What Works Clearinghouse

ies INSTITUTE OF EDUCATION SCIENCES

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WWC Review of the Report "The Effects of Student Coaching in College: An Evaluation of a Randomized Experiment in Student Mentoring"[1]

The findings from this review do not reflect the full body of research evidence on *InsideTrack*.

What is this study about?

The study examined whether *InsideTrack*, a personalized student coaching service for college students, increased rates of staying in and graduating from college.

The study analyzed data on about 13,500 students who were enrolled in one of eight higher education institutions during the 2003–04 and 2007–08 academic years. These institutions provided lists of students for *InsideTrack* to include in the study.

InsideTrack created lotteries that randomly assigned groups of students either to receive coaching services from *InsideTrack* or to serve as the comparison group. Students were moved between groups after random assignment in 10 of the 17 lotteries.

The authors presented two sets of analyses: one based on the subset of seven well-executed lotteries (where students were not moved between groups after random assignment) and the other based on the full set of 17 lotteries.

The study examined whether students stayed in or completed college by comparing the outcomes of all students who were randomly selected to receive *InsideTrack* with the outcomes of students who were not.

Features of *InsideTrack*

InsideTrack is a provider of one-on-one student coaching for college students. It operates independently in cooperation with partner institutions.

Coaches assess students' lives inside and outside of school and help them overcome barriers to academic success. They contact their students regularly and, when possible, use information on students' performance and participation in class to inform their discussions.

Coaching services typically last for two semesters, and student participation is voluntary.

Staying in college was measured at six and 12 months after randomization for students in all 17 lotteries. Twelve lotteries also provided information on staying in college for students at 18 and 24 months. Graduation from college was measured for students in three well-executed lotteries.

What did the study find?

For the seven well-executed lotteries, the study found that students assigned to receive *InsideTrack* were significantly more likely than students in the comparison group to remain enrolled at their institutions. Six months after random assignment, 81% of students in the intervention group were still enrolled, compared to 77% of students in the comparison group. After 12 months, 66% and 51% of the intervention and comparison groups, respectively, were enrolled, and 44% and 37% were enrolled after 18 months.

There was no significant difference in enrollment rates after 24 months. There was also no significant difference in completion rates within four years, a result based on a subset of three well-executed lotteries.

For all 17 lotteries, the study found that students assigned to receive *Inside Track* were significantly more likely to remain enrolled at their institutions than students in the comparison group. Six months after random assignment, 63% of students in the intervention group were still enrolled, compared with 58% of those in the comparison group. After 12 months, enrollment was 49% and 44%, respectively. After 18 months, the numbers were 33% and 29%, and after 24 months, they were 28% and 24%. The study did not examine completion rates within four years for all lotteries.

WWC Rating

The research on the subset of seven well-executed lotteries described in this report meets WWC evidence standards without reservations

Strengths: The lotteries in this subset are well-executed randomized controlled trials with low attrition.

The research for all lotteries described in this report meets WWC evidence standards with reservations

Cautions: The full set of lotteries includes those in which students were moved between groups after random assignment. These nonrandomly formed groups were equivalent at baseline, so the study meets standards with reservations.

Appendix A: Study details

Bettinger, E. P., & Baker, R. (2011). *The effects of student coaching in college: An evaluation of a randomized experiment in student mentoring* (Working Paper No. 16881). Retrieved from: http://www.nber.org/papers/w16881.

Setting

The study was conducted in eight participating universities during the 2003–04 and 2007–08 school years.

Study sample

Data came from students entering the 2003–04 (five lotteries) and 2007–08 school years (12 lotteries). Students were college students enrolled in public, private, and proprietary universities. Each institution had its own eligibility criteria and provided a list of potential students for *InsideTrack* to randomly assign into two groups. Most institutions provided a representative sample of new college students, including many students who were not traditional college age, but some schools focused on other subgroups, including full-time students, part-time students, upperclassmen, and athletes. *InsideTrack* then performed two types of randomization:

(1) For institutions that wanted equally sized groups (seven out of 17 lotteries, referred to as "well-executed" lotteries), *InsideTrack* created two randomly assigned groups of approximately equal size, and the institution decided which of the two groups would receive the intervention through a coin flip. Following the coin flip, the institution was notified which students were in each group. *InsideTrack* monitored the randomization to make sure that the two groups were balanced across observable characteristics. In some cases, students were moved between groups to achieve balance before the groups were randomly assigned to the intervention and comparison conditions. The authors presented the results for this subset of seven well-executed lotteries separately. In these lotteries, 1,768 students were assigned to the intervention group and 1,768 were assigned to the comparison group.

(2) For institutions that wanted a smaller comparison group (10 out of 17 lotteries), the institution provided *InsideTrack* with a predetermined size for the comparison group, and *InsideTrack* then randomly assigned two groups to meet those size restrictions. In some cases, students were moved between groups to achieve balance after the groups were randomly assigned to the intervention and comparison conditions.

Altogether, 8,049 students were assigned to the intervention group, and 5,506 students were assigned to the comparison group. In the overall sample, the average age of students was 31, and about 51% of the students were male.

Intervention group

Students in the intervention group received individualized coaching from an *InsideTrack* coach. A coach typically worked with a student for two semesters. Significant time was spent assessing students' lives outside of school in such areas as personal time commitments, primary caregiving responsibilities, and financial obligations.

Comparison group

The comparison condition received no individualized coaching through *InsideTrack*. All students had access to traditional resources provided through their institutions.

Outcomes and measurement

The primary outcomes were staying in college and completing a degree within four years. Students in all 17 lotteries were assessed for staying in college at six and 12 months after randomization, and students in 12 lotteries were additionally measured as staying in college at 18 and 24 months after randomization. Degree completion within four years was measured for students in three lotteries, which were part of the subset of seven well-executed lotteries. For a more detailed description of these outcome measures, see Appendix B.

Reason for review

This study was eligible for a single study review by receiving significant media attention.

Appendix B: Outcome measures for each domain

Staying in school	
Enrollment (measured 6, 12, 18, and 24 months after randomization)	Enrollment is measured as a binary variable with a value of one if a student is on a list of enrolled students provided by a participating institution at a point in time. All institutions provided lists of enrolled students at four times after groups were randomized to receive student coaching or the comparison condition: after six and 12 months for all lotteries, and after 18 and 24 months for 12 lotteries.
Completing school	
Completing a degree within four years	Completing a degree within four years is measured as a binary variable with a value of one if a student completes a certificate, an associate's degree, or a bachelor's degree. Three lotteries within the subset of seven well-executed lotteries had information on degree completion within four years.

Appendix C: Study findings for each domain

Domain and outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			*p*-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Staying in school								
Enrolled 12 months after randomization	Well-executed lotteries	7 lotteries/ 3,527 students	0.66 (0.47)	0.61 (0.49)	0.05	0.10	+4	< 0.01
Domain average for staying in school						**0.10**	**+4**	**Statistically significant**
Completing school								
Completed a degree within four years of the start of intervention	Well-executed lotteries	3 lotteries/ 1,346 students	0.35 (0.48)	0.31 (0.46)	0.04	0.08	+3	< 0.10
Domain average for completing school						**0.08**	**+3**	**Not statistically significant**

Table Notes: For mean difference, effect size, and improvement index values reported in the table, a positive number favors the intervention group and a negative number favors the comparison group. The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if the student is given the intervention. The improvement index is an alternate presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention. The table presents results in the staying in school domain from the strongest design presented in the study—the design based on the seven well-executed lotteries—measured immediately upon conclusion of the intervention. Later follow-up periods for enrollment outcomes are based on smaller samples. Results for completing school are also from the strongest design, though only three of the seven well-executed lotteries had information on this outcome. The study is characterized as having a statistically significant positive effect on staying in school because univariate statistical tests are reported for each outcome measure, the effect for at least one measure within the domain is positive and statistically significant, and no effects are negative and statistically significant. The study is characterized as having an indeterminate effect on completing school because the mean effect is neither statistically significant nor substantively important.

Study Notes: The *p*-values presented here were reported in the original study. All reported results are rounded to two decimal points.

Appendix D: Supplemental findings by domain

Domain and outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			*p*-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Staying in school								
Enrolled 6 months after randomization	Well-executed lotteries	7 lotteries/ 3,527 students	0.81 (0.40)	0.77 (0.42)	0.04	0.09	+4	< 0.01
Enrolled 18 months after randomization	Well-executed lotteries	3 lotteries/ 1,344 students	0.44 (0.50)	0.37 (0.48)	0.07	0.14	+6	< 0.01
Enrolled 24 months after randomization	Well-executed lotteries	3 lotteries/ 1,348 students	0.38 (0.48)	0.35 (0.48)	0.03	0.06	+2	> 0.10
Staying in school								
Enrolled 6 months after randomization	All lotteries	17 lotteries/ 13,552 students	0.63 (0.48)	0.58 (0.49)	0.05	0.10	+4	< 0.01
Enrolled 12 months after randomization	All lotteries	17 lotteries/ 13,553 students	0.49 (0.50)	0.44 (0.50)	0.05	0.10	+4	< 0.01
Enrolled 18 months after randomization	All lotteries	12 lotteries/ 11,149 students	0.33 (0.47)	0.29 (0.45)	0.04	0.09	+4	< 0.01
Enrolled 24 months after randomization	All lotteries	12 lotteries/ 11,153 students	0.28 (0.45)	0.24 (0.43)	0.03	0.08	+3	< 0.01

Table Notes: For mean difference, effect size, and improvement index values reported in the table, a positive number favors the intervention group and a negative number favors the comparison group. The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if the student is given the intervention. The improvement index is an alternate presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention.

Study Notes: The *p*-values presented here were reported in the original study. All reported results are rounded to two decimal points.

Endnotes

[1] Single study reviews examine evidence published in a study (supplemented, if necessary, by information from requests to the author[s]) to assess whether the study's design meets WWC evidence standards. The review reports the WWC's assessment of whether the study meets WWC evidence standards and summarizes the study findings following WWC conventions for reporting evidence on effectiveness. The WWC rating applies only to the summarized results, and not necessarily to all results presented in the study. This study was reviewed using the Dropout Prevention review protocol, version 2.0.

Recommended Citation

U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2012, August). *WWC review of the report: The effects of student coaching in college: An evaluation of a randomized experiment in student mentoring*. Retrieved from http://whatworks.ed.gov.

Glossary of Terms

Attrition Attrition occurs when an outcome variable is not available for all participants initially assigned to the intervention and comparison groups. The WWC considers the total attrition rate and the difference in attrition rates across groups within a study.

Clustering adjustment If intervention assignment is made at a cluster level and the analysis is conducted at the student level, the WWC will adjust the statistical significance to account for this mismatch, if necessary.

Confounding factor A confounding factor is a component of a study that is completely aligned with one of the study conditions, making it impossible to separate how much of the observed effect was due to the intervention and how much was due to the factor.

Design The design of a study is the method by which intervention and comparison groups were assigned.

Domain A domain is a group of closely related outcomes.

Effect size The effect size is a measure of the magnitude of an effect. The WWC uses a standardized measure to facilitate comparisons across studies and outcomes.

Eligibility A study is eligible for review if it falls within the scope of the review protocol and uses either an experimental or matched comparison group design.

Equivalence A demonstration that the analysis sample groups are similar on observed characteristics defined in the review area protocol.

Improvement index Along a percentile distribution of students, the improvement index represents the gain or loss of the average student due to the intervention. As the average student starts at the 50th percentile, the measure ranges from –50 to +50.

Multiple comparison adjustment When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.

Quasi-experimental design (QED) A quasi-experimental design (QED) is a research design in which subjects are assigned to intervention and comparison groups through a process that is not random.

Randomized controlled trial (RCT) A randomized controlled trial (RCT) is an experiment in which investigators randomly assign eligible participants into intervention and comparison groups.

Single-case design (SCD) A research approach in which an outcome variable is measured repeatedly within and across different conditions that are defined by the presence or absence of an intervention.

Standard deviation The standard deviation of a measure shows how much variation exists across observations in the sample. A low standard deviation indicates that the observations in the sample tend to be very close to the mean; a high standard deviation indicates that the observations in the sample tend to be spread out over a large range of values.

Statistical significance Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than 5% ($p < 0.05$).

Substantively important A substantively important finding is one that has an effect size of 0.25 or greater, regardless of statistical significance.

Please see the WWC Procedures and Standards Handbook (version 2.1) for additional details.