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How do hybrid school leaders measure program success? Experimental evidence from a national sample of hybrid schools

Matthew H. Lee
Kennesaw State University

John Thompson
Kennesaw State University

Eric Wearne
Kennesaw State University

Hybrid school enrollments are trending up and many parents express a diverse range of reasons for enrolling their children in hybrid schools. Yet little is known about the pedagogical goals pursued by hybrid schools. We aim to help close this gap in the literature with a stated preferences experiment of hybrid school leaders' perceptions of program success. Sixty-three school leaders participated in a survey experiment in which we randomly assigned attributes to hypothetical programs and asked school leaders to identify the most successful program. We find that hybrid school leaders consider a broad range of student outcomes when evaluating program success, including labor market outcomes, civic outcomes, and family life. Students' religious observance produced the largest effect sizes, a reasonable finding considering that roughly two-thirds of the schools represented in our sample have some religious affiliation. We do not find evidence that test score outcomes and higher education matriculation contribute meaningfully to perceived success.

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How do hybrid school leaders measure program success?

Experimental evidence from a national sample of hybrid schools

Matthew H. Lee*, John Thompson, & Eric Wearne

Kennesaw State University

Author Note

* Corresponding author. Address: MD 0403

560 Parliament Garden Way NW

Kennesaw, GA 30144

Email: mlee236@kennesaw.edu

Abstract

Hybrid school enrollments are trending up and many parents express a diverse range of reasons for enrolling their children in hybrid schools. Yet little is known about the pedagogical goals pursued by hybrid schools. We aim to help close this gap in the literature with a stated preferences experiment of hybrid school leaders' perceptions of program success. Sixty-three school leaders participated in a survey experiment in which we randomly assigned attributes to hypothetical programs and asked school leaders to identify the most successful program. We find that hybrid school leaders consider a broad range of student outcomes when evaluating program success, including labor market outcomes, civic outcomes, and family life. Students' religious observance produced the largest effect sizes, a reasonable finding considering that roughly two-thirds of the schools represented in our sample have some religious affiliation. We do not find evidence that test score outcomes and higher education matriculation contribute meaningfully to perceived success.

Keywords: school choice; hybrid schools; homeschooling; private schools; student outcomes; conjoint experiment

How do hybrid school leaders measure program success?

Experimental evidence from a national sample of hybrid schools

Researchers have only recently begun to explore empirically the landscape of hybrid schools – schools in which students attend physical classes for fewer than five days per week and are homeschooled in some form the rest of the week. While descriptive data have been collected on the hybrid school landscape over time (Wearne & Thompson, 2023b, 2022; Wearne, 2016), and hybrid school leaders have been surveyed about operational issues (Wearne, 2021), available data have not provided insights into the reasons why families choose hybrid schools, the impacts of these schools on student outcomes, and the pedagogical goals prioritized by these schools. This paper explores the hybrid schools' pedagogical goals using an experimental identification strategy known as a conjoint experiment in order to gauge the relative value hybrid school leaders place on a variety of potential measures of student success.

Literature Review

Why Parents Choose Schools

Previous research into parental preferences among schools of choice finds several factors matter to parents when making enrollment decisions for their children. Their choices will logically affect school leaders' views of their schools' success. Some variation of "academic quality" is noted as an important factor by parents across studies (Corcoran & Jennings, 2020; Catt & Rhinesmith, 2017; Kelly & Scafidi, 2013). In a recent review of the literature, Erickson (2017) finds that parents value academic quality, but not always as the deciding feature when choosing a school, and that parents often make trade-offs among their various preferences. Commonly noted preferences include teacher quality, school values, safety, extracurricular opportunities, curriculum, and class size, among other considerations (Erickson, 2017). These

findings comport with earlier research on why parents choose particular schools (Kelly & Scafidi, 2013). Lincove and coauthors (2018) additionally find preferences for sports, arts, and extended hours programming among some parents. Stewart et al. (2010) find student preferences factor meaningfully into choice decisions. Distance from home is also a common factor (Blagg et al., 2018; Harris & Larsen, 2018), although this seems to matter more for low-income families than others (Altenhofen et al., 2016). Parents using hybrid schools located in suburban areas seem to be more likely to commute farther to attend their preferred school (Wearne & Thompson, 2023a).

Prior Research on Hybrid School Parents

As a sector, hybrid school parents demonstrate preference patterns that are distinct from other choice sectors. Hybrid school parents share values as a group with homeschool parents, and place value on flexible schedules, time with family, and particular curricular models (Wearne, 2017, 2016). They tend to place less value on common academic metrics such as standardized test scores, a finding true of private school parents more broadly (Kelly & Scafidi, 2013). Hybrid school families do value college admissions but may emphasize admissions into particular non-elite religious colleges more than parents of other sectors (Wearne, 2019). In addition, some surveys among microschool families (very small schools with some similarities to many hybrid schools) characterize three overarching reasons parents choose unconventional school models for their children, all of which are also noted by hybrid school parents: 1. Parents feeling unheard at their previous schools; 2. Students feeling unhappy or unsafe at their previous schools; or 3. Parents feeling that their schools are too focused on conventional academics to the exclusion of other educational experiences (Arnett, 2024).

Outcomes in Hybrid Schools

Very little work has been done with respect to hybrid school student outcomes. While hybrid school parents may not prioritize conventional student outcomes, prior empirical work suggests that hybrid school students do comparatively well by some metrics such as college first-year grade point average (Herndon, 2019). This descriptive finding is consistent with one prior study, which suggests that simply putting students in schools that are stronger cultural "fits" for them may improve conventional academic outcomes (Pakaluk, 2021).

The entire field of "unconventional" school models such as hybrid schools and microschools are currently wrestling with what "success" and "accountability" might mean in the context of these schools. These sectors commonly use standardized testing and higher education matriculation as outcome measures. Labor market outcomes are another, though data are often more difficult to obtain. More recently, researchers have used civic engagement as an important measure of schooling outcomes (Cheng & Djita, 2021; Cheng & Sikkink, 2020; Cheng, 2014); this paper asks hybrid schools leaders about civic engagement outcomes as well. Finally, given that a significant percentage of hybrid schools are religious in nature(Wearne & Thompson, 2022), and that religion seems to play a meaningful role in school selection in many cases(Lee et al., 2024), this paper directly asks hybrid school leaders about the importance of religious outcomes as measures of school success. Our findings here break new ground and add meaningfully to this discussion by examining what hybrid school leaders themselves say are the ultimate measures of success for the students attending their schools, including both conventional measures such as test scores, college matriculation, and labor market outcomes, as well as unconventional measures such as religious observance, civic outcomes, and family outcomes.

Conjoint Experiments in Education Research

Our present study employs a novel identification strategy known as a conjoint experiment. A fully-randomized stated preferences experiment, conjoint experiments are helpful for understanding respondent preferences in multidimensional contexts such as marketing or political science (Leeper et al., 2020). Since all attributes are randomly assigned, conjoint analysis allows for causal inference in affecting a respondent's likelihood of selecting a particular product, candidate, or service. Thus, it can be a helpful analytic strategy for understanding parental preference in educational choice contexts. One study of parental preference in a private religious school context found that parents primarily consider spiritual formation and academic quality, while extracurricular offerings and tuition are secondary concerns (Lee et al., 2024). In other education contexts, conjoint analysis has also been used to understand administrator preferences in hiring teachers (Giersch & Dong, 2018; Johnson et al., 2024), students' persistence in higher education settings (Azarcon et al., 2014), and policymakers' student learning priorities in developing countries (Crawfurd et al., 2021).

Methodology

Data

Our data come from the National Hybrid Schools Survey of 2023-24. Between November and December of 2023, 428 school leaders were contacted by email to complete the survey and 93 school leaders completed the survey, a response rate of 21.7%.

Sample

Importantly for this present study, 63 school leaders responded to the stated preferences experiment. These leaders represent hybrid schools across 28 states, with the modal school in our sample being characterized as a religious school in a suburban setting serving around 260

students enrolled in grades K-12 where students receive an average of around 3 days per week of in-person instruction. On average, urban (3.22 days) and secular schools (3.00 days) tended to meet more frequently than religious (2.75 days) or suburban schools (2.69 days). Most schools have some religious affiliation (68 percent overall), particularly schools in a rural/small town setting (74 percent) or schools with enrollments exceeding 200 students (78 percent). Student enrollment was concentrated more in the high school grades (200.83 students overall) than in the elementary or middle school grades (58.79 students). Rural and small town schools (352.32 total students) tended to have larger enrollments than schools in urban (231.38) or suburban (226.42) settings. For schools reporting, tuition was $3,900 on average. The most common religious affiliation was "broadly Christian" (40 percent), but schools that were specifically Catholic (11 percent) or with some other religious affiliation (2 percent) were represented as well. Full summary statistics for the schools these leaders represent are included in Table 2.

[Table 2 about here]

Little is known about hybrid schools as a national sector, but our analytic sample's descriptive statistics appear similar to descriptive statistics reported by the National Hybrid Schools Project in 2022 and 2023 (Wearne & Thompson, 2022, 2023b). Our experimental sample meets for a similar number of days per week (between 2.66 and 2.80 compared to 2.36 to 2.61 reported in 2023). Our sample mean tuition falls between the mean tuition reported in 2022 ($4,158) and 2023 ($3,504). Mean enrollment (260) is slightly higher than enrollments reported in those years (227 in 2022 and 194 in 2023). These descriptive statistics continue to build our understanding of hybrid schools nationally.

Stated Preferences Experiment

We presented school leaders with a conjoint or stated preferences experiment in which respondents considered four sets of three hypothetical programs. We randomly assigned attributes to each hypothetical program across 6 components: test score outcomes, higher education matriculation, civic engagement, family life, religious observance, and labor market outcomes. For test score outcomes, we randomly assigned one of the following four attributes: program does not collect standardized test score data, or students have below average, average, or above average test score performance. For college matriculation, we randomly assigned one of five attributes: many students do not enroll, or many students enroll in a two-year program, local four-year program, specific faith-based program, or prestigious program. For civic engagement, we randomly assigned one of the following four attributes: graduates tend not to be involved in civic life, volunteer regularly, vote, or give regularly to charitable causes. For family life, we randomly assigned one of the following four attributes: graduates tend to put off marriage and having kids, many graduates have children, many graduates are married, or many graduates are married with children. For religious observance, we randomly assigned one of the following four attributes: graduates are actively involved in a religious community, graduates are involved in a religious community, graduates are nominally religious, or graduates are not religious. Finally, for labor market outcomes, we randomly assigned one of five attributes: graduates tend to be gainfully employed, graduates work meaningful but low-paying jobs, graduates tend to have high-paying jobs, graduates tend to be unemployed, or graduates are entrepreneurial in business ventures (see Table 1 for summary of components and attributes). For each set, we asked respondents the following question: “Based on these student outcomes, which Hybrid School

would you consider more successful?" In total, 63 respondents considered 227 sets of 681 hypothetical programs.

We hypothesize that higher test score performance will increase the likelihood that a program will be chosen relative to average test score performance, the omitted category. Conversely, we hypothesize that lower test score performance will decrease the likelihood that a program will be chosen. We further hypothesize that higher education matriculation (relative to having many students not enroll in college or university), civic engagement of volunteering, voting, and giving to charitable causes (relative to not being involved in civic life), marriage and childbearing (relative to putting off both), religious observance (relative to not being religious), and employment (relative to unemployment) will increase the likelihood a program will be chosen.

Empirical Strategy

The exogenous design of our stated preferences experiment allows us to identify the causal effect of each attribute on increasing the likelihood a hybrid school leader would consider a program successful. To estimate the average marginal component effect (AMCE) of each program characteristic on the likelihood a school leader will deem it successful, we assume linearity and use the following random effects model:

$$y_{rst} = \beta_0 + \boldsymbol{\tau}'_{\boldsymbol{rst}}\beta_1 + \boldsymbol{\upsilon}'_{\boldsymbol{rst}}\beta_2 + \boldsymbol{\chi}'_{\boldsymbol{rst}}\beta_3 + \boldsymbol{\phi}'_{\boldsymbol{rst}}\beta_4 + \boldsymbol{\rho}'_{\boldsymbol{rst}}\beta_5 + \boldsymbol{\lambda}'_{\boldsymbol{rst}}\beta_6 + \epsilon_r \quad (1)$$

where y_{rst} is set to unity if respondent *r* chose school *s* in set *t* and zero otherwise. Note that *s* = 1, 2, or 3 because we presented respondents with 3 schools in each set, and *t* = 1, 2, 3, or 4 because we presented respondents with 4 sets.

In Equation 1, $\boldsymbol{\tau}'_{\boldsymbol{rst}}$ is a vector of three dummy variables indicating whether school *s* in set *t* had above average test score performance, the school had below average test score

performance, or the school did not collect standardized test score data. Schools with average test score performance serve as the omitted category, so β_1 captures the causal effect of changes in test score performance on the likelihood a respondent would deem a program successful relative to average test score performance.

The vector $\boldsymbol{\upsilon}'_{\boldsymbol{rst}}$ represents four dummy variables indicating whether students in the school tended to enroll in a two-year program, a local four-year program, a specific faith-based program, or a prestigious program. Schools whose students tend not to enroll in college or university serve as the omitted category, so β_2 captures the causal effect of differences in higher education matriculation relative to not enrolling in college or university.

The vector $\boldsymbol{\chi}'_{\boldsymbol{rst}}$ represents three dummy variables of civic engagement, indicating whether graduates of the program tend to volunteer regularly, vote, or give to charitable causes. The coefficient β_3 captures the causal effect of civic engagement relative to not being involved in civic life, the omitted category, on increasing the likelihood a school leader would choose a program as more successful.

The vector $\boldsymbol{\phi}'_{\boldsymbol{rst}}$ stands for family life, representing three dummy variables indicating whether graduates tend to have children, tend to be married, or tend to be married with children, relative to the omitted category of putting off marriage and children. The coefficient β_4 therefore captures the causal effect of family outcomes on perceived program success.

The vector $\boldsymbol{\rho}'_{\boldsymbol{rst}}$ captures three religious observance dummy variables, indicating whether graduates of a program tended to be actively involved in a religious community, involved in a religious community, or nominally religious. Here, since schools with graduates who tended not to be religious serve as the omitted category, β_5 captures the causal effect of religious observance on perceived program success.

Finally, the vector $\boldsymbol{\lambda}'_{\boldsymbol{rst}}$ captures labor market outcomes in four dummy variables: gainfully employed, low-paying but meaningful jobs, high-paying jobs, and entrepreneurial in business ventures. The coefficient β_6 captures the causal effect of these labor market outcomes relative to a program whose graduates tend to be unemployed, the omitted category.

Lastly, ϵ_r represents our error term. Because respondents identified "successful" programs in 4 different sets, we cluster standard errors at the respondent level to correct for non-independence of observations in our data that originate from the same respondent, presenting average marginal component effects for our main findings and marginal means for subgroup analyses (Leeper et al., 2020).

Findings

Main Results

As hypothesized, we find evidence that civic engagement, family life, religious observance, and labor market outcomes contribute positively to a hybrid school leader's perceptions of program success. Contrary to our hypothesis, we do not find evidence that standardized test score outcomes and higher education matriculation affect a hybrid school leader's perception of success. We present our findings in Table 3.

[Table 3 about here]

In our analytic sample, our findings suggest that school leaders consider religious observance most when evaluating program success. Having graduates who are "actively involved" in a religious community increased likelihood of being deemed successful by 54 percentage points ($p < 0.001$). Similarly, having graduates who are "involved" in a religious community increased likelihood of being deemed successful by 32 points ($p < 0.001$). Having graduates who are nominally religious was not statistically distinguishable from graduates who

are not religious ($p = 0.178$). This finding is reasonable particularly in light of the fact that roughly-two thirds of our sample of school leaders represents a hybrid school with a religious affiliation.

While religious observance produced effect sizes of the greatest magnitude, school leaders considered other student outcomes as well. Labor market outcomes were also viewed favorably, particularly if graduates were "gainfully employed" (31 points, $p < 0.001$), "entrepreneurial in business ventures" (27 points, $p < 0.01$), or employed in a "high-paying job" (17 points, $p < 0.05$). Similarly, civic engagement improved the likelihood a program was identified as "successful." If a program produced graduates who vote (29 points, $p < 0.001$), volunteer regularly (20 points, $p < 0.01$), or give to charitable causes (15 points, $p < 0.05$), school leaders were more likely to pick a program as "successful." Finally, family life was also predictive of a program's perceived success, but only if many graduates tended both to be married and have children (16 points, $p < 0.05$), as neither "married" nor "children" produced effects independently.

Subgroup Analyses

We consider results by respondents' school characteristics by running separate regressions conditional on seven school characteristics: religious affiliation (religious or secular), enrollment size (exceeding 200 or less than 200), and urbanicity (urban, suburban, and small town or rural). In Table 4, we present these conditional average marginal component effects, replicating the overall result from Table 3, Column 1. Overall, school leaders in different school settings demonstrate similar preference profiles, with some notable exceptions. In particular, school leaders in rural or small town schools placed a greater premium on college matriculation and on family outcomes than did school leaders in other settings. Sending graduates to a

prestigious college or university increased the likelihood a rural school leader would identify a program as successful by 32 points ($p < 0.05$). Similarly, having graduates who are married with children increased the likelihood a rural school leader would identify a program as successful by 36 points ($p < 0.001$). These school characteristics did not affect the selections of school leaders in other settings.

Labor market outcomes appear to matter more to leaders in religious schools, schools with small enrollments, and schools in urban or rural/small town settings than to other school leaders. Having graduates who are entrepreneurial in business ventures or gainfully employed increased the likelihood a school leader identified a program as successful for religious, small, urban, or rural/small town schools. Furthermore, having graduates with high-paying jobs increased the likelihood school leaders or religious and rural or small town schools identified a program as successful. Finally, having graduates with meaningful but low-paying jobs increased the likelihood a rural school leader identified a program as successful by 42 points ($p < 0.01$), but this characteristics did not produce an effect with school leaders in other settings.

[Table 4 about here]

Attrition

Given our relatively small sample size, one concern we had was the possibility that effect sizes could have been a result of differential attrition among the 93 school leaders who responded to the survey. If school leaders were more likely to skip the stated preferences survey question when certain school attributes appeared, our estimates can be biased. To test for differential attrition, we generated a variable $skip_{rt}$, set to 1 if respondent *r* skipped the survey question in set *t* and 0 otherwise. We regressed this variable on the following model:

$$skip_{rt} = \beta_0 + \boldsymbol{\tau}'_{\boldsymbol{rst}}\beta_1 + \boldsymbol{\upsilon}'_{\boldsymbol{rst}}\beta_2 + \boldsymbol{\chi}'_{\boldsymbol{rst}}\beta_3 + \boldsymbol{\phi}'_{\boldsymbol{rst}}\beta_4 + \boldsymbol{\rho}'_{\boldsymbol{rst}}\beta_5 + \boldsymbol{\lambda}'_{\boldsymbol{rst}}\beta_6 + \epsilon_{rst} \quad (2)$$

Overall, we find little evidence of differential attrition. Respondents were slightly less likely to skip if the attributes "local four-year" (10 points, $p < 0.05$) or "prestigious" (11 points, $p < 0.05$) appeared for higher education matriculation, or if the attribute "children" (13 points, $p < 0.01$) appeared for family life. All other estimates were not statistically significant at conventional levels. We present the results of our differential attrition analysis in Table 5.

[Table 5 about here]

Limitations

Our analysis is subject to a few important limitations. First, we are limited to observing administrators' stated rather than revealed preferences. While school administrators may respond to a survey by favoring certain student outcomes over others, we cannot determine how these stated preferences may or may not reflect actual behaviors that may affect those student outcomes, including teacher hiring, choice of curriculum, and school operations. Second, as we observe administrators' stated preferences, we cannot observe how successfully these hybrid schools achieve these outcomes for their students. A hybrid school leader may state a preference for standardized test score outcomes, for example, but our analysis cannot tell how effectively that leader's school is at improving student tested outcomes. Finally, as a study of hybrid schools, we cannot generalize our results to other school sectors, even adjacent sectors such as homeschools, microschools, or conventional private schools.

Discussion

These limitations aside, our study is the first to provide experimental evidence of how heavily various student outcomes affect school leaders' perceptions of success, thus providing empirical insights into the kinds of student outcomes hybrid schools may be pursuing. We find evidence that students' religious observance into early adulthood factors heavily into hybrid

school leaders' perceptions of program success. As 68 percent of our sample indicated some school religious affiliation, our findings are consistent with a previous study of parental preference in private religious schools, which finds that spiritual formation was the most important consideration for parents (Lee et al., 2024). Furthermore, we find evidence that student labor market outcomes and civic outcomes also affect hybrid school leaders' perceptions of success. We do not find any evidence that standardized test score outcomes and college matriculation affect hybrid school leaders' perceptions of success.

Directions for Further Research

Our findings suggest that the administrators of hybrid schools perceive characteristics of their schools, such as civic engagement, family life, and religious observance, as important for successful schools, while more conventional measures, such as standardized test performance and higher education matriculation, matter significantly less for these administrators. While these findings are important on their own and significant for their contribution to our understanding of this unique sector of unconventional schooling, further work is needed in order to help address the causes of these differences. It is worth noting that schools don't exist in a vacuum, and that the interests of other actors within a school's orbit – notably families, teachers, and students – interests, motivations, and perceptions of success are likely to influence school administrators. With that in mind, further examinations of each of these group's perceived values of school characteristics would be informative for contextualizing how and why these hybrid schools are operating as they do. Additionally, once these topics have been illuminated, more meaningful work can be taken to address topics such as the impacts of attending hybrid schools on students.

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Tables

Table 1. Conjoint survey design

Component	Attributes
(1)	(2)
Standardized testing	Program does not collect standardized test score data on students Students in the program have below average standardized test score performance *Students in the program have average standardized test score performance (omitted)* Students in the program have above average standardized test score performance
Higher education matriculation	*Many students do not enroll in college or university (omitted)* Many students enroll in a two-year higher education program Many students enroll in a local four-year higher education college or university Many students enroll in a specific faith-based religious college or university Many students enroll in a prestigious higher education program
Civic engagement	*Graduates of the program tend not to be involved in civic life (omitted)* Graduates of the program volunteer regularly Graduates of the program vote Graduates of the program give regularly to charitable causes
Family life	*Graduates of the program tend to put off marriage and having kids (omitted)* Many graduates have children Many graduates are married Many graduates are married with children
Religious observance	Graduates of the program continue to be actively involved in a religious community Graduates of the program are involved in a religious community Graduates of the program are nominally religious *Graduates of the program are not religious (omitted)*
Labor market outcomes	Graduates of the program tend to be gainfully employed Graduates of the program work meaningful but low-paying jobs Graduates of the program tend to have high-paying jobs *Graduates of the program tend to be unemployed (omitted)* Graduates of the program are entrepreneurial in business ventures

Table 2. Summary statistics

	All	Religious	Non-Religious	Urban	Suburban	Rural / Town	Small Schools	Large Schools
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tuition	3900	3812.5	4040	3600	3241.67	4937.5	4045.83	2150
	(2347.34)	(2163.12)	(2881.28)	.	(1046.62)	(3949.55)	(2389.41)	.
Elementary	0.06	0.09	0.00	0.00	0.12	0.05	0.09	0
	(0.25)	(0.29)	(0)	(0)	(0.33)	(0.23)	(0.29)	(0)
All Grades	0.60	0.63	0.55	0.69	0.65	0.53	0.53	0.78
	(0.49)	(0.49)	(0.51)	(0.48)	(0.49)	(0.51)	(0.50)	(0.43)
Multiple Grades	0.33	0.28	0.45	0.31	0.23	0.42	0.38	0.22
	(0.48)	(0.45)	(0.51)	(0.48)	(0.43)	(0.51)	(49)	(0.43)
K-5 Days Per Week	2.67	2.52	3.08	2.57	2.67	2.75	2.82	3.53
	(0.88)	(0.80)	(1.00)	(0.79)	(0.92)	(0.97)	(0.94)	(1.91)
6-8 Days Per Week	2.66	2.61	2.82	2.80	2.58	2.69	2.78	3.00
	(0.84)	(0.77)	(1.08)	(0.63)	(0.90)	(0.95)	(0.91)	(1.5)
9-12 Days Per Week	2.80	2.75	3.00	3.22	2.69	2.67	2.78	3.44
	(0.85)	(0.72)	(1.31)	(0.67)	(0.95)	(0.82)	(0.89)	(1.46)
Religious	0.68	1	0	0.69	0.62	0.74	0.64	0.78
	(0.47)	(0)	(0)	(0.48)	(0.5)	(0.45)	(0.48)	(0.43)
Urban	0.25	0.26	0.25	1	0	0	0.22	0.33
	(0.44)	(0.44)	(0.44)	(0)	(0)	(0)	(0.42)	(0.49)
Suburban	0.41	0.37	0.50	0	1	0	0.42	0.39
	(0.5)	(0.49)	(0.51)	(0)	(0)	(0)	(0.5)	(0.5)
Rural	0.30	0.33	0.25	0	0	1	0.31	0.28
	(0.46)	(0.47)	(0.44)	(0)	(0)	(0)	(0.47)	(0.46)
K-8 Enrollment	58.79	56.44	63.85	68.13	37.54	86.21	18.58	159.33
	(103.58)	(79.61)	(144.78)	(99.66)	(56.64)	(149.38)	(19.84)	(152.07)
9-12 Enrollment	200.83	184.51	235.9	163.25	188.88	266.11	63.96	543
	(357.38)	(328.82)	(419.37)	(169.67)	(359.99)	(476.42)	(44.66)	(535.8)
Total Enrollment	259.62	240.95	299.75	231.38	226.42	352.32	82.53	702.33
	(442.7)	(392.08)	(545.19)	(246.32)	(397.59)	(622.92)	(54.29)	(645.45)
n	63	43	20	16	26	19	45	18

Table 3. Factors contributing to perceptions of successful programs

	Estimate	SE	*p*-value
	(1)	(2)	(3)
Standardized Test Score Outcomes			
Program does not collect test score data	0.10	(0.07)	0.157
Above average	0.02	(0.07)	0.779
Average (omitted)			
Below average	-0.05	(0.07)	0.484
Higher Education Matriculation			
Do not enroll (omitted)			
Local four-year	0.08	(0.10)	0.432
Prestigious	0.02	(0.10)	0.865
Religious	-0.02	(0.10)	0.804
Two-year	-0.04	(0.13)	0.763
Civic Engagement			
Not involved in civic life (omitted)			
Give to charitable causes	0.15	(0.07)	0.049*
Volunteer	0.20	(0.07)	0.007**
Vote	0.29	(0.07)	0.000***
Family Life			
Unmarried, no children (omitted)			
Married	0.02	(0.07)	0.786
Children	0.04	(0.07)	0.531
Married with children	0.16	(0.07)	0.024*
Religious Observance			
Not religious (omitted)			
Nominally religious	0.09	(0.07)	0.178
Involved in a religious community	0.32	(0.07)	0.000***
Actively involved in a religious community	0.54	(0.07)	0.000***
Labor Market Outcomes			
Unemployed (omitted)			
Entrepreneurial business ventures	0.27	(0.09)	0.003**
Gainfully employed	0.31	(0.08)	0.000***
High-paying job	0.17	(0.08)	0.043*
Meaningful but low-paying job	0.13	(0.10)	0.209
n respondents	63		
n observations	681		

Notes. Standardized errors clustered by respondent. Asterisks indicate level of significance, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 4. Conditional results by school characteristics

	Overall AMCEs	Conditional AMCEs						
		Religious	Secular	Large	Small	Urban	Suburban	Rural
	(1)	(2)	(3)	(4)	(56)	(6)	(7)	(8)
Standardized Test Score Outcomes (vs. "average")								
Program does not collect test score data	0.10	0.10	0.26	-0.06	0.13	-0.13	0.20	-0.07
Above average	0.02	0.07	0.02	-0.10	0.03	-0.16	0.01	0.09
Below average	-0.05	-0.07	-0.08	-0.14	-0.08	-0.19	0.08	-0.16
College Matriculation (vs. "do not enroll")								
Local four-year	0.08	0.14	-0.03	-0.08	0.14	0.14	-0.15	0.33
Prestigious	0.02	0.16	-0.29	0.12	0.06	-0.01	-0.05	0.32*
Religious	-0.02	0.15	-0.39	-0.11	0.03	0.16	-0.19	0.23
Two-year	-0.04	0.14	-0.41	-0.26	0.07	0.08	-0.35	0.37
Civic Outcomes (vs. "not involved")								
Give to charitable causes	0.15*	0.08	0.21	0.29*	0.11	0.30*	0.11	0.13
Volunteer	0.20**	0.27***	0.04	0.14	0.18	0.28*	0.20	0.00
Vote	0.29***	0.27**	0.38**	0.37**	0.27**	0.42**	0.18	0.15
Family Outcomes (vs. "unmarried, no children")								
Married	0.02	-0.02	0.11	0.16	-0.01	-0.14	0.10	-0.07
Children	0.04	0.05	0.11	0.17	0.03	-0.22	0.20	-0.10
Married with children	0.16*	0.12	0.17	0.21	0.17	-0.07	0.09	0.36***
Religious Observance (vs. "not religious")								
Nominally religious	0.09	0.07	0.08	0.05	0.12	0.06	0.27*	0.10
Involved in a religious community	0.32***	0.33**	0.32**	0.42*	0.33***	0.65**	0.28*	0.17
Actively involved in a religious community	0.54***	0.66***	0.34	0.58***	0.55***	0.63**	0.49***	0.46**
Labor market outcomes (vs. "unemployed")								
Entrepreneurial business ventures	0.27**	0.25*	0.20	0.09	0.32**	0.49**	0.10	0.33*
Gainfully employed	0.31***	0.27**	0.27	0.23	0.35***	0.52**	0.19	0.54**
High-paying job	0.17*	0.10	0.24	0.22	0.15	0.17	-0.01	0.38**
Meaningful but low-paying job	0.13	0.12	-0.03	0.03	0.16	0.10	-0.03	0.42**
n respondents	63	44	19	18	45	16	26	19
n observations	681	480	201	192	489	180	279	204

Notes. Column 1 reproduced from Table 3, Column 1. Standard errors clustered by respondent. Asterisks indicate level of significance, *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 5. Is there evidence of differential attrition?

	Est.	SE	*p*-value
	(1)	(2)	(3)
Standardized test ("does not collect" omitted)			
Above average	0.03	(0.05)	0.538
Average	0.03	(0.05)	0.542
Below average	0.01	(0.05)	0.799
College matriculation ("religious" omitted)			
Many do not enroll	-0.02	(0.07)	0.727
Local four-year	-0.10	(0.05)	0.040*
Prestigious	-0.11	(0.05)	0.036*
Two-year	-0.02	(0.07)	0.790
Civic outcomes ("not involved" omitted)			
Give to charitable causes	-0.04	(0.06)	0.527
Volunteer	0.00	(0.05)	0.975
Vote	-0.05	(0.04)	0.235
Family outcomes ("married" omitted)			
Unmarried, no children	-0.05	(0.06)	0.396
Children	-0.13	(0.05)	0.009**
Married with children	-0.09	(0.05)	0.090
Religiosity ("involved" omitted)			
Nominally religious	-0.02	(0.06)	0.767
Not religious	-0.01	(0.06)	0.921
Actively involved	-0.04	(0.06)	0.503
Labor market outcomes ("gainfully employed" omitted)			
Entrepreneurial	0.04	(0.05)	0.374
Unemployed	0.02	(0.05)	0.734
High-paying	-0.04	(0.06)	0.537
Low-paying but meaningful	-0.07	(0.06)	0.249
Constant	0.25	(0.09)	0.005**

Notes. Heteroskedasticity-robust standard errors in parentheses. Asterisks indicate significance level, ** $p < 0.01$, * $p < 0.05$.