Do Charter Schools Promote Student Citizenship?

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Abstract

Many believe that citizenship education is core to maintaining democratic practices and a strong civil society. As such, it is an important topic to academic researchers and policy makers. Recent research has examined the extent to which voucher-supported private schools may provide superior civic skills and knowledge to their public counterparts. We extend this research to include an important class of schools—charter schools, using original survey data of students and parents in the Washington, D.C. public school system. We find that students in charter schools report a higher amount of community participation and training in civic skills, but have about the same political tolerance as their traditional public school counterparts.

Introduction

Citizenship education and the political socialization[1] of American youth has long been a topic of interest to an interdisciplinary community of social researchers, including philosophers, sociologists, political scientists, psychologists and scholars of education. Beginning in the late 1950s with the seminal work of Hyman (1959), the topic attracted considerable research attention, but fell out of favor by the early 1980s. The 1990s, however, marked a resurgence of interest in the topic (see, for example, Galston, 2001; Niemi and Hepburn, 1995; Niemi and Junn, 1999; Verba et al., 1996).

Within political science this resurgence appears to be driven, at least in part, by proponents of school vouchers (e.g., Greene, 1998; Moe, 2000). Building on the empirical findings that Catholic schools appear to foster a higher level of civic engagement and volunteerism than their public counterparts (see, e.g., Bryk, Lee, and Holland, 1993, and Coleman, Hoffer and Kilgore 1982), voucher proponents argue that the same benefits observed in Catholic schools could be reaped more widely through a universal voucher system; a claim for which there is some empirical support (Campbell, 2002, Greene, 1998; Belfield, 2003).

Our goal in this paper is to extend this research on citizenship education to include the effects of the most popular and widespread form of public school choice—charter schools. As we discuss below, many of these schools appear to offer either explicit curricular reforms or changes in culture and governance that should, in theory, enhance civic education. Despite these expectations, the question of whether charter schools foster civic engagement and democratic

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[1] The terminology used in the literature varies both across and within disciplines. The term "citizenship education," borrowed from the philosophy of education, is roughly synonymous with the "civic education" or "democratic education" described by political theorists, and we use these terms interchangeably here. Psychologists and empirical political scientists also frequently refer to "political socialization," a term that connotes an interest in the "process of inducting youth into the political culture" (Ehman, 1980:99). While citizenship/civic education certainly has more normative overtones than political socialization, there is nonetheless substantial overlap. Note also that our focus here is on K-12 education and our empirical evidence is from secondary schools.

norms is an empirical one. To answer this question, we rely on evidence from a telephone survey of 7th-12th graders and their parents in Washington, D.C., conducted in the Fall of 2003. Our sample, part of a larger panel study of the effects of school choice on the behavior and beliefs of parents, contains both charter and traditional public school students.[2]

The plan of the paper is as follows: after a brief review of the relevant theoretical and empirical literature on civic education, we outline how this scholarship can be applied to charter schools. We then describe our data and our specific measures. Because of the observational nature of our data, we detail the various methods we employ to try to remove potential biases caused by the self-selection of parents to charter schools and the attrition of respondents from the panel. We then present and discuss our results and conclude with some thoughts on both the limits and the policy implications of our findings.

Creating Citizens

When discussing the purpose of citizenship education in the United States, philosophers of both politics and education often begin with the words of the Framers of the Constitution. Thomas Jefferson, for example, in explaining his reasoning for introducing an amendment to the Virginia constitution in 1779, wrote: "Every government degenerates when trusted to the rulers of the people. The people themselves are its only safe depositories. And to render even them safe, their minds must be improved to a certain degree." (Jefferson, 1853:157).

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[2] The first two waves of the study focused entirely on parent attitudes and behavior toward their children's school. The first wave conducted in the fall of 2001 consisted of 564 parents in Washington DC who chose to enroll their children in charter schools in the district plus 448 parents whose children remained in the traditional DC public schools. Wave 2 was conducted in the Spring of that school year. In wave 3, conducted in the Fall of 2003 we added children to the study—and it is these student data that we use in this article. More details on the study, attrition rates and the like are available upon request in a technical appendix.

As a foundation, then, citizenship education is something that allows citizens in a democratic republic to function as the ultimate holders of political authority. But what is the content of this education? Not surprisingly there has been considerable debate on this point.

Enslin and White (2002), synthesizing recent contributions to the theory of citizenship and citizenship education by theorists such as Callan (1997), Gutmann (1987, 1999), Levinson (1999), and Shklar (1995), identify two contrasting research themes—both of which describe a distinction between passive and active citizenship. One theme defines a passive/active dichotomy as the difference between citizens as "passive recipients of rights," and citizens "who are alert to the responsibilities sometimes required by those rights (like, for example, voting, writing to the newspapers, joining protests, etc…)." The second version of this distinction casts passive citizens as "bearers of rights and aware of, and committed to, the related responsibilities," as opposed to citizens "actively virtuous in the public sphere which activity they rate more highly than private concerns." (Enslin and White 2002: 121).

While some researchers, most notably those studying social capital, have emphasized the importance of citizens being "actively virtuous" in civic affairs, most work on education for democratic citizenship has focused on the first dichotomy. We believe that this debate in fact identifies the ends of a continuum that stretches between passive and active citizenship and identifies the form of education that matches that conception.

Passive Citizenship defines citizens as passive recipients of rights. Their civic education must consist of sufficient socialization/acculturation so that they are able to recognize the appropriate nation-state or other political entity in which they have membership and be familiar with the rights they (and their fellow citizens) hold under this regime.

Active Citizenship treats citizens as knowledgeable of their rights, but also of their

responsibilities as the ultimate repository of political authority. As in the case of passive

citizenship, their education must include an understanding of their shared identity. It must

also, however, impart the civic skills necessary for participation in the public sphere.

We believe that passive citizenship is insufficient for a vibrant civil society and the

vigorous protection of the people's sovereignty. We therefore argue that the role of democratic

education should be the creation of active citizens. But if active citizenship is the goal, which

civic skills and knowledge should schools teach? Perhaps the most interesting (and controversial)

contemporary investigation of this issue is being undertaken by James Bernard Murphy.

In his argument "Against Civic Education in Public Schools," Murphy argues that civic

education in the United States cannot and should not be directed at imparting values. Rather

schools should impart civic skills, which are just that—*skills*— "the trained capacities for

deploying civic knowledge in the pursuit of civic goals, such as voting, protesting, petitioning,

canvassing, and debating." (Murphy, 2003:5)

Murphy further argues that schools are "relatively weak instruments of civic education"

and that "schools can play a small though significant role in teaching civic knowledge and that

schools can indirectly foster civic skills by encouraging extra-curricular participation in student

government and other voluntary organizations." (2003: 7). Murphy's emphasis is consistent with

Verba, Schlozman, and Brady (1995), who find that American high schools provide civic

education "not by teaching about democracy but by providing hands-on training for future

participation." (1995: 376).

In his discussion of the goals of civic education, Campbell (2002: 3-4) divides political

activity into a typology consisting of four categories:

(1) Participation in public-spirited collective action (community service);

(2) The capacity to be involved in the political process (civic skills);

(3) An understanding of the nation's political system (political knowledge), and;

(4) A respect for the civil liberties of others (political tolerance).

In relation to the continuum outlined above, the latter two categories are necessary for active and passive citizenship, while the former two are necessary only for active citizenship.[3] Murphy's argument suggests that schools should concentrate only on the first three categories—but that they should not expect much return from teaching political knowledge.

The Role of Schools

If the imparting of civic skills for active citizenship is to be the goal of civic education, how can American schools best meet this goal? This is really two questions: First, within the school, what is the best pedagogical method of training active citizens? Second, beyond the individual classroom or school, how should the system of schooling be institutionally structured to facilitate an active citizenry? The former question is the one which drove the first wave of political socialization research of the 1960s and '70s. The latter question is the one of particular interest to proponents of education privatization today since it often reduces to: "Are public or private schools better at producing active citizens?" Although we are primarily interested in the latter question, we first turn to a brief discussion of the former.

Inside the School

In an authoritative review of the first wave of literature on the political socialization of American adolescents, Ehman (1980: 112-113) reviewed hundreds of articles, books, and dissertations, including most of the seminal work in political science and education on political

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[3] Neither set, however, is sufficient for either type citizenship. All citizens must also possess more basic academic skills as well, such as reading ability, mathematics skills, and some knowledge of science (Galston 2001).

socialization, such as Jennings and Niemi (1968), Langton and Jennings (1968), and Langton (1969). Ehman's work illustrated the breadth and depth of scholarship focused on this question in the first wave of socialization research, but also showed that what goes on inside a school has at best a marginal impact on civic skills, knowledge and tolerance, though sometimes with larger effects found for lower-SES students.

Scholars have recently returned to the question of what, inside the school, might predict different levels or types of political socialization. Niemi and Junn (1998), for example, re-examine the role of civics education using data from the National Assessment of Educational Progress (NAEP) and find—in contrast to earlier research—evidence that civics education courses do increase students' political knowledge. Also Nie, Junn, and Stehlik-Berry (1996) conclude, in more general terms, that the level of educational attainment is correlated with an increase in political tolerance, a finding echoed a wide range of work (see., e.g., Delli Carpini and Keeter, 1996, or Bobo and Licari, 1989).

Education researchers, for the most part, have welcomed this resurgence of interest in political socialization, but have called for further research on the precise mechanisms by which socialization occurs within the school and comparatively across nations and for the grounding of political socialization research in psychological theory (Torney-Purta, 1995; Torney-Purta, 1997). Reflecting the neo-institutional orientation of voucher researchers following Chubb and Moe, others (e.g., Greene, 2000) have criticized the new political socialization research for another reason—its failure to move beyond the school and consider the broader institutional environment.

Beyond the School

Since the "common school" movement of the 1840's, public schools have been regarded as the most important provider of civic education, and education generally, in America. While the leaders of this movement, "school men" like Horace Mann and Henry Barnard, had other goals for public education as well (Goldin and Katz, 2003), the influx of immigrants to the nation in the second half of the 19th century created a perceived need to socialize the newcomers to American values and made citizenship education a central goal of the public school system (Perkinson, 1991). Over a century later, public schools still retain this central role in the eyes of the public (Moe, 2001: 86-91; Hochschild and Scovronick, 2003: 9-27).

Democratic political theorists have provided philosophical justification for the public's trust in public schools as the primary socializing agent of American political culture, perhaps none more eloquently than Amy Gutmann (1987). Her argument, generally, is that private schools, particularly religious ones, may not promote the key values of political and religious tolerance. Furthermore, they are likely to be governed by bodies, such as religious orders or boards of trustees, that are not democratically accountable to the general citizenry, thus removing any check on their governance structure or curricula. Finally, in an increasingly multicultural society, some private schools may actually promote cultural or political separatism (Macedo, 2000).

Proponents of educational privatization, on the other hand, reject the conclusions of democratic theorists like Gutmann. Beginning with Chubb and Moe (1988; 1990) they argue that the government of public education is dominated by special interest groups and mired in bureaucracy. This institutional environment hampers civic education and makes it impossible for true democratic school-based communities to emerge (Moe, 2000). The proposed solution is to

replace the current institutional arrangement with a market-based approach—often, a universal school voucher system.

There is a growing body of empirical evidence supporting the claim that private schools do a better job of civic education than their public counterparts. Catholic secondary schools, in particular, have long been found to promote both the knowledge and attitudes essential for passive citizenship as well as the civic skills needed for active citizenship (Bryk, Lee, and Holland, 1993; cf. Coleman and Hoffer, 1987). In addition, they also promote a particular moral view that includes teachings of political and religious tolerance.

Perhaps the strongest evidence for the benefits of private schooling to citizenship education comes from Campbell (2002). Using data from both the National Household Education Survey (NHES) and the randomized voucher experiment funded by the Children's Scholarship Fund (Peterson, Howell, Wolf, and Campbell, 2002), Campbell studies the effects of private schooling on his four dimensions of political activity presented above. For knowledge and tolerance (two attributes of passive citizenship), [4] Campbell reports a statistically significant effect for a school's status as "private." However, breaking that status down into public magnet, private Catholic, private religious (other than Catholic), and private secular schools, he finds an effect for all three private categories on political tolerance, but only for the Catholic schools on political knowledge. Similarly, for the components of active citizenship, he finds an effect of private schools that appears to be attributable to the "value added" by Catholic schools.

Enter Charter Schools

While non-Catholic private schools may have some benefit to students, the bulk of the empirical evidence suggests that some combination of characteristics of Catholic education—

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[4] Campbell himself does not use this distinction.

perhaps the strong sense of community coupled with a firm orientation towards making positive changes in the secular world—gives Catholic schools an advantage in fostering passive *and* active citizenship. Other private schools do not necessarily succeed in improving citizenship education over their public counterparts.

However, there is potentially a "third way" between the overly bureaucratic and special-interest-dominated public schools and the particularistic and myopic private sector: charter schools.

Charter schools—publicly-funded schools that are allowed significant autonomy in curriculum and governance—arguably combine the best of both sectors. They are, in theory, free to innovate more readily; in the context of citizenship education, they can adopt the best-practices in civics curricula, as well as encourage or even require extra-curricular activities thought to build active citizenship.[5] Due to the decentralized nature of their administration, they can also involve parents and students in school governance to an extent not found in traditional public schools (Hill, Pierce, and Gutherie 1997; Hill et al., 2001).[6]

Nevertheless, charter schools remain *public* schools. They are generally required to serve the entire population of their district (with over-enrollment resolved by lottery) instead of particular ethnic or religious minority groups.[7] As public schools of choice, they may encourage participation of parents and students and enhance social capital (Schneider et al. 2000). And as public schools, they may be more likely to educate their students with the foundations of passive citizenship than many private schools.

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[5] The extent to which charter schools actually do innovate, however, has been questioned (see, for example, Teske, Schneider, Buckley, and Clark, 2001; Lubienski 2003).
[6] But see Benveniste, Carnoy and Rothstein (2003) for a contrary view.
[7] There is some concern in the literature that charter schools with "skim the cream" off of the student population. Lacireno-Paquet, Holyoke, Moser, and Henig (2002), however, find this to be a problem of limited extent.

Fuller (2001), however, presents a strong dissenting viewpoint. He sees charter schools as a "radical decentralization" of authority in which decisions regarding the education of children and the allocation of public resources are entrusted to groups of parents, advocates, and charter school leaders, pushing their own particularistic self-interests while neglecting the "common good." Fuller argues that charter school advocates seek to create isolated ("tribal") communities that "may contribute to the dismantling of the modern state's political foundations." Fuller further argues that under school choice regimes, "the state sanctions the pursuit not of the broad common good but of private interests."

In short, for Fuller, charter schools threaten not only to displace the "common school" in which students of diverse backgrounds and interests come together in one place to learn tolerance for diversity and respect for their fellow citizens, but also to diminish the civic virtues and democratic practices of students.[8]

For these reasons, we believe that empirically assessing the effect of charter school enrollment on the active and passive citizenship education of students is an important task for educational policy—a task to which we now turn.

Data Issues

To test our theory about the effect of charter schools on citizenship education, we use data from a telephone survey of both charter and traditional public school parents and 7th-12th grade students conducted in Washington, D.C. in September-October, 2003.[9] The data comprise the third wave of a panel survey of parents begun in the Fall of 2001. The original sample size was 1012 parents, with approximately half selected by random digit dialing and the other half, a designed oversample of charter parents, randomly selected from a list. Due to panel attrition, the

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[8] For a critical appraisal of the "common school", see Glenn (1988).
[9] During the interview period, approximately 17% of D.C. students, about 11,500, were in charter schools.

restriction of student interviews to those in grade levels to 7th-12th grade, and the difficulty of

convincing parents to allow us to interview their children, we were able to complete only 196

interviews with students. Given the "messy" nature of our data, we need to address the issues of

self-selection to the sample by parents as well as attrition from the panel over time before

proceeding with our analysis of the effect of charter enrollment on civic education.

Self-Selection to Treatment

It is well-known that results from quasi-experimental studies of the effects of public

policy (or other such "treatments") are potentially biased when the factors predicting self-

selection into the program (here, charter schools) are correlated with the outcome measures

(Achen, 1986; Maddala, 1983; Rosenbaum, 2002). The possibility of selection bias is built into

the very way in which charter schools are designed—charter schools, like most current school

choice plans, are what Elmore (1991) calls "option demand" choice.

In contrast to a system of "universal choice" where all parents must choose a school for

their child, option demand choice is a two-stage process. First, parents must "choose to

choose"—that is, they must be dissatisfied enough with their existing schools or be sufficiently

attracted to an alternative to their neighborhood school that they decide to exercise choice. Once

they decide to choose, the parent then has to select among the alternatives to find a school in

which to enroll her child. Given this two-stage process, the possibility of bias due to self-

selection must be taken into account when studying any outcomes of choice. That is, it is likely

that the individuals who choose to choose are not representative of the entire population of

parents (see, for example, Schneider, Teske, and Marschall, 2000) and the characteristics that are

motivating them to choose may affect their subsequent behavior and attitudes. To the extent this

is true, simple comparisons of choosers and non-choosers are biased and any difference between charter and traditional public sectors on active and passive citizenship—assuming, reasonably, that the home environment has an effect on students—may be a function of the factors that led parents to choose in the first place.

A variety of techniques have been developed to deal with this problem. One solution is the estimation of some form of parametric "treatment effects" model, usually by means of a consistent two-step or maximum likelihood model (Goldberger, 1972; Heckman, 1979). Here we use instead a semiparametric estimator, propensity score matching, originally introduced by (Rosenbaum and Rubin, 1983; Rosenbaum and Rubin, 1985) in a biometric context and recently applied widely in econometric studies evaluating the effects of training programs on subsequent earnings (e.g. Dehejia and Wahba, 2002; Heckman, Ichimura, and Todd, 1997) and in other research ranging from the impact of school choice on satisfaction (Buckley and Schneider, 2003) to evaluating successful techniques of heart catheterization (Hirano and Imbens, 2001).

The logic underlying this method is to construct, from quasi-experimental data, a new variable (the propensity score) that summarizes pre-treatment characteristics of each respondent. Based on these propensity scores, a treatment group and a matched control group are created and the size and significance of the treatment effect can be estimated using these groups. Propensity score matching has several advantages, such as the relaxation of restrictive parametric assumptions and no requirement to find instrumental variables for practical model identification, over more familiar "Heckman-type" treatment effects models (see Lalonde, 1986 and Puhani, 2000 for a discussion of the sensitivity of Heckman-type of models to misspecification and to violations of their parametric assumptions). Moreover, as Dehejia and Wahba (2002) argue, matching provides estimates of the treatment effects more similar to randomized field trials than

can be obtained using other corrections for self-selection. A disadvantage is that, whereas the

Heckman-type models account for unobserved covariates that are common to both the selection

and outcome equations by allowing for correlations in their residuals, propensity score methods

assume selection on the observables.

In order to try and reduce the likelihood of self-selection bias on the student outcomes as

a result of the decision of parents to enroll their child in a charter school, we first estimate a

propensity score for selection to charter for 775 parents in the wave 1, 2001 sample,[10] using a

standard maximum-likelihood probit model of the parents decision to choose on the following

covariates:[11]

- A set of three dichotomous variables for self-reported race (Hispanic, white, other,
  with African-American the excluded—and modal—category);

- Residential mobility, as measured by the number of years the person has lived in her
  current neighborhood and by the years the person has lived in D.C.;

- Respondents' years of schooling and the square of this quantity, to account for
  possible nonlinearity;

- Respondents' assessment of the general quality of the DC public schools, which we
  include as a control for pre-treatment attitudes. This assessment is measured by the grade
  respondents assigned to the DC public schools, using the familiar A, B, C, D, F scale,
  which we treat here as a continuous 0 (F) to 4 (A) scale;

- Frequency of church attendance (a seven-category measure, again treated as
  continuous);

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[10] This number is lower than the original 1,012 due primarily to the *a priori* removal of parents with children in grades K-6 and also due to listwise deletion of cases with missing values on any of the covariates in the propensity score model.

[11] We also employ a post-stratification weight (Little, 1993) to adjust the propensity score estimation for the charter oversample.

- Whether or not the respondent was employed, and;

- The respondent's marital status.

The results of the estimation of the model are presented in Table 1. We also present, in Figure 1, a graphical comparison of the propensity scores (predicted probabilities of selection) of the charter ("treated") and traditional public ("untreated") parents. As the figure shows, a small number of the treated observations have propensity scores that are outside the range of untreated scores (i.e., not on the "common support") and we discard these from subsequent models.

Table 1 and Figure 1 Here

Our next step is to match the charter parents (the "treatment" group) to the parents in the DC public school parents who are most similar to them (the "control" group). We use the nearest-neighbor matching method, with a caliper of .01, and allow sampling with replacement from the untreated observations (Becker and Ichino, 2002). The result is a new dataset (essentially an integer-weighted adjustment of the original data) consisting of 429 charter parents and their 429 matched non-charter parents. We test the equality of the two samples by comparing the first and second moments of the covariates in the propensity score model with a series of independent t- and F tests, failing to reject the null of equality at the .05 level for each test. We also conduct the multivariate T^2 test of the joint equality of samples (Hotelling, 1931) and fail to reject the null ($p=.27$) of equality of samples. Figure 2, below, presents the distribution of propensity scores post-match.

Figure 2 Here

Panel Attrition and Missing Data

The second major problem in our data is missing data due to high attrition from the first wave to the third wave and due to parents being unwilling to allow their children to be interviewed. From the 858 observations in the dataset created through the matching algorithm, there are only 165 valid students in the sample—81% attrition (unit nonresponse). Even within this sample of 165, about 5% of the total matrix of the data is missing as well (item nonresponse). Following the terminology of Little and Rubin (2002; Rubin, 1987), we assume that the data are missing at random (MAR), that is, the "missingness" of any given variable is determined by the observed data, not by any of the missing values themselves.

For unit nonresponse, we use the method of propensity weighting (Cassel, Sarndal, and Wretman, 1983). That is, we estimate a model predicting the probability of each family unit remaining in the student sample, based on the observed data for the parents in the first wave. Again, we use a maximum-likelihood probit model for dichotomous dependent variables. The model is similar to the propensity score model reported above, and includes the following covariates:

- A set of two dichotomous variables for self-reported race (Hispanic and other—in wave 3, no white respondents were left in the sample);

- Residential mobility, as measured by the number of years the person has lived in D.C. and by the square of this quantity;

- Respondents' years of schooling and its square;

- The respondent's marital status;

- Whether or not the respondent was employed;

- Frequency of church attendance (a seven-category measure, again treated as continuous);

- The grade the respondent assigned to their child's school in the first interview. This is a five-category (A,B,…F) measure, which we treat here as continuous;

- The interaction of the school grade and their level of education,

- A dichotomous indicator for whether their child was enrolled in a charter school, during the first interview, and;

- The interaction of the charter indicator and their level of education.

The results of this model are presented in Table 2. After estimating the predicted probabilities, we partition the propensities into three adjustment classes and created weights by assigning the inverse of the mean propensity within each to all members. This avoids placing overly large nonresponse weights on observations with an extremely low response propensity (Little and Rubin, 2002:48-49).

To avoid losing any additional observations in subsequent analysis due to item nonresponse, we also employ a multiple imputation method (Little and Rubin 2002; Allison, 2002; King, Honaker, Joseph, and Scheve, 2001; Rubin, 1987). Specifically, we impute five complete datasets of 165 observations each using a predictive mean matching model (Little 1988; Allison 2002: 59-63;Van Buuren and Oudshoorn, 1999) and average the results of the analyses reported below using Rubin's (1987) method. One particular advantage of the partially parametric predictive mean matching approach over other techniques used in the applied literature is the restriction of imputed values to those observed in the sample.

The Effect of Charter Schools on Citizenship

With these datasets in hand, the only remaining step before we are ready to model the effect of charter enrollment on active and passive citizenship is to construct our measures of the dependent variables. In terms of Campbell's categories, our survey contains questions that attempt to measure community service and civic skills (active citizenship), and political tolerance (passive citizenship). We will discuss each measure in turn.[12]

Community Involvement

Our measures of community involvement are student responses to the following questions, each of which asks the student to report the frequency of a given activity over the past school year using four response options (almost every day, once a week, once in a while, and never):

- How often have you participated in school clubs or organizations (like student council, drama club, or others)?

- How often have you participated in church or community youth groups?

- How often have you played team sports?

- How often have you engaged in any community service activity or volunteer work at your school or in your community?

Civic Skills

Our civic skills measure use students' responses to four yes or no questions asking about their behavior in the past year:

- Have you written a letter to a public official, such as the mayor?

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[12] The research questionnaire, unfortunately, did not include any measures of political knowledge.

- Have you given a speech or an oral report?

- Have you taken part in a debate or discussion in which you had to persuade others of your point of view?

- Have you gone to a community meeting and given comments or a statement?

Political Tolerance

Finally, we asked students two questions aimed at measuring the extent to which they supported basic civil liberties. The first question pertained to free speech and religious tolerance. We asked students:

- If a person wanted to make a speech in your community against churches and religion, do you think he or she should:

    1. Definitely be allowed to speak

    2. Probably be allowed to speak

    3. Probably shouldn't be allowed

    4. Definitely shouldn't be allowed

Our second question pertained to another dimension of free speech, the flow of information. We asked:

- Suppose a book that most people disapproved of was written, for example, saying that it was all right to take illegal drugs. Should a book like that

    1. Definitely be kept out of a public library

    2. Probably be kept out of a public library

    3. Probably be allowed in a public library

    4. Definitely be allowed in a public library

Model

Although other recent research in this area (e.g., Campbell 2002) has combined measures similar to our survey questions into scales of community involvement, civic skills, and political tolerance, we choose a different approach that retains the ability to focus on the effect of charter schools on the individual measures while accounting for their correlation.[13]

First, for each of the ten outcome measures we estimate independent ordered probit regressions using the standard maximum-likelihood estimator (Zavoina and McElvey, 1975), which is equivalent to a probit model for the dichotomous outcomes. In each case, we regress our indicators of citizenship on the same covariates:

- A dichotomous indicator for charter school enrollment;

- A measure of the parent's civic engagement;[14]

- The parental response to the two tolerance measures described above;

- The number of students in the school (in hundreds);

- How long (in years) the student has been in the school;

- Frequency of church attendance as reported by the student;

- The student's grade level (7th-12th), and;

- The number of close friends in school that the student reports.[15]

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[13] Another reason for this is that the individual measures do not scale particularly well. Using Mokken's nonparametric item-response model for scaling ordinal items (Hemker, Sijtsma, and Molenaar, 1995; Mokken 1971). We find a scalability coefficient (H) of slightly less than .3 for each of the three groups of measures, although some restricted sets of items yield H's of about .4.

[14] This measure is constructed similarly as a Mokken scale ($H = .379$) by adding the polytomous responses to nine questions asking parents whether they are frequent volunteers at school events, if they are PTA members, how many organizations, clubs, or groups they are members of, how confident they are in their ability to write a letter to a public official clearly stating their opinion, how confident they are in making a statement at a public meeting, how often they attend events at their child's school, how often they talk to politicians at any level, the number of discussants they converse with about their child's education regularly, and the extent to which they agree that they are well-qualified to participate in politics.

The estimation in each case is weighted using the attrition propensity weights discussed above.

Once we have the estimate coefficients and variance-covariance matrix for each of the ordered probit models, we adjust the latter using a variant of White's (1982) "sandwich" estimator of covariance (Weesie, 1999), modeling the joint distribution of the individual model results as a sort of "seemingly-unrelated ordered probit" model. Finally, as discussed above, we repeat the estimation of the full model using each of the five multiply imputed datasets, and average the results, which are presented in Tables 3a, b, and c.

TABLE 3 a, b, c HERE

Results

We find mixed support for the beneficial effects of charter school enrollment on the civic education of students. In Table 3a, there is a statistically significant and positive charter effect on the community service/volunteer work outcome ($p < .01$, all values reported are two-tailed), suggesting that, *ceteris paribus*, charter students are more likely to perform such service. We find no effect, however, on participation in school clubs, church or youth groups, or team sports. Regarding the estimates of the control variables, the religiosity of the student as measured by frequency of religious service attendance is a significant predictor of participation in church and youth groups and in team sports ($p < .01$) and in volunteer work as well (at $p = .10$). The number of close friends that the student reports is significantly associated with participation in school clubs ($p < .01$), and parental civic engagement predicts participation in church/youth groups ($p = .01$) and team sports ($p = .10$).

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[15] We include this in response to the criticism of Portes (1998) that the empirical literature on social capital generally fails to deal with the potential confound of sociability, although there is the possibility of endogeneity, particularly in the case of the groups/clubs membership outcome.

As Table 3b illustrates, charter enrollment is associated with the enhancement of the civic skills of students. Specifically, we find a statistically significant effect on the probability of taking part in a debate or discussion ($p = .10$, again two tailed) and making comments or a statement at a community meeting ($p = .09$). The pattern of significance of the control variables is a bit different for these outcomes, with at least one of the parental tolerance measures being a significant predictor for three of the four outcome measures (all except writing a letter to a public official). Parent civic engagement, however, does not appear to be a good predictor of the civic skills measures. Church attendance is also a significant predictor for two of the outcomes, increasing the student's probability of taking part in a public debate or discussion ($p <.01$) but decreasing the probability of writing a letter to a public official ($p <.01$).

The results of the model for our final pair of outcomes, the political tolerance measures, are presented in Table 3c. As the table shows, there is no significant charter effect on either of these outcomes. The student's religiosity, however, has a statistically significant and negative effect on both measures ($p =.07$ for each). The parent's civic engagement has a positive effect on the "allow drugs book in the library" measure ($p <.01$), but the only significant effect of parental tolerance is negative on this measure ($p = .04$). The size of the school has a positive effect on the religion/speech tolerance measure ($p <.01$), and the number of close friends has an opposite effect ($p = .02$).

Because it is difficult to interpret the effect size of coefficients in an ordinal regression model due to the model's inherent nonlinearity, we also compute predicted probabilities of the sets of response options for the community service/volunteer work (Figure 3), participation in a debate or discussion (Figure 4), and participation in a community meeting (Figure 5) outcome measures. The predicted probabilities are computed using the estimates from the overall

seemingly-unrelated ordered probit model, holding all the covariates at their mean or modal

values in-sample (varying only the charter indicator). As all three figures illustrate, charter

enrollment predicts a substantively significant effect on all three of these measures.

Finally, the seemingly-unrelated model allows for likelihood-based hypothesis tests

across the various submodels. For example, the null that all of the charter effect coefficients are

jointly equal to zero is rejected ($p < .01$). Similarly, we reject the null hypotheses that the

parental civic engagement, parental political tolerance (speech), student number of close friends,

and student church attendance effects are zero for all submodels (all $p < .01$), using a modified

Wald test.

Discussion

Compared to the traditional public schools, charter schools do a superior job of educating

their students in civic skills and getting them to volunteer and to participate in their community.

In this respect, then, charter schools appear to perform like private and parochial schools. Given

the focus in many charter schools on mandatory service and volunteerism, this result is perhaps

not surprising.[16]

In contrast, we find that charter attendance has essentially no effect on political tolerance.

Here, charter schools appear to be more similar to magnet schools or traditional public schools

than to either non-Catholic religious private schools or their secular or Catholic counterparts. As

Campbell notes:

> It is possible that there is some credence to the concern expressed by critics of private
> education that it has the potential to foster political intolerance. While students in
> Catholic schools (the most common form of private education) and secular private

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[16] In our data, for example, we find that volunteer activity among charter schools is 35% more likely to be a result of
mandatory school programs than in the case of students in the traditional public schools.

schools are more politically tolerant than students in assigned public schools, the 2 percent of America's students in other religious schools—an amalgam of schools sponsored by many different faiths—score lower on the political tolerance index. (2001: 60-61).

Charter schools, then, neither foster the broad civic tolerance of Catholic schools nor the troubling intolerance of non-Catholic religious schools.

Should this mixed result be of concern to educational researchers and the broader public? One response, in line with the philosophical argument of Murphy, is simply "no." Charter schools appear to increase, at least in part, the community involvement and civic skills of their students and conform to Verba, Schlozman, and Brady's emphasis on "hands-on training for future participation." (1995: 376). From this perspective, perhaps this is all that we should expect or want from any of our public schools—and charter schools are doing this part of their job better than their traditional public school counter-parts.

On the other hand, traditional democratic theorists may be concerned with the notion of a publicly funded set of schools that provides their students with the tools of active citizenship but insufficient grounding in the foundations of knowledge and tolerance needed for the proper use of those tools. This debate will continue to play out as the charter school "movement" continues to transform the nature of the public school system in the United States.

Finally, our data do not speak to the permanence of any charter school effects—it is unknown whether any improvements to community involvement or volunteerism will persist over time or decay as students either move on to the next stage of their education or leave school and become citizens. Further research on this question will be essential in determining the long term effect of school choice on democratic citizenship.

Table 1: Results of Propensity Score Matching Model for Wave 1 Parents

	Coefficient (Standard Error)	*p*-Value
White	-.889 (.231)	<.01
Hispanic	-.187 (.175)	.29
Other Race	-.114 (.190)	.55
Years Lived in Neighborhood	.003 (.006)	.66
Years in D.C.	.005 (.009)	.58
Years of Education	.500 (.155)	<.01
Years of Education Squared	-.018 (.006)	<.01
DCPS Grade	-.192 (.038)	<.01
Church Attendance	-.048 (.019)	.02
Employed	-.086 (.100)	.39
Married	.052 (.090)	.56
Constant	-4.08 (1.07)	<.01

Results of probit model with child in charter school as dependent variable. Number of Observations = 775. All *p*-values are two-tailed. Log-likelihood of the model is -272.94.

Figure 1: Comparing the Estimated Propensity Scores of Charter (Treated) and Traditional Public (Untreated) Parents, Before Matching
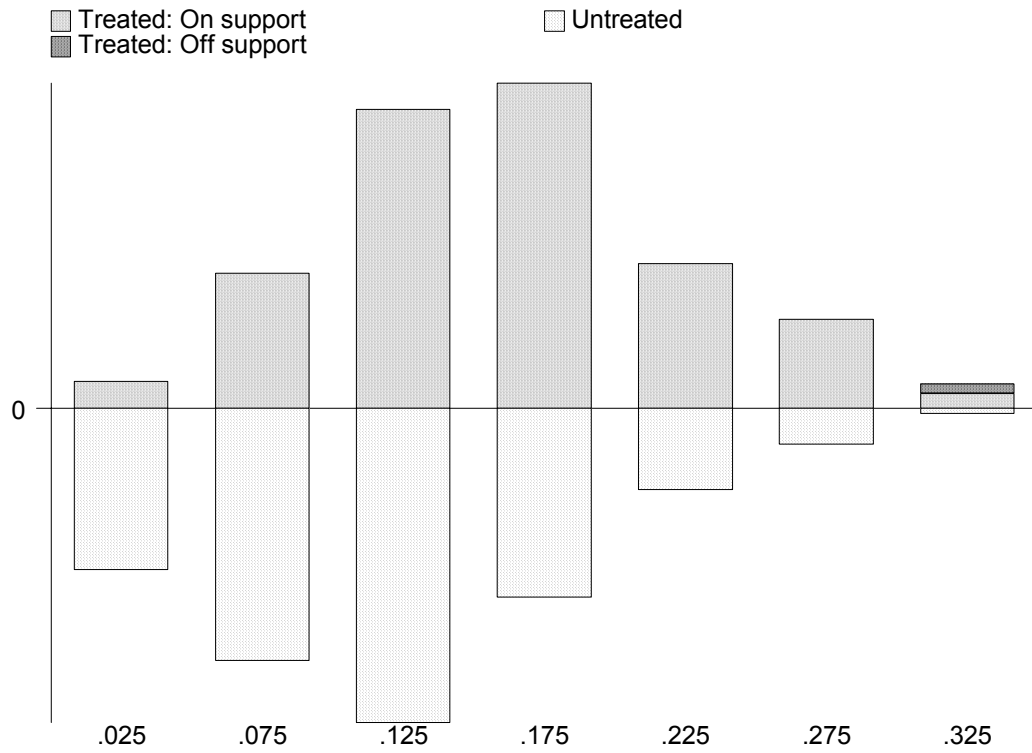
Note: Figure is a histogram of propensity scores (predicted probabilities of selection) using the model reported in Table 1.

Figure 2: Comparing the Post-Match Estimated Propensity Scores of Charter (Treated) and Traditional Public (Untreated) Parents
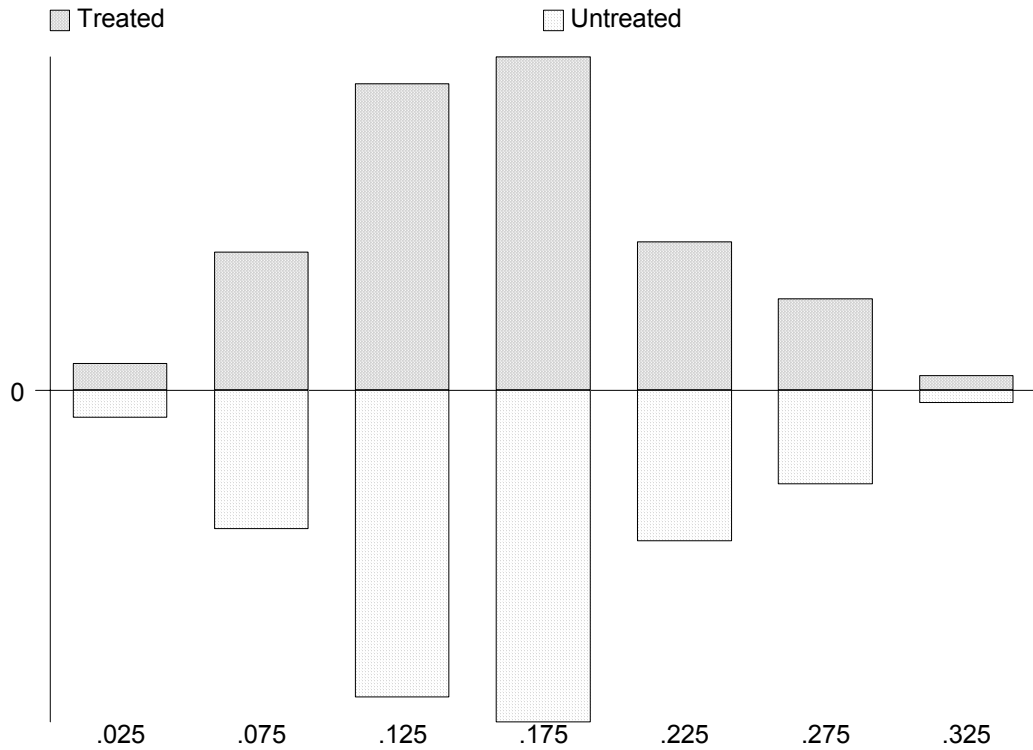
Note: Figure is a histogram of propensity scores (predicted probabilities of selection) after nearest-neighbor matching (caliper = .01) using sampling with replacement from the untreated.

Table 2: Results of Propensity Weighting Model for Unit Nonresponse in Student Sample

	Coefficient (Standard Error)	*p*-Value
Hispanic	-.534 (.330)	.11
Other Race	-.930 (.361)	.01
Years in D.C.	-.058 (.068)	.40
Years in D.C. Squared	.003 (.003)	.33
Years of Education	.036 (.286)	.90
Years of Education Squared	.001 (.009)	.94
Married	.100 (.105)	.34
Employed	-.275 (.123)	.03
Church Attendance	.006 (.026)	.83
School Grade	-.510 (.331)	.12
Education $\times$ School Grade	.015 (.025)	.54
Charter School	1.50 (.674)	.03
Charter $\times$ Education	-.087 (.048)	.07
Constant	-2.68 (2.14)	.21

Results of probit model with student observed in sample as dependent variable. Number of Observations = 832. All *p*-values are two-tailed. Log-likelihood of the model is -398.40.

Table 3a: The Only Effect of Charter Schools on Community Involvement is Community Service/Volunteer Work

Outcome	Covariate	Coefficient Estimate	Standard Error	p
Participated in School Clubs	**Charter Enrollment**	**0.169**	**0.221**	**0.44**
	Parent's Civic Engagement	-0.019	0.021	0.36
	Parent's Tolerance (Speech)	0.135	0.100	0.18
	Parent's Tolerance (Library)	-0.022	0.094	0.82
	Number of Students (00's)	-0.009	0.020	0.66
	Years at School	0.010	0.076	0.89
	Student's Church Attendance	0.096	0.063	0.13
	Grade Level	0.024	0.064	0.70
	Student's Number of Close Friends	0.180	0.062	<0.01
	Cutpoint 1	0.891	0.825	0.28
	Cutpoint 2	1.684	0.823	0.04
	Cutpoint 3	2.059	0.824	0.01
Participated in Church or Community Youth Groups	**Charter Enrollment**	**-0.040**	**0.199**	**0.84**
	Parent's Civic Engagement	0.049	0.019	0.01
	Parent's Tolerance (Speech)	-0.163	0.112	0.15
	Parent's Tolerance (Library)	-0.138	0.096	0.15
	Number of Students (00's)	-0.026	0.030	0.40
	Years at School	0.105	0.066	0.11
	Student's Church Attendance	0.333	0.068	<0.01
	Grade Level	0.110	0.067	0.10
	Student's Number of Close Friends	-0.031	0.058	0.60
	Cutpoint 1	1.353	0.914	0.14
	Cutpoint 2	2.581	0.928	0.01
	Cutpoint 3	3.707	0.940	<0.01
Played Team Sports	**Charter Enrollment**	**-0.141**	**0.206**	**0.49**
	Parent's Civic Engagement	0.033	0.020	0.10
	Parent's Tolerance (Speech)	-0.146	0.106	0.17
	Parent's Tolerance (Library)	0.094	0.085	0.27
	Number of Students (00's)	0.042	0.030	0.17
	Years at School	-0.049	0.045	0.28
	Student's Church Attendance	0.233	0.065	<0.01
	Grade Level	0.105	0.063	0.10
	Student's Number of Close Friends	-0.013	0.058	0.82
	Cutpoint 1	1.888	0.864	0.03
	Cutpoint 2	2.371	0.864	0.01
	Cutpoint 3	2.621	0.867	<0.01
Engaged in Community Service or Volunteer Work	**Charter Enrollment**	**0.728**	**0.207**	**<0.01**
	Parent's Civic Engagement	0.007	0.021	0.76
	Parent's Tolerance (Speech)	0.252	0.107	0.02
	Parent's Tolerance (Library)	0.214	0.100	0.03
	Number of Students (00's)	0.007	0.030	0.82
	Years at School	-0.011	0.059	0.85
	Student's Church Attendance	0.108	0.065	0.10
	Grade Level	0.236	0.064	<0.01
	Student's Number of Close Friends	0.177	0.058	<0.01
	Cutpoint 1	4.335	0.874	<0.01
	Cutpoint 2	5.898	0.910	<0.01
	Cutpoint 3	6.470	0.935	<0.01

Table 3b: Charter Schools Increase Some of the Civic Skills of Students

| Outcome	Covariate	Coefficient Estimate	Standard Error	p
Written a Letter to a Public Official	**Charter Enrollment**	**-0.110**	**0.261**	**0.67**
	Parent's Civic Engagement	-0.008	0.023	0.74
	Parent's Tolerance (Speech)	0.025	0.130	0.85
	Parent's Tolerance (Library)	0.039	0.105	0.71
	Number of Students (00's)	-0.010	0.030	0.74
	Years at School	-0.028	0.103	0.79
	Student's Church Attendance	-0.218	0.070	<0.01
	Grade Level	0.140	0.078	0.07
	Student's Number of Close Friends	0.174	0.074	0.02
	Cutpoint 1	1.739	1.036	0.09
Given a Speech or Oral Report	**Charter Enrollment**	**-0.358**	**0.247**	**0.15**
	Parent's Civic Engagement	-0.012	0.021	0.58
	Parent's Tolerance (Speech)	0.171	0.115	0.14
	Parent's Tolerance (Library)	0.206	0.108	0.06
	Number of Students (00's)	0.034	0.040	0.40
	Years at School	0.073	0.083	0.38
	Student's Church Attendance	0.067	0.088	0.44
	Grade Level	0.073	0.085	0.39
	Student's Number of Close Friends	0.277	0.070	<0.01
	Cutpoint 1	1.955	1.275	0.13
Taken Part in Debate or Discussion	**Charter Enrollment**	**0.416**	**0.251**	**0.10**
	Parent's Civic Engagement	-0.011	0.025	0.66
	Parent's Tolerance (Speech)	0.338	0.121	0.01
	Parent's Tolerance (Library)	0.163	0.116	0.16
	Number of Students (00's)	0.066	0.047	0.16
	Years at School	0.069	0.072	0.34
	Student's Church Attendance	0.239	0.078	<0.01
	Grade Level	0.177	0.077	0.02
	Student's Number of Close Friends	-0.075	0.144	0.60
	Cutpoint 1	3.506	1.180	<0.01
Given Comments or Statement at Community Meeting	**Charter Enrollment**	**0.500**	**0.296**	**0.09**
	Parent's Civic Engagement	-0.025	0.032	0.44
	Parent's Tolerance (Speech)	-0.101	0.142	0.48
	Parent's Tolerance (Library)	0.265	0.116	0.02
	Number of Students (00's)	-0.020	0.030	0.50
	Years at School	0.076	0.071	0.29
	Student's Church Attendance	-0.102	0.083	0.22
	Grade Level	0.022	0.091	0.81
	Student's Number of Close Friends	0.019	0.073	0.79
	Cutpoint 1	1.278	1.109	0.25

Table 3c: Charter Schools Have No Effect on Student Tolerance

Outcome	Covariate	Coefficient Estimate	Standard Error	p
Allow Speech Against Churches and Religion	**Charter Enrollment**	**0.119**	**0.217**	**0.58**
	Parent's Civic Engagement	0.014	0.018	0.44
	Parent's Tolerance (Speech)	0.093	0.109	0.40
	Parent's Tolerance (Library)	0.130	0.088	0.14
	Number of Students (00's)	0.094	0.033	<0.01
	Years at School	0.055	0.067	0.42
	Student's Church Attendance	-0.128	0.070	0.07
	Grade Level	0.078	0.066	0.24
	Student's Number of Close Friends	-0.164	0.069	0.02
	Cutpoint 1	-0.268	0.976	0.78
	Cutpoint 2	-0.025	0.963	0.98
	Cutpoint 3	1.010	0.941	0.28
Allow Pro-Drug Book in Library	**Charter Enrollment**	**0.178**	**0.227**	**0.43**
	Parent's Civic Engagement	0.070	0.018	<0.01
	Parent's Tolerance (Speech)	-0.256	0.123	0.04
	Parent's Tolerance (Library)	0.027	0.088	0.76
	Number of Students (00's)	-0.001	0.029	0.98
	Years at School	-0.007	0.074	0.92
	Student's Church Attendance	-0.121	0.066	0.07
	Grade Level	0.040	0.064	0.53
	Student's Number of Close Friends	-0.044	0.064	0.49
	Cutpoint 1	-0.043	0.969	0.96
	Cutpoint 2	0.601	0.970	0.54
	Cutpoint 3	1.156	0.965	0.23

Note: Tables 3a,b,c are results of a seemingly-unrelated ordered probit model of the probability of selecting the various response categories for each of the 10 outcome measures simultaneously. Model results presented are the average results over five multiple imputation datasets created by predictive mean matching. The data are also adjusted for possible self-selection to treatment and panel attrition using the models presented in Tables 1 and 2, above. The number of observations is 165.
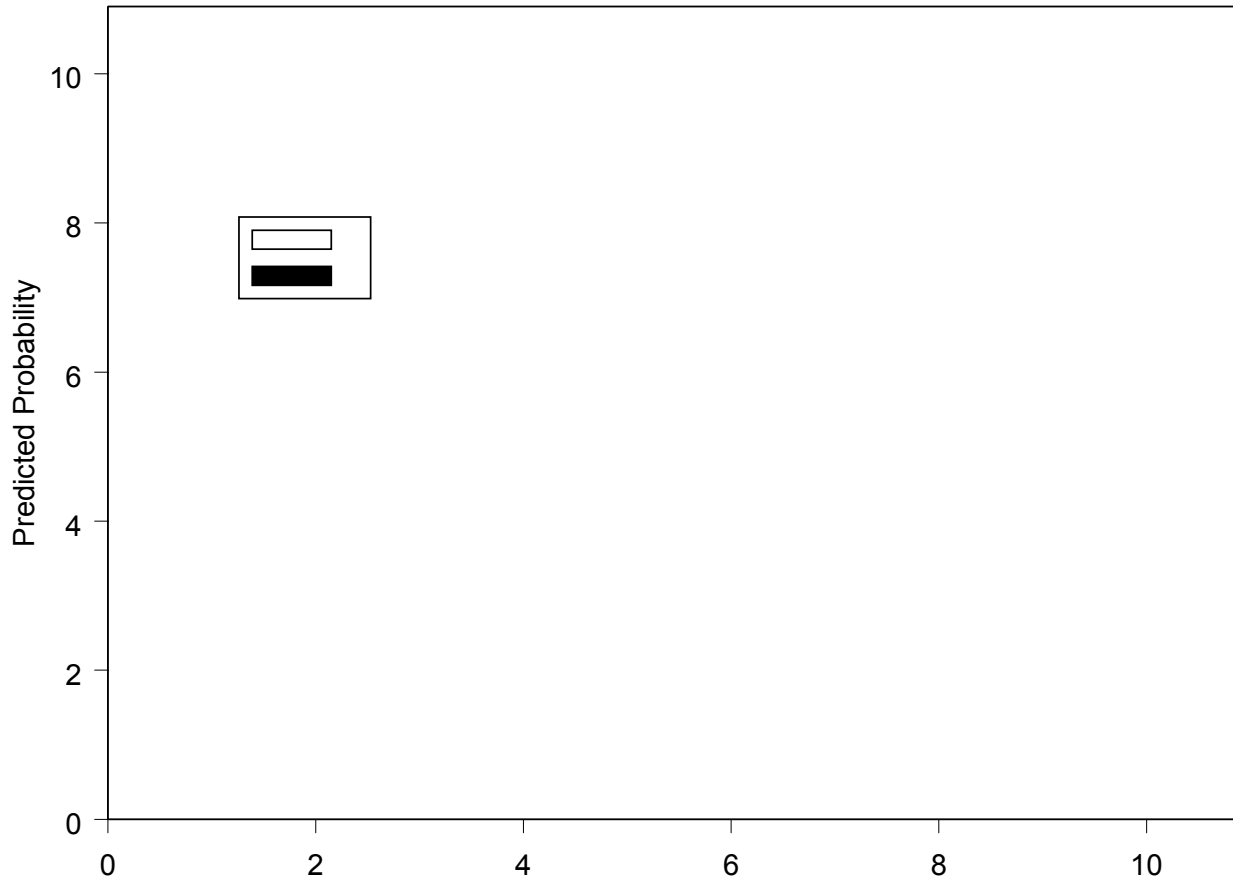
Frequency of Community Service/Volunteer Work
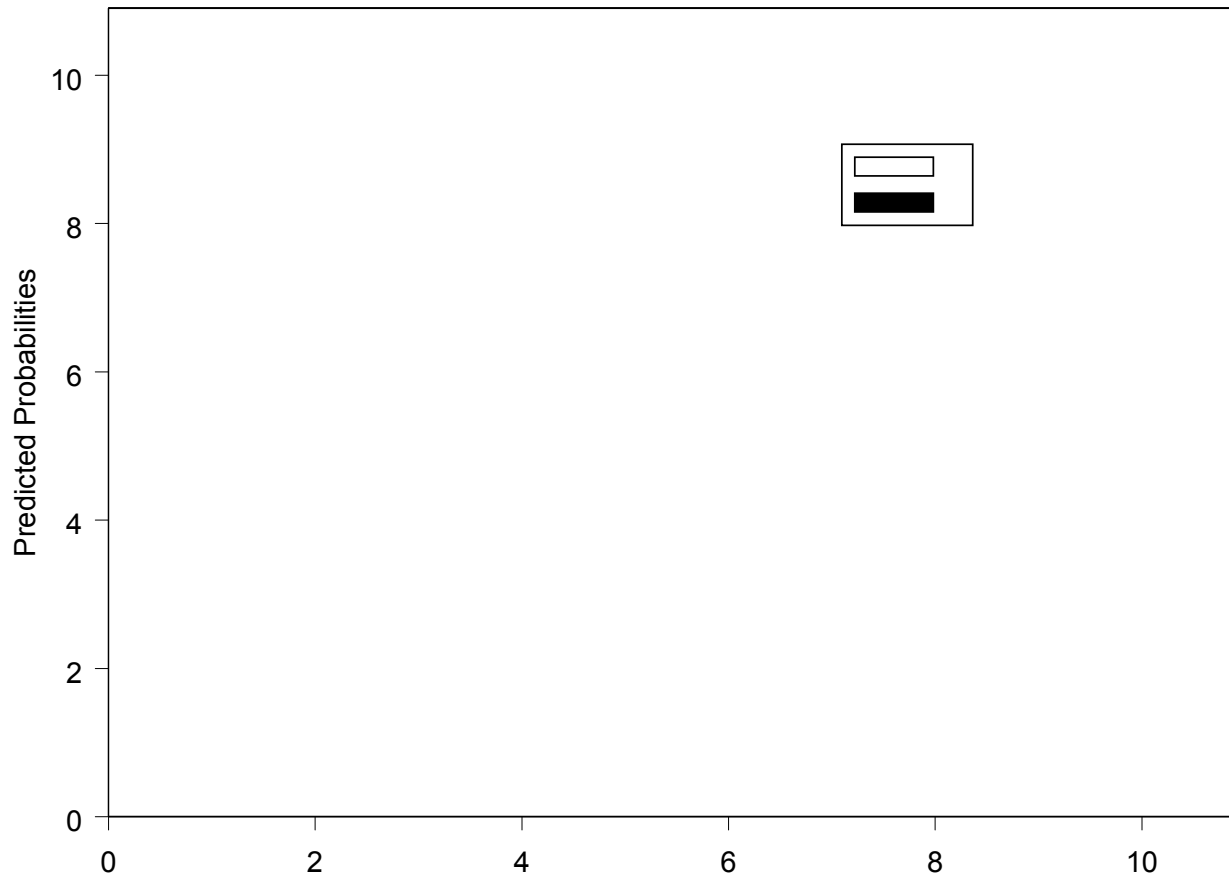
Figure 3: Charter school students have a higher probability of participating more often in community service and volunteer work than do their peers in the traditional D.C. public schools.

Taken Part in a Debate or Discussion

Figure 4: Charter students are more likely to report that they have taken part in a debate or discussion in the past year than are their peers in the traditional schools.

Comments or Statement at Community Meeting
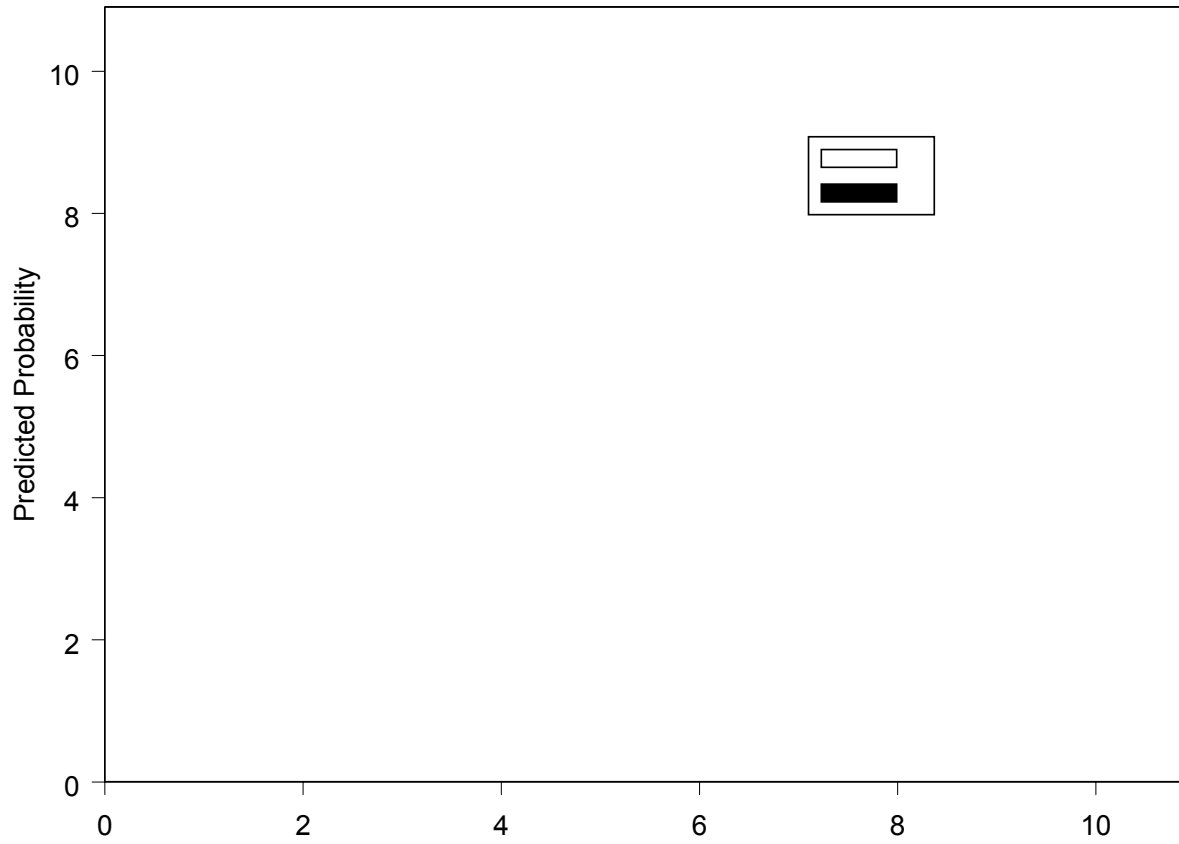
Figure 5: Charter students are also more likely to report that they made comments or a statement at a community meeting than are their traditional public school peers.

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