the 4-YI, especially Juniors and Seniors, have a more positive and receptive attitude toward FT than the students at the 2-YI.

This is the full abstract presented at the Experimental Biology meeting and is only available in HTML format. There are no additional versions or additional content available for this abstract.



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