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The many colors of algebra: the impact of equity focused teaching upon student learning and engagement.

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Summary: The number of students who leave U.S. schools mathematically underprepared has prompted widespread concern. Low achieving students, many of whom have been turned off mathematics, are often placed in low tracks and given remedial, skills-oriented work. This study examines a different approach wherein heterogeneous groups of students were given responsibility and agency and asked to engage in a range of mathematical practices collaboratively. The teaching intervention, which was introduced in the first paper, took place as part of a summer class on algebra, and it gave students the opportunity to participate with mathematics in changed ways. This paper will report evidence that the vast majority responded with increased engagement, achievement, and enjoyment. The students chose collaboration and agency as critical to their improved relationships with mathematics.

Classification: D43 D33 C63 H23 H33

Keywords: algebra; equity; engagement; agency; authority

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