An Analysis of the Impact of Course Elimination via Contextualization in Developmental Mathematics

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Abstract
We assess the effect of eliminating the remedial Arithmetic course at a community college in New York City. We compare remedial sequence completion of two comparable groups of students. In the first group, there were 285 students who placed into Arithmetic in Spring 2012 and were required to pass both a one-semester Arithmetic and a one-semester Elementary Algebra to exit remediation. In the second group, there were 252 students who would previously have placed into Arithmetic but were placed directly into a one-semester Elementary Algebra with integrated contextualized arithmetic in Spring 2013. Intuitively, one would expect students taking more semesters of remediation to be better prepared. But utilizing cross-tabulations, we show that the students taking only a single course completed the sequence at a statistically significant ($p = 0.05$) higher rate. A more analytical logistic regression shows similar improved completion rates. We speculate from this that front-loading material into an extra course has a detrimental effect on student success in the remedial sequence, and that shortening the sequence by contextualizing arithmetic into the elementary algebra course is a more promising approach.

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