

ISSUE BRIEF: ADVANCED COURSEWORK AND POSTSECONDARY EDUCATION

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Introduction

Advanced coursework is one strategy education leaders and policymakers have used to improve academic performance and college readiness (Iatarola et al., 2011). Programs such as Advanced Placement (AP) and dual enrollment provide students opportunities to earn college credit while in high school. Proponents of advanced coursework argue that exposure to college-level materials aid in preparing students for the rigors of college coursework (Iatarola et al., 2011) while also reducing the achievement gaps (Hoffman et al., 2008). This review presents an overview of recent research examining the relationships between advanced coursework, specifically AP and dual enrollment, and college readiness and persistence.

Advanced Coursework and College Readiness

There is clear evidence of a relationship between advanced coursework and college readiness. In their study of AP course taking in Utah, Warne et al. (2015) found a positive relationship between passing an AP exam with a score of 3 or higher and an increase in ACT composite scores, with a change of 2.8-4.1 points in ACT Composite score associated with AP English, and a change of 1-2.7 associated with AP Calculus. Moreover, the researchers found that merely taking an AP course without taking the exam did not have a positive effect on ACT score whereas taking the course and passing the exam had the highest positive effect. In a similar study of advanced level Calculus, English, and Chemistry content areas, AP exam participation was found to be positively related to SAT performance compared to the performance of students who do not take an AP exam (McKillip & Rawls, 2013). This benefit was specific to students who scored a 3 or higher on their AP exam, with SAT score rising as AP scores increased. Additionally, AP course-taking itself was associated with increased college readiness. For

example, in a study of Florida high school students, Speroni (2011) found a 6 percentage point increase in the rate of college enrollment for students who participated in AP coursework compared to students who did not and an 18 percentage point increase in the rate of four-year college enrollment.

Similarly, research has shown participation in dual enrollment to improve students' study habits and to raise their academic motivation (An, 2015). A recent study of a nationally represented sample of college goers found dual enrollment students to be more college ready, displaying higher levels of cognitive strategies, content knowledge, and learning skills and techniques than their peers who did not participate in dual enrollment (An & Taylor, 2015). Further, the probability of taking a remedial course for students who participated in dual enrollment is lower than those who did not participated in dual enrollment (An, 2013b).

Advanced Coursework and College Persistence

Empirical evidence suggests a positive association between advanced coursework participation and increased chances of obtaining a degree. In a recent study, Smith, Hurwitz, and Avery (2015) found that achieving a high AP exam score results in an increased probability of obtaining a bachelor's degree within four years. However, most of this effect was due to accruing AP credit that goes towards college graduation requirements, indicating that the effect occurred when a student was able to earn credit from their AP coursework (Smith, Hurwitz, & Avery, 2015).

In his examination of National Education Longitudinal Study data, An (2013a) found dual enrollment participation increased the likelihood of earning any postsecondary degree by 8 percentage points and a bachelor's degree by 7 percentage points. These findings were consistent

across socioeconomic groups with some evidence that first-generation students benefit more from dual enrollment participation than students with college-educated parents. However, An (2013a) found no evidence that dual enrollment participation decreased the greater attainment gap.

Differences between Two- and Four-year College Going

There is little research studying the differential effects of advanced coursework on two and four-year college attendance. In a study using national student-level data, Smith et al. (2015) found evidence of students with AP exam scores of 3 or higher tended to enroll in more selective universities compared to their lower-scoring peers. However, their findings also indicate that AP exam scores themselves did not largely impact the type of postsecondary institution in which a student chooses to enroll.

Few studies have examined advance course taking and academic readiness and persistence in two-year community colleges and technical schools. Of what little research that exists, studies that have examined these relationships are mixed (e.g., Cowan & Goldhaber, 2015; Wang, Chan, & Washbon, 2015). For example, a study of the Wisconsin Technical System found dual enrollment to have had a positive, direct association with technical college students' retention and completion (Wang, Chan, & Washbon, 2015). The researchers also found dual enrollment reduced the likelihood of delayed college entry. However, Cowan and Goldhaber (2015) found dual enrollment students in Washington were more likely to drop out of high school or delay graduation. The researchers hypothesized that these findings may be explained by students completing an Associate's degree during high school or state-specific policies that allow students to enroll directly into a community school without a high school diploma.

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