The Effects of Acceleration in Developmental Mathematics on Lowest-Level Placed Students at Utah Valley University

Acceleration in developmental mathematics at Utah Valley University through compression of a 4-course sequence into a 2-course sequence was examined to determine the extent to which sequence length predicted student success outcomes, including completion of, pass/fail grades in, and re-enrollment into subsequent developmental mathematics courses for students with the lowest-level incoming placement exam scores. The findings of this study suggested that the post-reform 2-course sequence may have a detrimental effect on student success outcomes in developmental mathematics courses for the lowest-level placed students, however broad confidence intervals prevented firm conclusions. Goodness of fit measures showed that the models created in this study do not account for a large portion of the variance in the student success outcomes, indicating that factors other than sequence length, such as Pell grant eligibility, first generation status, and other cognitive and affective characteristics would be better predictors of success. Reduced course sequences could be an effective option as part of a holistic developmental mathematics program that meets the various needs of its students. However, as an isolated change without consideration of varied ideal learning rates, a shortened sequence does not have a meaningful impact.