

APPENDIX: EVIDENCE-BASED PRACTICES

This document is a supplement to the Department of Education’s “[College Completion Toolkit](#),” published December 2016. It presents examples of studies that include impact estimates for some of the general practices outlined in this toolkit. None of the research studies included here examine any of the school-specific interventions contained in the toolkit—rather, the research provides additional evidence supporting the subset of the general practices outlined in that document. Each intervention is briefly summarized and followed by a quote directly from the study that describes the quantifiable impact of that intervention.

This appendix includes both studies that have been reviewed by the What Works Clearinghouse (WWC) and studies that have not yet been reviewed. The WWC reviews existing research on education programs and practices to provide educators with the information they need to make evidence-based decisions. The Department cannot vouch for the rigor of any individual study. For more information on each study, we recommend consulting the [What Works Clearinghouse](#).

RESEARCH: HIGH-QUALITY COACHING, ADVISING AND MENTORING

[The Effects of Student Coaching in College: An Evaluation of a Randomized Experiment in Student Mentoring.](#) *Bettinger and Baker, 2011*

Intervention Summary: This study examined the impact of a professional coaching program called InsideTrack over the course of two separate school years. The coaches worked with college students, who were randomly assigned either to a group with or without coaches. Once assigned to a coach, the students regularly worked with their coaches who supported them in guiding their daily activities, developing long-term vision and goals, and developing personal skills such as time management and study skills. The study included 13,555 students in both an experimental and control group across eight different schools including public, private not-for-profit and proprietary colleges.

Impact: “While coaching was taking place during the first year, coached students were about 5 percentage points more likely to persist in college. This represents a 9 to 12 percent increase in retention over the control group. We also find that the effect of coaching on persistence does not disappear after the treatment. Coached students were 3-4 percentage points more likely to persist after 18 months and 24 months.”

[Doubling Graduation Rates: Three-Year Effects of CUNY’s Accelerated Study in Associate Programs \(ASAP\) for Developmental Education Students.](#) *Scrivener, 2015*

Intervention Summary: The Accelerated Study in Associate Programs (ASAP) intervention was designed to address the potential barriers to students’ academic success in the City University of New York (CUNY). As described in the study, ASAP provided students with requirements and focused messaging to encourage them to take positive steps to graduate on time. An array of student services, course enrollment support, and financial supports were offered over a three-year period. Students in ASAP were also required to meet with their assigned adviser twice per month. Additionally, students in ASAP are eligible for the difference between their fees and the total sum of their financial aid award to be waived. The study included a sample of 896 total students in both the experimental and control group.

Impact: “Over three years, ASAP almost doubled graduation rates of low-income community college students in need of some developmental education. The dramatically higher graduation rates caused the cost per graduate to fall, despite the incremental costs of operating the program.”

RESEARCH: WELCOME AND TRANSITIONAL ACTIVITIES

The Effects of Non-Compulsory Freshman Seminar and Core Curriculum Completion Ratios on Post-Secondary Persistence and Baccalaureate Degree Attainment. *Clouse, 2012*

Intervention Summary: This study examines the impact of a freshman seminar class at a large western public university. Within the freshman seminar, students learned about building their academic goals, achieving personal goals, and achieving community goals all in the context of college success. The study follows students through their first year and explores the impact of participation in the seminar beyond that year on persistence and completion, as well as the impact of several other variables. This study includes 8,377 students, 3,774 of whom completed a freshman seminar course.

Impact: “When controlling for both cohort year and major group, a student who participated in freshman seminar is 1.41 ($p < 0.000$) times more likely to persist until their sophomore fall term [compared with those that did not take a freshman seminar].”

“Findings indicate that participation in socially focused orientation courses have a positive relationship [in] freshman-to-sophomore persistence and baccalaureate degree completion. Moreover, high completion ratios of core required academic courses also have a positive effect on both freshman to sophomore persistence and baccalaureate degree attainment.”

An Empirical Analysis of Factors That Influence the First-Year-to-Second-Year Retention of Students at One Large, Hispanic Serving Institution (HSI). *Wilkerson, 2008*

Intervention Summary: This study took place at the University of Texas at San Antonio and focused on a number of variables to predict freshman retention at the university. One of those variables was whether or not students participated in a first-year seminar course. The first-year seminar class was a three-credit-hour course in a small class setting that focused on using social and behavioral sciences to promote a successful transition to the university. The study examined 1,296 first-year students enrolled during the 2002–2004 academic years.

Impact: “The odds of retention for students who enrolled in a first-year seminar course were increased by 70 percent compared to students who did not enroll. This finding is consistent with previous research that revealed how seminar course enrollment exacted a positive impact on retention.”

RESEARCH: BRIDGE PROGRAMS

College Graduation Rates for Minority Students in a Selective Technical University: Will Participation in a Summer Bridge Program Contribute to Success? *Murphy et al., 2010*

Intervention Summary: This study focused on the Challenge Program at the Georgia Institute of Technology. This program began in the 1980s and focuses on support and integration for students who enroll, with a particular focus on incoming minority students. The objective of the program is to help first-year students and their families become initiated to the common pitfalls of the college environment. This program begins in the last week of June and extends through the end of July. In addition to helping students better acclimate to the college environment, it also includes coursework in math, science, and English. The longitudinal data include more than 2,200 students.

Impact: “After controlling for important demographic and academic characteristics, participation by [underrepresented minority] students in the Challenge Program is associated with a higher likelihood of graduation than that of nonparticipants.”

Getting College Students Back on Track: A Summer Bridge Writing Program.

Kodama et al., 2016

Intervention Summary: This study focused on a five-week summer bridge writing program at a Midwestern public university. The program was designed to provide remedial instruction in writing for incoming first-year students during the summer, serving approximately 500 students per year.

Impact: “Participation in [the Summer Bridge Writing Workshop] was a positive, significant predictor on the outcomes of 6- and 4-year graduation and first-year earned credits ($p < .001$), as well as first-year college GPA ($p < .01$).”

“Students from the SBWW program not only graduated at higher rates but were more likely to graduate in 4 years as well.”

RESEARCH: ALTERNATIVE REMEDIATION PATHWAYS

CUNY Start: Analysis of Student Outcomes. *Logue and Mogulescy, 2013*

Intervention Summary: The City University of New York (CUNY) Start program began in 2009. The program requires that those who enroll temporarily delay starting their degree to participate in the 15- to 18-week program, which consists of 12 weeks of core content instruction in the fall with 3 to 6 weeks of additional core instruction as needed for students. Students enrolled in the program complete 25 hours a week. The program includes both students with a high school diploma and students with a GED, as well as students from foreign high schools. The curriculum includes reading, writing, and pre-college math. The study examines outcomes for 1,716 CUNY students who are compared to a matched comparison group using propensity scores with an identical number of students.

Impact: The program had several positive outcomes: “1) Once CUNY Start students began a degree program, they attempted and earned more credits than comparison group students after one semester, and had higher GPAs. 2) Using a different methodology to examine cumulative outcomes, CUNY Start students, after being enrolled in CUNY for one semester, earned only slightly fewer credits than comparison group students who were enrolled for two semesters. CUNY Start students also had slightly higher GPAs. 3) Once CUNY Start students begin a degree program, they are retained at higher rates [68.8 percent vs 74.7 percent] than comparison group students. 4) After using ordinary least squares (OLS) regression to control for any observable factors that might not have been fully accounted for in the original matching, CUNY Start is still shown to have a positive impact on the postsecondary outcomes discussed above.”

Curricular Redesign and Gatekeeper Completion: A Multi-College Evaluation of the California Acceleration Project. *Hayward, 2014*

Intervention Summary: The California Acceleration Project (CAP) was studied to determine the effectiveness of its accelerated pathways in preparing students to complete gateway courses at higher rates. This accelerated pathways approach replaces multiple levels of remedial courses and focuses instead on the skills required for success at the transfer level. The study analyzed outcomes for two cohorts of English

and math-accelerated students at 16 schools in California. The program promotes accelerated pathways by providing training and advice to faculty interested in implementing an accelerated pathways program at their school. The study examined outcomes for 2,489 students in the accelerated pathway.

Impact: “Students’ odds of completing a transferable college-level course were 1.5 times greater in accelerated English models overall and 2.3 times greater in high-acceleration models [than those in a traditional sequence]. Students’ odds of completing a transferable math course were 4.5 times greater in accelerated pathways than for students in traditional remediation.”

RESEARCH: LEARNING COMMUNITIES

Commencement Day: Six-Year Effects of a Freshman Learning Community Program at Kingsborough Community College. Sommo, 2012

Intervention Summary: A large urban college in the City University of New York (CUNY) tested a single-semester learning program, which grouped students together in clusters of up to 25. These students then took three classes together during their first semester and also had access to enhanced counseling and tutoring, as well as vouchers for books. The study included 1,534 students, 769 of whom were included in the program group.

Impact: The program had two key impacts: “1) The Opening Doors Learning Communities program increased the proportion of students who earned a degree by 4.6 percentage points after six years. 2) The Opening Doors Learning Communities program is cost-effective. In particular, the cost per degree earned was lower per program group member than it was per control group member.”

RESEARCH: ACADEMIC INTERVENTION SYSTEMS

Style Over Substance Revisited: A Longitudinal Analysis of Intrusive Intervention.

Abelman and Molina, 2001

Intervention Summary: This study compared three different academic intervention systems ranging from least to most intrusive and assessed their impact on sophomore and junior students who were struggling academically and had been placed on academic probation. The first intervention used a nonintrusive method, specifically a letter informing students of their probationary status. The second, termed the moderate-intrusion group, received the letter and a follow-up phone call from an academic advisor who went over the letter with the student and advised on next steps for the student to take. The third group, termed full intrusion, received the letter and phone call, and students were required to meet with an academic advisor in person for a 30–40 minute interview.

Impact: “Students who received a fully intrusive intervention had a cumulative mean GPA of 1.48 at the time of the intervention and a 1.56 at the end of the following term, which is a short-term increase of 5.13%. By comparison, students who received a moderately intrusive intervention or a nonintrusive intervention generated a less impressive short term increase in GPA, 0.61% (1.64 to 1.65) and 3.83% (1.51 to 1.57) respectively.”

RESEARCH: CO-REQUISITE COURSEWORK

[Is Corequisite Remediation Cost-Effective? Early Findings From Tennessee.](#) *Belfield, 2016*

Intervention Summary: In the fall of 2015, 13 community colleges in Tennessee implemented co-requisite remediation at scale for math, writing, and reading. Students participating in these classes enroll jointly in the college-level gateway course and a learning support course. Curricular material is aligned between the two courses by college faculty. This approach contrasts with the previously required “prerequisite model” where completion of remedial coursework was required prior to enrollment in college-level coursework, which could be accessed following completion of the gateway coursework.

Impact: “Under the prerequisite model, 12 percent of students assigned to math remediation ultimately passed college-level math in one academic year, and 31 percent assigned to writing remediation passed college-level writing. Under the co-requisite model, the success rates were significantly higher at 51 percent and 59 percent, respectively.”

RESEARCH: FULL CREDIT LOADS

[Momentum: The Academic and Economic Value of a 15-Credit First-Semester Course Load for College Students in Tennessee.](#) *Belfield, Jenkins, and Lahr, 2016*

Intervention Summary: This study examines student records for first-time college students entering the Tennessee Board of Regents higher education system. The study compares students who took 15 credits in their first semester of college to those who took 12 credits. Those students who take 15 credits are termed “momentum students.”

Impact: “We find strong positive academic impacts on credits and degree completion for momentum students in community colleges and four-year colleges. These impacts are financially valuable to students: Over their time in college, momentum students pay 4–14 percent less per credit and 9–19 percent less per degree in tuition and fees.”