Abstract Title Page
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Title: Effects of College Access Programs on College Readiness and Enrollment: A meta-analysis

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Abstract Body

Limit 4 pages single-spaced.

Background / Context:

Description of prior research and its intellectual context.

Despite modest increases in the U.S. high school graduation and college enrollment rates over the past decade, approximately 25 percent of ninth grade public school students do not go on to earn a high school diploma four years later (Chapman, Laird, & KewalRamani, 2010). Furthermore, among high school graduates, only 70 percent enroll in higher education (Snyder & Dillow, 2010). Additionally, recent research has demonstrated that a large proportion of high school graduates have not developed the skills necessary to succeed academically in college (Callan, Finney, Kirst, Usdan, & Venezia, 2006; Greene & Winters, 2005). Of high school graduates who enroll in two- or four-year colleges, only about 35 percent earn a bachelor's degree (Carnevale & Fry, 2000). Almost half of students in four-year institutions and two thirds of students in two year institutions require remedial coursework (Kirst & Bracco, 2004). Overall college enrollment rates have increased, yet students whose parents did not attend college, students of lower socioeconomic status and students of minority backgrounds are considerably less likely than their peers to graduate high school, pursue post-secondary education, and persist upon entry (College Board, 2010).

For decades, college access programs have aimed to improve college readiness and enrollment rates, particularly for underrepresented populations. Though several published reports have produced comprehensive inventories of college access programs (Gandara, 2001; Perna, 2002; Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009), no systematic review and meta-analysis of the evidence regarding their effectiveness exists.[1] This paper fills that knowledge gap by systematically gathering, reviewing, and synthesizing the findings on the effectiveness of programs designed to improve college readiness and enrollment for disadvantaged populations. In so doing, it is intended to provide guidance for policymakers and practitioners implementing college access programs, and to identify important gaps in the scientific evidence base that warrant further research.

Purpose / Objective / Research Question / Focus of Study:

Description of the focus of the research.

The purpose of this review is to summarize the evidence regarding the effectiveness of college access programs on college readiness and college enrollment. We address the following questions: (1) What evidence is available to judge the effectiveness of programs aimed at increasing college readiness and enrollment? (2) What does that evidence base tell us about the effectiveness of these programs? More specifically, what are the estimated average impacts of programs on college readiness outcomes within the following four domains: math achievement, language arts achievement, completed coursework, and high school graduation? What is the estimated impact of programs on college enrollment?

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[1] For the What Works Clearinghouse Practice Guide *Helping Students Navigate the Path to College*, a panel of experts identified promising practices high schools engage in to increase college access (Tierney et al, 2009). A comprehensive search of the literature and review of studies by the WWC was performed to determine the level of evidence supporting the specific recommendations of the panel (Tierney et al, 2009). In contrast, this paper reports the effects of college access programs systematically, without limiting attention to particular strategies for increasing access.

Setting:
Description of the research location.
Evaluations of college access programs that have been fielded since 1990, were conducted in the United States or in developed countries with similar secondary and higher educational systems, and are written in English are eligible for inclusion in this review. See the results section for a description of the settings of the interventions identified through our preliminary search.

Population / Participants / Subjects:
Description of the participants in the study: who, how many, key features, or characteristics.
The review only includes studies of interventions that target students between grades six and 12, or students of comparable ages who have not yet graduated from high school or earned a General Education Development certificate. The review excludes studies in which less than 75 percent of the sample falls within the target population for this review. See the results section for a description of the participants in the studies identified through our preliminary search.

Intervention / Program / Practice:
Description of the intervention, program, or practice, including details of administration and duration.
For this review, we define college access programs to be pre-college interventions that explicitly identify increasing college readiness and/or college enrollment as a primary goal of the program. This review examines two broad categories of college access programs: pre-packaged whole school reform efforts; and supplementary services provided at the student level. We use Gandara's (2001) taxonomy to characterize components of college access programs. See the results section for a description of the programs identified through our preliminary search.

Research Design:
Description of the research design.
This project conducts a Campbell Collaboration systematic review and meta-analysis of the effect of college access programs on college readiness and college enrollment. This literature review is systematic in that attempts to uncover all existing research on college access programs within a set of pre-specified bounds. We defined these bounds in a systematic review protocol that describes our search strategy, our criteria for screening studies for relevance and quality, the aspects of the studies that will be coded for analysis and our analytic approach.[2]

Our relevance screening identifies studies that use an eligible study design to measure the impact of a college access program on at least one of our key outcomes and that fall within the bounds described above. Eligible study designs include randomized controlled trials (RCTs), quasi-experimental designs (QEDs) and regression discontinuity designs (RDDs).

To pass quality standards, a randomized control trial must meet the What Works Clearinghouse attrition standards. RCTs that do not meet this standard are treated as QEDs. Quasi-experimental designs must establish baseline equivalence of the analytic sample to be included in the review.[3] In addition to these quality standards, the protocol establishes requirements for data collection, reporting and analysis.

Data Collection and Analysis:
Description of the methods for collecting and analyzing data.

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[2] We are in the process of revising and resubmitting the protocol to the Campbell Collaboration.

[3] Our preliminary search has not identified any RDD studies. Should one be identified, we will screen them for quality on a case-by-case basis.

For this systematic review, data collection involves conducting an extensive literature review and systematically coding the studies identified. To attempt to identify all quantitative studies of the effects of college access programs, we perform electronic database searches, search online conference programs for the three most relevant conferences, browse online repositories of research related to college access, perform cited reference searches, search the web and solicit feedback from subject experts. Our electronic database search involves keyword searches of general bibliographic databases, full-text journals, a dissertation and thesis database, two grey literature databases and subject-specific databases for education, economics, psychology and sociology (Table 1). We perform additional controlled language searches for the subject-specific databases.

Bibliographic information and abstracts for all studies identified through our search process are entered into a RefWorks database. Abstracts are reviewed for all studies, and the full text of the study is obtained for all studies that might measure the impact of a college access program. We then screen the study for relevance. Studies that pass relevance are screened for quality. We record full study details for those that pass quality screening.

We record effect size data for five key outcomes of interest: language arts achievement, math achievement, completed coursework, high school graduation and college enrollment. For the math achievement and language arts achievement domains, outcome measures are continuous. In the finished paper, these study impact estimates will be reported in natural units (where possible) as well as converted to standardized mean differences. Both the standardized mean differences and the standard error associated with each standardized mean difference are calculated as described by Lipsey & Wilson (2001, p. 49). Analysis of impacts on completed coursework, high school graduation, and college enrollment are reported as percentage point differences.[4] The standard error of these differences is calculated as given in Fleiss & Berlin (2009, p. 239). In all cases, the pooled impact estimate is given by the weighted average of these effect sizes, where the weights are given by the inverse of the squared effect size standard error (Lipsey & Wilson, 2001 p. 113-114).

Findings / Results:

Description of the main findings with specific details.

Please note that these findings are preliminary. The full search process is still being conducted. As we identify additional studies for inclusion in the analysis, our results may change.

The preliminary literature search located 1175 unique citations from electronic database and online sources. A total of 28 studies passed relevance and quality screening. See Table 2 for the number of studies retained through each step of the screening process. Of these studies, 14 reported their results in sufficient detail for inclusion in the meta-analysis.[5] These studies report the impact of 12 different college access programs, as several studies had multiple, independent evaluations. <TABLE 2 HERE>

The studies included in this review represent a wide range of programs that vary in terms of the target population, source of funding, key program components and study design. Four of the 12 programs implemented pre-packaged whole school reform initiatives–three at the high school

[4] Note that these calculations assume that the outcomes are reported as binary measures.

[5] The most common reason for exclusion at this stage was failure to report standard deviations for the continuous measures.

and one at the middle school level. The remaining eight programs provided a range of college access supports, typically from outside agencies, to supplement the regular education program. All 12 of the programs included in the analysis targeted low-SES students, although there was variation in whether these students were academically high- or low-performing (not shown). Nine of the evaluated programs received federal funds, four received state funds, three received local funds, five received non-profit or foundation funds, and three received private funds (not shown). The average program costs per differed substantially across programs (not shown). <INSERT TABLE 3 HERE>

Programs also diverged in terms of key components (Table 4). The majority of programs included an academic enrichment program and a counseling element, while fewer programs provided personal enrichment and social integration, mentoring, parental involvement, or scholarships. Within each of these broader components, the duration and intensity of offered services also varied by program. <INSERT TABLE 4 HERE>

Six of the 14 studies were randomized controlled trials (RCTs), while the remaining eight were based on quasi-experimental designs (QEDs) (Table 4). Several of the QEDs used advanced techniques, such as propensity score matching. No regression discontinuity studies were identified.

Of the five key outcomes of interest, only high school graduation and college enrollment data were available for a sufficient number of studies to support a meta-analysis. Table 5 presents effect size data for language arts and mathematics achievement outcomes. We were unable to construct such a table for completed coursework measures because too few studies reported measures of completed coursework. <TABLE 5 HERE>

On average, college access programs increase high school graduation by eight percentage points. However, among the three programs evaluated by RCTs, the estimate of the average impact was not statistically significant. <INSERT FIGURE 2 & TABLE 6 HERE>

The average impact of college access programs on enrollment in a 2-year or 4-year college is a 12 percentage point increase. The impact of programs evaluated by RCTs is also positive and statistically significant. These programs increase enrollment by 4 percentage points on average. <INSERT FIGURE 2 & TABLE 7 HERE>

Conclusions:

Description of conclusions, recommendations, and limitations based on findings.

Given that our results are still very preliminary, we are hesitant to draw strong conclusions at this time. However, two aspects of our preliminary analysis are striking enough to comment on.

Measures of completed coursework are the best pre-college predictors of college graduation (Adelman, 2006; Rose & Betts, 2001). We encourage evaluators to consider including these outcome measures in their evaluations of college access programs.

The sharp differences in the size of estimated impacts between QEDs and RCTs raise questions about the extent to which QEDs are identifying causal impacts. We must proceed carefully when interpreting the results of the QEDs.

Appendices

Not included in page count.

Appendix A. References

References are to be in APA version 6 format.

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Greene, J. P., & Winters, M. A. (2005). *Public high school graduation and college-readiness rates: 1991–2002* (Education Working Paper Number 8). New York, NY: Manhattan Institute for Policy Research.

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Snyder, T.D., & Dillow, S. A. (2010). *Digest of Education Statistics, 2009* (NCES 2010-013). Washington DC: National Center for Education Statistics.

Tierney, W.G., Bailey, T., Constantine, J., Finkelstein, N., & Hurd, N. F. (2009). *Helping students navigate the path to college: What high schools can do: A practice guide* (NCESS #2009-4066). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U. S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/publications/praticeguides/

Appendix B. Tables and Figures

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Table 1: Keywords used for Electronic Database Searches

Topic	Intervention	Evaluation
pre-colleg*	program	evaluation
precolleg*	intervention	experiment
college AND transition*		effect*
“college access”		
“college enrollment”		
“college readiness”		
“college preparation”		
college AND outreach		
college AND bridge		
“college going”		
“college attendance”		

Table 2: Summary of Search Results (Number of Studies)

Search Source	Citations Identified	Unique Citations	Reviewed	Meeting Relevance Criteria	Meeting Quality Criteria
Electronic Databases					
EBSCO Megafile	169	133	24	4	3
JSTOR	7	6	1	0	0
Econlit	20	11	1	0	0
ERIC	444	294	47	1	1
Dissertation Abstracts	745	432	92	16	7
Project Muse	659	275	3	0	0
US Department of Education	8	8	8	5	5
Hand Searches	16	16	16	14	8
Total	2068	1175	192	40	28

Note: of the 28 studies meeting the relevance and quality criteria, only 14 both estimated impacts on outcomes that fall within the protocol for this review and reported outcomes with sufficient detail that the findings could be included in the review. These 14 studies represent studies of only 12 separate programs.

Table 3: Intervention Program Components for College Access Programs Represented in the Review

Program Name & Citation	Program Goal	Program Components					
		Counseling	Social Enrichment	Academic enrichment	Mentoring	Parent Involvement	Scholar-ships
Whole School Reforms: Comprehensive initiatives implemented at the school level							
Advancement via Individual Determination (AVID)							
	Prepare more underrepresented students for college by focusing on improving the academic performance of a select group of students through placing them in advanced classes and giving them additional support.	X	X	X			
Career Academies							
	Enhance students' performance in high school and provide them with the credentials and skills needed to make a successful transition to post-secondary education and eventually a career	X	X	X			
Early College							
	Prepare students to graduate in four to five years with a high school diploma and an associate's degree or two years of transferrable college credit	X		X			
Gear Up							
	Increase postsecondary attendance and success among low-income students by targeting teachers, parents, and students at high poverty middle schools.	X	X	X	X	X	X

Supplemental Services: Support provided to students in addition to the regular education program, typically from outside agencies						
FAFSA intervention with H & R block						
Provide families with additional information and support in filling out the FAFSA so that they will be more likely to enroll in college	X					
Upward Bound						
Increase college enrollment and graduation rates of low-income students and students whose parents did not complete college	X		X	X	X	
Upward Bound Math & Science						
Improve the academic achievement of economically disadvantaged students in math and science and to increase the number of disadvantaged students that become math and science majors	X	X	X			
Sponsor A Scholar Program						
Motivate at-risk students to enroll in and attend college	X	X	X	X		X
Quantum Opportunity Program						
Help at-risk high school age youth graduate from high school and enroll in postsecondary education and training		X	X	X		
Talent Search						
Help low-income, potentially first generation college students prepare for and gain access to college by targeting students who have academic potential	X		X	X		
Tech Prep						

Develop systemic links between secondary and postsecondary institutions to better prepare students for high tech careers	X		X			
ACE Plus						
Reduce dropout rates among at-risk students and help them make a smooth transition to community colleges or universities	X	X	X	X	X	X
Total Number of Studies	11	7	11	6	3	3

Table 4: Study Citation and Design

Program Name	Citation	RCT or QED?
Advancement via Individual Determination (AVID)	Black, A. C., Little, C. A., McCoach, D. B., Purcell, J. H., & Siegle, D. (2008). Advancement via individual determination: Method selection in conclusions about program effectiveness. *Journal of Educational Research, 102*(2), 111-124	QED
Career Academies	Kemple, J.J. & Snipes, J.C. (2000). *Career Academies: Impacts on students' engagement and performance in high school*; MDRC, New York	RCT
Early College	Edmunds, J. A., Bernstein, L., Unlu, F., Glennie, E., Willse, J., Arshavsky, N. Yamaguchi, R., Dallas, A. (2009). *Expanding the College Pipeline: Early Results from an Experimental Study of the Impact of the Early College High School Model*, Paper presented at the annual meeting of the American Education Research Association, San Diego, California.	RCT
Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)	U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service, *Early Outcomes of the GEAR UP Program – Final Report*, Washington, D.C., 2008 U.S. Department of Education, Office of the Under Secretary, Policy and Program Studies Service, *National Evaluation of GEAR UP: A Summary of the First Two Years*, Washington, D.C., 2003 Cabrera, A. F., Deil-Amen, R., Prabhu, R., Terenzini, P. T., Lee, C., & Franklin Jr., R. E. (2006). Increasing the college preparedness of at-risk students. *Journal of Latinos & Education, 5*(2), 79-97.	QED
Excel	Bergin, D.A., Cooks, H.C., Bergin, C.C. (2007). Effects of a college access program for youth underrepresented in higher education: A randomized experiment, *Research in Higher Education*, 48 (6), 727-750.	RCT
FAFSA intervention with H&R Block	Bettinger, E., Long, B. T., Oreopoulos, P. & Sanbonmatsu, L. (2009). *The role of information and simplification in college decisions: Results from the FAFSA experiment.* Retrieved 02/04, 2010, from	RCT

	http://www.uis.no/getfile.php/SV/Eric%20Bettinger.pdf	
Upward Bound	Myers, D., Olsen, R., Seftor, N., Young, J., & Tuttle, C. (2004). *The impacts of regular Upward Bound: Results from the third follow-up data collection.* Washington, D.C.: Mathematica Policy Research, Inc. Seftor, N. S., Mamun, A., & Schirm, A. (2009). *The impacts of regular Upward Bound on postsecondary outcomes seven to nine years after scheduled high school graduation.* Princeton, N.J.: Mathematica Policy Research, Inc.	RCT
Sponsor A Scholar Program	Johnson, A. W. (1997). Mentoring at-risk youth: A research review and evaluation of the impacts of the Sponsor-A-Scholar program on student performance.	QED
Quantum Opportunity Program	Maxfield, M., Schirm, A., & Rodriguez-Planas, N. (2003). *The Quantum Opportunity Program demonstration: Implementation and short-term impacts*. Washington, D.C.: Mathematica Policy Research, Inc. Schirm, A., & Rodriguez-Planas, N. (2004). *The Quantum Opportunity Program demonstration: Initial post-intervention impacts.* Washington, D.C.: Mathematica Policy Research, Inc. Schirm, A., Stuart, E., & McKie, A. (2006). *The quantum opportunity program demonstration: Final impacts*. Washington, D.C.: Mathematica Policy Research, Inc.	RCT
Talent Search	Constantine, J. M., Seftor, N. S., Martin, E. S., Silva, T., & Myers, D. (2006). *Study of the effect of the Talent Search program on secondary and postsecondary outcomes in Florida, Indiana and Texas. Final report from phase II of the national evaluation*. Washington, D.C.: U.S. Department of Education. Cahalan, M., Silva, T., Humphrey, J., Thomas, M., & Cunningham, K. (2004). *Implementation of the talent search program, past and present: Final report from phase I of the national evaluation.* Washington, D.C.: Mathematica Policy Research, Inc. Retrieved from http://www2.ed.gov/rschstat/eval/highered/talentsearch/index.html	QED
Tech Prep	Cellini, S. R. (2006). Smoothing the transition to college? The effect of Tech-Prep programs on educational attainment. *Economics of Education Review, 25*(4), 394-411. Ball, J. F.,Jr. (2005). *Tech Prep: A study of high school career and technical students' preparation for college* (Unpublished	QED QED

	doctoral dissertation) Idaho State University, Pocatello, Idaho. Brodsky, S. M., Newman, D. L., Arroyo, C. G. and Fabozzi, J. M. (1997). *Evaluation of Tech-Prep in New York state: Final report.* New York State Education Department, Albany; Bureau of Postsecondary Grants Administration, Retrieved on January 12, 2011 from http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED412355&ERICExtSearch_SearchType_0=no&accno=ED412355	QED
Achieving a College Education Plus Program (ACE Plus)	Fowler, M. (2007). *A program evaluation of achieving a college education plus*. (Ed.D., Northern Arizona University)	QED
Total		6 RCTs and 8 QEDs

Note: RCT refers to a randomized controlled trial and QED refers to a comparison group quasi-experimental design study.

Table 5: Estimated Impacts on Language Arts and Mathematics Achievement in Effect Size Units

Outcome and Study Authors	Program	Design	N	Effect Size (ES)	Standard Error	95% CI
Language Arts Achievement Outcomes						
Cabrera, Prabhu, Terenzini, Lee and Franklin	GEAR UP	QED	219	-0.62	0.14	(-0.89, -0.34)
Ball	Tech Prep: Health	QED	30	0.03	0.37	(-0.69, 0.75)
Ball	Tech Prep: Business/Engineering	QED	89	0.23	0.26	(-0.27, 0.74)
Black, Little, McCoach, Purcell and Siegle	AVID	QED	52	3.14	0.48	(2.20, 4.08)
Mathematics Achievement Outcomes						
Cabrera, Prabhu, Terenzini, Lee and Franklin	GEAR UP	QED	219	2.05	0.19	(1.67, 2.43)
Ball	Tech Prep: Business/Engineering Pre-Algebra	QED	69	0.35	0.28	(-0.20, 0.90)
Ball	Tech Prep: Business/Engineering Algebra	QED	55	0.45	0.33	(-0.20, 1.10)
Ball	Tech Prep: Health Pre-Algebra	QED	20	1.22	0.53	(0.19, 2.26)
Ball	Tech Prep: Health Algebra	QED	18	1.04	0.55	(-0.03, 2.11)

Source: See Table 4.

Note: RCT refers to randomized controlled trials and QED refers to comparison group quasi-experimental design studies.

Table 6: Estimated Impacts on High School Graduation Rates Measured as Risk Differences (In Descending Order of the Size of Estimated Risk Differences)

Study Authors	Program	Design	Sample Size	Risk Difference	Standard Error	95% CI
Fowler	ACE Plus	QED	120	0.18	0.08	(0.02, 0.34)
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Florida	QED	43414	0.14	0.01	(0.12, 0.16)
Cellini	Tech Prep	QED	7211	0.11	0.01	(0.09, 0.13)
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Texas	QED	34869	0.09	0.01	(0.08, 0.10)
Brodsky, Newman, Arroyo & Fabozzi	Tech Prep: New York	QED	1854	0.07	0.01	(0.05, 0.09)
Maxfield, Schirm and Rodriguez-Planas	Quantum Opportunity Program	RCT	1069	0.06	0.03	(0.00, 0.12)
Kemple and Snipes	Career Academies	RCT	1482	0.00	0.02	(-0.05, 0.04)
Myers, Olsen, Seftor, Young & Tuttle; Seftor, Mamun & Schirm	Upward Bound	RCT	2292	-0.01	0.01	(-0.04, 0.02)
Pooled Effect Size: All Studies				0.08	0.00	(0.07, 0.09)

Source: See Table 4 for study citations. See Appendix Table B.1 for data related to these computations.

Table 7: Estimated Impacts on College Enrollment Rates Measured as Risk Differences (In Descending Order of the Size of Estimated Risk Differences)

Study Authors	Program	Design	Sample Size	Risk Difference	Standard Error	95% CI
Johnson	Sponsor-A-Scholar: Class of 95	QED	130	0.26	0.08	(0.11, 0.41)
Fowler	ACE Plus	QED	120	0.22	0.08	(0.06, 0.37)
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Texas	QED	34,869	0.20	0.01	(0.18, 0.22)
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Florida	QED	43,414	0.16	0.01	(0.13, 0.19)
Johnson	Sponsor-A-Scholar: Class of 94	QED	73	0.08	0.09	(-0.10, 0.26)
Bettinger, Long, Oreopoulos and Sanbonmatsu	FAFSA Support	RCT	786	0.08	0.03	(0.03, 0.13)
Maxfield, Schirm and Rodriguez-Planas	Quantum Opportunity Program	RCT	1,069	0.07	0.03	(0.01, 0.13)
Bergin, Cooks and Bergin	Excel	RCT	83	0.05	0.10	(-0.16, 0.25)
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Indiana	QED	10,927	0.04	0.02	(0.01, 0.07)
Myers, Olsen, Seftor, Young & Tuttle; Seftor, Mamun & Schirm	Upward Bound	RCT	2,292	0.03	0.02	(-0.01, 0.07)
Cellini	Tech Prep	QED	7,211	0.02	0.02	(-0.01, 0.05)
Kemple and Snipes	Career Academies	RCT	1,482	-0.01	0.03	(-0.06, 0.04)
Pooled Effect Size, All Studies				0.13	0.01	(0.12, 0.14)

Source: See Table 4 for study citations. See Appendix Table B.2 for data related to these computations.

Appendix Table B.1: Descriptive Data on Studies Estimating Impacts on High School Graduation Rates

			Treatment Group		Control Group	
Study Authors	Program	Design	Proportion Graduated	Sample Size	Proportion Graduated	Sample Size
Fowler	ACE Plus	QED	0.80	60	0.62	60
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Florida	QED	0.84	900	0.70	42,514
Cellini	Tech Prep	QED	0.86	1,125	0.75	6,086
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Texas	QED	0.86	4,027	0.77	30,842
Brodsky, Newman, Arroyo & Fabozzi	Tech Prep: New York	QED	0.97	1,050	0.90	804
Maxfield, Schirm and Rodriguez-Planas	Quantum Opportunity Program	RCT	0.46	580	0.40	489
Kemple and Snipes	Career Academies	RCT	0.74	817	0.74	665
Myers, Olsen, Seftor, Young & Tuttle; Seftor, Mamun & Schirm	Upward Bound	RCT	0.89	1,265	0.90	1,027

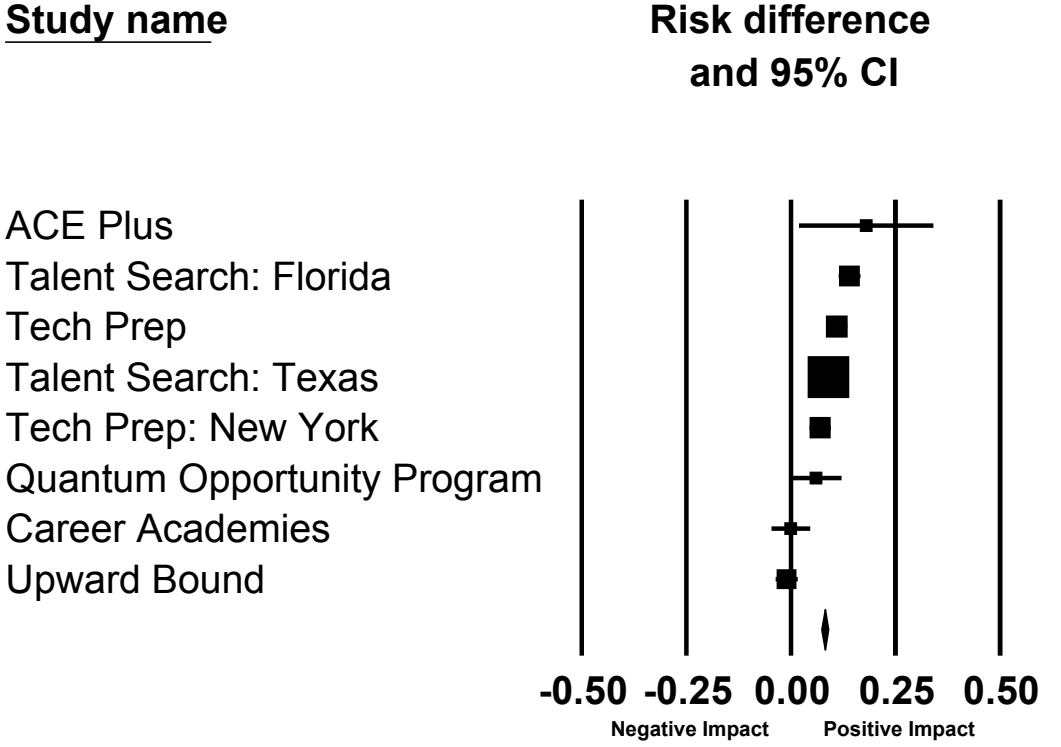
Source: See Table 4 for study citations.

Appendix Table B.2: Descriptive Data on Studies Estimating Impacts on College Enrollment

			Treatment Group		Control Group	
Study Authors	Program	Design	Proportion Enrolled	Sample Size	Proportion Enrolled	Sample Size
Johnson	Sponsor-A-Scholar: Class of 95	QED	0.84	61	0.58	69
Fowler	ACE Plus	QED	0.83	60	0.62	60
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Texas	QED	0.65	4,027	0.45	3,0842
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Florida	QED	0.73	900	0.57	42,514
Johnson	Sponsor-A-Scholar: Class of 94	QED	0.84	31	0.76	42
Bettinger, Long, Oreopoulos and Sanbonmatsu	FAFSA Support	RCT	0.19	390	0.12	396
Maxfield, Schirm and Rodriguez-Planas	Quantum Opportunity Program	RCT	0.37	580	0.30	489
Bergin, Cooks and Bergin	Excel	RCT	0.67	43	0.63	40
Constantine, Seftor, Martin, Silva and Myers	Talent Search: Indiana	QED	0.56	1,083	0.52	9,844
Myers, Olsen, Seftor, Young & Tuttle; Seftor, Mamun & Schirm	Upward Bound	RCT	0.72	1,265	0.69	1,027
Cellini	Tech Prep	QED	0.55	1,125	0.53	6,086
Kemple and Snipes	Career Academies	RCT	0.42	817	0.43	665

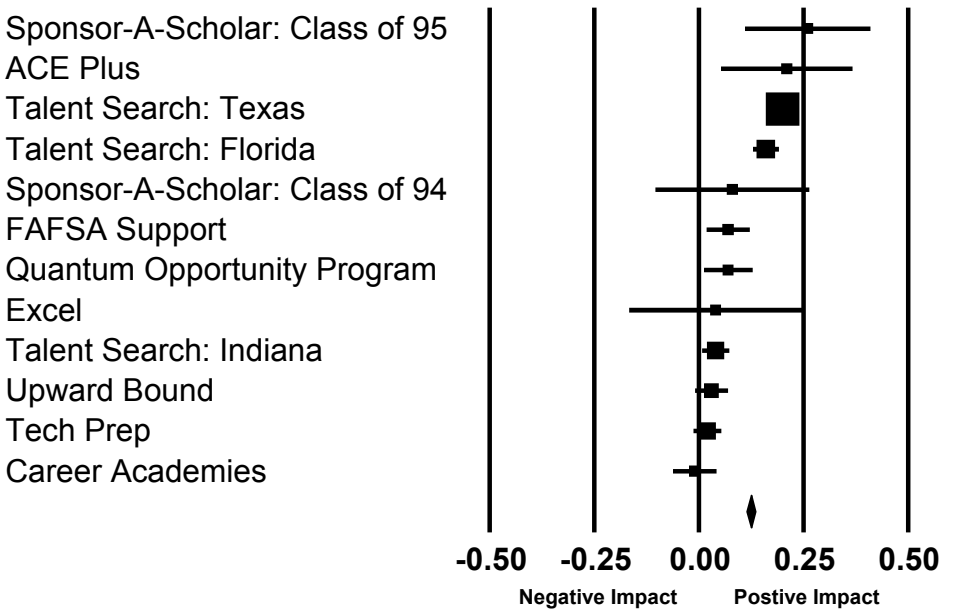
Source: See Table 4 for study citations.

High School Graduation



Meta Analysis

College Enrollment



Meta Analysis