



## Who Are Charter School Teachers? Comparing Teacher Characteristics, Job Choices, and Job Preferences

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**Abstract:** Given the importance of teachers to student learning, it is important to understand how and why charter schools differ in terms of their human capital. This paper explores the following questions: How do teacher qualifications and characteristics vary across school types? How much choice do teachers feel they have about where to work? How do teacher preferences for where to work differ by school type? Our findings suggest that charter school teachers do have different preferences for where to work compared to traditional public school teachers, but understanding these differences requires exploring differences among types of charter schools as well.

**Keywords:** Teacher labor market; teacher preferences; teacher qualifications; charter schools.

**¿Quiénes son los maestros de las *escuelas charter*. Comparando las características docentes, sus opciones y preferencias de empleo**

**Resumen:** Dada la importancia de los docentes en el aprendizaje de los estudiantes, es importante entender cómo y por qué las *escuelas charter* (concesionadas) difieren en cuanto a su capital humano (Brewer y Ahn, 2010). Este artículo explora las siguientes preguntas: ¿Cómo varían las cualificaciones y características de los docentes según los tipos de escuela? ¿Cuántas opciones de escoger tienen los docentes sobre dónde trabajar?, ¿Cómo difieren las preferencias de los docentes sobre dónde trabajar según el tipo de escuela? Nuestros hallazgos sugieren que los docentes de *escuelas charter* tienen diferentes preferencias acerca de dónde trabajar en comparación con los maestros de escuelas públicas tradicionales, pero la comprensión de estas diferencias requiere también de explorar las diferencias entre los tipos de *escuelas charter*.

**Palabras clave:** Mercado de trabajo docente; preferencias docentes; cualificaciones docentes; *escuelas charter* (concesionadas).

### **Quem são os Professores das Escolas *Charter*? Comparando Características dos Professores, Opções de Emprego e Preferências de Emprego**

**Resumo:** Dada a importância dos professores para as aprendizagens dos estudantes, é importante compreender como e porquê as escolas *Charter* diferem em termos do seu capital humano (Brewer & Ahn, 2010). Este artigo explora as seguintes questões: Como é que as qualificações e as características dos professores variam de acordo com o tipo de escola? Quanta possibilidade de escolha os professores sentem que têm sobre o local onde trabalhar? Como é que as preferências dos professores relativamente ao local onde trabalhar diferem com o tipo de escola? Os nossos resultados sugerem que os professores das escolas *Charter* têm diferentes preferências para o local de trabalho em comparação com os professores das escolas públicas tradicionais, mas a compreensão dessas diferenças exige explorar de igual modo as diferenças entre os tipos de escolas *Charter*.

**Palavras-chave:** Mercado de trabalho do professor; preferências do professor; qualificações do professor; escolas *Charter* (escolas do sistema público de ensino, com financiamento misto - público e particular).

## **Introduction**

For almost two decades, increasing school choice has been a prominent feature of education reforms internationally. Charter schools have risen dramatically in number to over 4,000 schools in 40 states, while countries such as Great Britain, France, Qatar, and New Zealand already have or are adopting other versions of publicly financed but privately operated schools (Brewer & Hentschke, 2009). Extensive research on independent or charter schools has accompanied this increased interest. Much of this research has tried to determine whether charter schools have a greater effect on student learning than traditional public schools (Betts et al., 2006; Buddin & Zimmer, 2005). The mixed results of research on the relationship between school choice and student achievement has led to a need for research that focuses on the internal operations of charter schools to explore not only *whether* charter schools impact student learning, but also *why* and *how* they may do so (Betts et al., 2006; Furgeson et al., 2012; Hess & Loveless, 2005; Zimmer et al., 2003).

Given the importance of teachers to student learning, it is important to understand how charter schools differ in terms of the types and uses of human capital inside schools (Brewer & Ahn, 2010). Previous research points to observable differences in the qualifications of teachers in charter schools compared to their colleagues in traditional public schools (Baker & Dickerson, 2006; Cannata, 2012). Less research has focused on the causes behind these differences. The different characteristics of teachers in charter and traditional public schools raise questions about whether these differences are due to teachers being differentially attracted to charter schools or to schools of

choice making different hiring decisions. How particular teachers end up in particular schools depends on both school and teacher decisions (Boyd, Lankford, Loeb, & Wyckoff, 2010), yet there is little evidence on how charter schools interact with the teacher labor market.

This paper begins to address this gap in existing literature by exploring the following questions: How do teacher qualifications and characteristics vary across charter and traditional public schools? How much choice do teachers feel they have about where to work? How do teacher preferences for where to work differ between charter and traditional public school teachers?

## Teachers and School Choice

### Are They Different?

Previous research indicates that charter school teachers have different qualifications compared to their peers in traditional public schools. Charter school teachers tend to come from more selective colleges than their peers in traditional public schools, but are also more likely to be inexperienced and lack certification and advanced degrees (Baker & Dickerson, 2006; Burian-Fitzgerald & Harris, 2004; Cannata, 2012; Guarino, 2003; Hoxby, 2002; Podgursky & Ballou, 2001; Texas Center for Educational Research, 2003). For example, analyses using nationally representative data have consistently found that charter school teachers graduated from more selective universities as measured by the Barron's ranking than their peers in traditional public schools (Baker & Dickerson, 2006; Burian-Fitzgerald, Luekens, & Strizek, 2004; Cannata, 2012; Podgursky, 2008). This may be due to differences in principals' preferences in whom to hire (Baker & Cooper, 2005).

Studies in specific states and using nationally representative data have also consistently found that charter school teachers are less likely to be certified, less likely to have a master's degree, and have less experience (Bomotti, Ginsberg, & Cobb, 1999; Burian-Fitzgerald et al., 2004; Fuller, Gawlik, Gonzales, Park, & Gibbings, 2003; Hoxby, 2002; Malloy & Wohlstetter, 2003; Miron & Nelson, 2000; Podgursky & Ballou, 2001; Vanourek, Manno, Finn, & Bierlein Palmer, 1998). A recent analysis of the 2007-08 Schools and Staffing Survey (Cannata, 2012) provides recent and representative data on qualifications across charter and traditional public school. This study found that 85 percent of charter school teachers were certified and 36 percent had at least a master's degree, compared to 97 percent and 53 percent, respectively of traditional public school teachers. Likewise, the average charter school teacher had 8 years of teaching experience, compared to nearly 14 years for the average traditional public school teacher. These differences remain when comparing teachers in similar types of schools (Cannata, 2012). While charter schools do still value teacher certification, it is also clear that they may be willing to trade certification for other attributes (Cannata & Engel, 2012; Podgursky, 2008; Wells, 2002).

### Why Might They Be Different?

There are two explanations for why charter and traditional public schools may be staffed with different types of teachers. One, charter schools may use different hiring practices due to their increased flexibility and accountability (Podgursky, 2008). This flexibility may allow a charter to focus on a particular mission and thus hire teachers committed to that mission (Hassel, 1999; Manno, Finn, Bierlein, & Vanourek, 1998; Wohlstetter & Griffin, 1998). Further, the lack of state and local policy constraints and union work rules that restrict whom schools can hire and how they can structure teachers' work may allow these schools to hire the most effective teachers. Coupled with competitive pressure to raise enrollments, charter schools should have the incentive and flexibility to hire the most effective teachers and use them more efficiently (Podgursky, 2008). Indeed, some research suggests that charter schools are using different recruiting and compensation

practices (Grogan & Youngs, 2008; Podgursky, 2008). For example, DeArmond and colleagues (2012) find that charter management organizations focus more on hiring teachers for fit with their mission and community. The implication of these potentially different hiring practices is that charter school teachers may have different characteristics because charter school recruitment practices favor teachers with particular characteristics or that charter school principals hire on different criteria, thus shaping the teacher pool in specific ways. On the other hand, data from a survey of principals that is part of the larger project from which the data used in this paper was collected find that charter and traditional public school principals have relatively similar preferences when hiring new teachers (Cannata & Engel, 2012). This would suggest that observed differences between teachers in charter and traditional public schools is not due to principal hiring preferences.

The second explanation for observed differences between teachers across school types focuses on charter school teachers themselves making different types of decisions about where to work. As the matching of teachers to schools depends on both demand and supply factors, teacher job search decisions also influence who ends up working in charter schools (Boyd et al., 2010). In addition to any difference that may be inherent in working for an individual school rather than a district, the working conditions and salary in charter and traditional public schools do vary. For example, charter school teachers report feeling more empowered in their classrooms, better teaching conditions, and higher levels of teacher professional community than traditional public school (Bomotti et al., 1999; Cannata, 2007; Gawlik, 2007; Goldring & Cravens, 2008; Hoxby, 2002). Yet other research finds that the reduced time for teacher collaboration in charter schools restricts the collegial community (Bomotti et al., 1999; Johnson & Landman, 2000). They also have somewhat lower salaries that are less dependent on education and years of experience (Gruber, Wiley, Broughman, Strizek, & Burian-Fitzgerald, 2002; Harris, 2006; Podgursky, 2008; Texas Center for Educational Research, 2003).

Not all teachers have the same preferences for where to work (Boyd et al., 2010), and the differences between charter and traditional public schools may interact with individual preferences as teachers with preferences for specific school features seek out schools with those features. That is, depending on teachers' preferences for these various school characteristics, some teachers may be more attracted to charter schools and others may prefer traditional public schools. For example, teachers with a strong preference for a high salary may gravitate toward traditional public schools while teachers who care more about working in a small school or with like-minded colleagues may be more likely to seek out charter schools. Indeed, many teachers are attracted to charter schools because of the ability to work with like-minded colleagues, they agree with the school's educational philosophy, and they want to and engage in innovative instruction and educational reform (Malloy & Wohlstetter, 2003; Manno et al., 1998; Miron, Cullen, Applegate, & Farrell, 2007; Miron & Nelson, 2002; Nelson & Miron, 2004).

Of course, to make job decisions based on their preferences, teachers must feel like they have a choice in where they work. Labor market conditions and centralized hiring practices of traditional public schools in which teachers are assigned to schools can limit the amount of choice teachers have in their job search. Previous studies of charter school teachers found that teachers were not working in charter schools because they were unable to find jobs in traditional public schools (Miron et al., 2007; Miron & Nelson, 2000; Nelson & Miron, 2004). On the other hand, a recent study of prospective elementary teachers found that most beginning teachers preferred to avoid working in charter schools, although the limited number of teaching vacancies prompted some beginning teachers to apply to charter schools rather than face unemployment (Cannata, 2011a).

This paper adds to this existing literature on teachers in charter schools by moving beyond comparisons of the qualifications and characteristics of teachers in charter and traditional public

schools. While that topic is addressed, the paper then explores the amount of job choice teachers have and their preferences for where to work to begin to understand why these differences may emerge.

## Methods

### Sample Characteristics and Data

The purpose of the larger project from which our data are drawn was to understand achievement differences, as well as the other differences among charter and traditional public schools that may explain differences in student outcomes (see Berends et al., 2011; Cannata, 2011b; Goff, Mavrogordato, & Goldring, 2012 for other papers from this study). Making such comparisons is challenging, particularly if researchers want to examine schools across a variety of contexts in a cost-effective manner. Our approach to data collection was to partner with the Northwest Evaluation Association (NWEA), a non-profit testing organization that currently partners with over 4,300 districts and 12,300 schools to provide computer-based, vertically equated assessments in mathematics, reading, and English/Language Arts. The large number of charter and traditional public schools in the NWEA allowed us to construct a matched sample to which teacher and principal surveys were administered in the 2007-2008 school year. The data used in this paper come from the teacher surveys.

Traditional public schools were matched to charters in two stages. In the first stage, we used the Common Core of Data (CCD) to identify the best-matched schools. Schools were matched using the following criteria: same state, geographic proximity (within 20 miles),<sup>1</sup> grade range served, racial-ethnic composition, socio-economic status, and size. Due to differences in grade configurations between charter and traditional public schools, there are cases where we had more than one match for a charter school to match all the grade levels in the school. For instance, a K-8 charter could be matched to both an elementary (K-5) and a middle (6-8) traditional public school. Some traditional public schools were also used as matches for more than one charter school.<sup>2</sup>

The second stage of the matching process was obtaining school participation in the teacher surveys. Once we received a positive response from a charter school, we then approached the matched traditional public school (and its district) to participate in the study. If a traditional public school or its district declined participation, we replaced it with the next best match using the above matching criteria. Participating schools were asked to submit teacher rosters, and teachers were asked to fill out a confidential online survey. Schools are in the sample if they agreed to participate and at least one teacher completed a survey.<sup>3</sup>

Based on CCD characteristics, the sample charter schools are generally similar to charter schools across the nation.<sup>4</sup> One important difference is that sample charter schools serve fewer Hispanic students. The sample charter schools are 13 percent Hispanic compared with 24 percent

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<sup>1</sup> We restricted matches to within 20 miles to ensure matched schools would be within the same choice set for parents (Bilfucio & Ladd, 2006; Holmes, DeSimone, & Rupp, 2003). Further, this is consistent with a recent study that finds that matched comparison groups based on geographically defined criteria (rather than across states) produce estimates closer to randomized experiments (Cook, Shadish, & Wong, 2008).

<sup>2</sup> We did not use propensity score matching because the different models that we tested produced inconsistent matches, and we wanted a method by which we could weight to certain matching variables (i.e., school size) differentially.

<sup>3</sup> The school participation rates were 52 percent and 36 percent for charter and traditional public schools, respectively.

<sup>4</sup> Data not shown, but available upon request.

for charter schools in the eight sample states.<sup>5</sup> In addition, the charter schools in our sample are slightly larger, on average, compared with the nation's charter schools.

The analytic sample includes 59 charter schools and 59 traditional public schools, with 1,015 charter school teachers and 1,300 traditional public school teachers. Table 1 presents descriptive characteristics of the schools in the sample.<sup>6</sup> Two-thirds of both charter and traditional public schools have elementary grades (i.e., grades K-5), although the charter schools are more likely to also have middle or high school grades. The traditional public schools have greater concentrations of White students (although the difference is not statistically significant) and fewer Black students than the charter schools. Charter and traditional public schools have similar pupil-teacher ratios, but the charter schools are smaller overall. About 19 percent of charter schools in the sample are operated by Best Academy (the name is a pseudonym), which is a large for-profit management organization that operates schools in multiple states. Another 8 percent of charter schools are operated by other for-profit or non-profit management organizations. The remaining 73 percent of charter schools are independent, that is, they are not affiliated with any management organization.

Table 1

*Descriptive Statistics for School Characteristics*

School characteristic	TPS	Charter
Has elementary grades	69.5%	69.5%
Has middle school grades	28.8	64.4***
Has high school grades	13.6	32.2*
School has pre-kindergarten	32.2	18.6
Percent Hispanic students	14.4	14.6
Percent Black students	18.2	30.7*
Percent White students	60.9	49.2
Percent students of other ethnicities	6.6	5.6
Percent FRL students	42.0	49.9
Pupil-teacher ratio	20.0	18.9
Students per grade	112.5	49.7***
School size	512.2	372.1**
Affiliation		
None	n/a	72.9%
Best Academy	n/a	18.6
Other affiliations	n/a	8.5
N	59	59

\* Indicates statistically significant difference with TPS mean.  $p < .05$ .

\*\* Indicates statistically significant difference with TPS mean.  $p < .01$ .

\*\*\* Indicates statistically significant difference with TPS mean.  $p < .001$ .

<sup>5</sup> The states included are: California, Colorado, Delaware, Indiana, Michigan, Minnesota, New Mexico, and Wisconsin. These states are in the sample due to where NWEA has relationships with schools.

<sup>6</sup> Chi-square tests were used to test for differences between categorical variables and t-tests were used to test for differences in continuous variables.

The questionnaire that teachers were asked to fill out online included measures of instructional innovation, instructional conditions, influence on school-wide decisions, professional development, principal leadership, career decisions, and qualifications. The questionnaire completion rates for the teachers were 80.0 percent for charter and 72.5 percent for regular public schools.

After correcting obvious data inconsistencies in the teacher questionnaires, missing data were imputed in steps. When appropriate, missing values were “manually imputed” using values obtained from the best sources possible. Sometimes a value could be deduced from other redundant responses in the questionnaire. Other times, it had to be researched on the appropriate websites or data repositories. When this was not possible, we proceeded to use a multiple imputation procedure. Before multiple imputation, the behavior of the missing values for the variables were studied. Almost all of the variables had missing-value proportions under 5 percent. The variable with the greatest missing-value proportion was the selectivity of college attended, 7.34 percent. Multiple imputation was done using SAS PROC MI under the assumption that the data were Missing at Random (MAR). We used the appropriate imputation method for the type of variable being imputed (i.e. continuous, binary, likert-type, or categorical). In the absence of a known imputation model, all the analysis variables available were used for the imputation process. We made sure that the skip questions ended up with the appropriate missing patterns.

## Variables

### *Teacher qualifications*

Teacher certification is the certification teachers hold in their main assignment fields. Regular and standard state certification is combined with probationary certification that is issued after teachers satisfy all requirements except for a probationary period. The dummy variable for less than full certification includes teachers with provisional certification given to teachers who are still participating in an alternative certification program, temporary certifications that require additional coursework, teachers who are not certified, emergency certifications or waivers, and those who do not fall into any of the above categories.

Total years of teaching experience is measured as the teacher’s total years of teaching experience in charter, magnet, private, and traditional public schools. Experience prior to current school is measured as the teacher’s total years of teaching experience minus the years of experience in their current school.

Advanced degree is a dummy variable indicating whether the teacher has a master’s, education specialist, or doctorate degree. Midcareer is a dummy variable indicating whether the teacher worked in another career before they started teaching.

College selectivity is the competitiveness rating from the Barron’s Profile of American Colleges (6=Most competitive, 5=Highly competitive, 4=Very competitive, 3=Competitive, 2=Less competitive, and 1=Noncompetitive). Criteria used to determine rankings include entrance examination scores, class rank, and GPA of admitted students.

### *Amount of Job Choice and Job Preferences*

Teachers were asked an initial question about the amount of choice they had in working at their current school when they were hired. The options were: “I chose this school over positions at other schools because I wanted to teach here,” “This was the only school with an opening for which I was qualified,” and “I was assigned to this school.” Depending on how centralized the teacher hiring process is within districts and management organizations, teachers may be hired by a central office (i.e., district or management organization) and then assigned to a specific school. Teachers who are considered to have actively chosen their school are those that indicated they chose this school over other positions.

Teachers who made an active choice to work at their current schools were asked additional questions about the importance of various factors in their decisions to work at the schools when they first started working there. Teachers who did not make an active choice to work in their current schools were not asked about their preferences because we thought it was not appropriate to compare teachers with limited job choices to those who thought they had more choices. Teachers first rated each school characteristic using a Likert scale with 1 indicating the characteristic was not important at all and 5 indicating the characteristic was extremely important. After rating each characteristic, teachers were asked to name the three most important characteristics in their decisions to work at their current schools. The forced rankings represent the percentage of teachers who named each characteristic as one of their three most important characteristics.

## Analytic Methods

Bivariate analyses were first conducted to identify overall mean differences in teacher characteristics, amount of job choice, and job preferences across school types. In these initial analyses, Chi-square tests were used to test for differences in categorical variables and t-tests were used to test for mean differences for continuous variables. Yet the amount of job choice that teachers have and their preferences are likely related to teacher characteristics. Thus determining whether charter school teachers have greater or lesser job choice or different preferences must disentangle the relationship between teacher characteristics and school type. To predict the amount of job choice teachers had (i.e., whether teachers actively chose to be in their school), we use a two-level binomial logistic Hierarchical Linear Model (HLM) regression model assuming that teachers are nested within schools. The level 1 model is:

$$\text{ActiveChooser}_{jk} = \pi_{0k} + \pi_{1k}(\text{Teacher Characteristics}) + \varepsilon_{jk}$$

where  $\text{ActiveChooser}_{jk}$  is a dummy variable indicating the teacher actively chose his/her school for teacher  $j$  in school  $k$ ;  $\pi_{0k}$  is the mean within school  $k$ . Teacher characteristics include: having less than full certification, midcareer status, having an advanced degree, college selectivity, years of experience prior to working at this school, years of experience prior to this school squared, male, and dummy variables indicating race/ethnicity. We assume that the outcome variable varies across schools, represented by the following level-2 equations:

$$\pi_{0k} = \beta_{00} + \beta_{01}(\text{School Characteristics}) + \beta_{02}(\text{Charter}) + r_{0k}$$

where school characteristics are school size, percentage of students eligible for free- or reduced-price lunch, and percentage of students that are Hispanic, Black, and other racial minority.

In addition to this first model (referred to as Model 1), Model 2 includes an additional school-level control variable, the propensity score. While our sampling procedure was designed to obtain charter-traditional public school pairs matched on school demographic characteristics, the implementation of this procedure and the low participation rates of traditional public schools may have introduced differences between the charter and traditional public schools in the final sample. For this reason, we conducted a logistic regression with a dummy for charter schools as the dependent variable and school demographics as regressors (results not shown). These demographics include school level (elementary, middle, or high school), percentage of students by race/ethnicity, percentage of students eligible for free/reduced lunch, student/teacher ratio, students per grade, school enrollment, and whether or not a school has a pre-kindergarten. A propensity score was then calculated for each school in the sample from this analysis. This propensity score was included in Model 2 as a robustness check to control for the quality of the match between the charter and traditional public schools. It is expected that if Models 1 and 2 produce dissimilar results, any results for the charter school variable are likely due to differences in charter and traditional public school characteristics and our limited ability to match schools, rather than true differences for charter

schools. On the other hand, if Models 1 and 2 produce similar results, then findings about charter schools are probably not due to our sampling procedure. Finally, Models 1 and 2 were conducted both using a dummy variable indicating overall charter status, and a set of dummy variables to indicate the affiliation status of charter schools.

To examine teacher preferences, descriptive statistics are shown for all school characteristics that teachers rated and ranked are provided. For the ten most important school characteristics in teachers' job searches (as determined by the ten most likely to be ranked as being one of the most important factors), binomial logistic regressions were run to determine whether charter status was related to a teacher's likelihood of ranking these characteristics as most important in their job search. The model used was the same as the model used to analyze the amount of teacher job choice. For space considerations, only the results that use dummy variables for each charter affiliation category are shown.

## Findings

### Qualifications and Characteristics

Table 2 shows the means for various teacher qualifications and characteristics across charter and traditional public schools. Results are shown for all charter school teachers and charter school teachers disaggregated by the type of affiliation with a management organization. Charter school teachers are less likely to have full certification or an advanced degree than traditional public school teachers. This is also true for each type of charter affiliation. Three percent of traditional public school teachers lack full certification, compared to about 19 percent for charter school teachers. Likewise, about 59 percent of traditional public school teachers have an advanced degree, versus only 34 percent for charter school teachers. These differences are statistically significant and relatively large.

Charter school teachers also have fewer years of experience than their peers in traditional public schools. Charter school teachers have, on average, about seven years of total teaching experience, while traditional public school teachers have almost thirteen years. The difference in experience is smaller when considering how much experience teachers had prior to beginning to teach in their current school, although charter school teachers still trail their colleagues in traditional public schools. Traditional public school teachers had an average of 4.4 years of teaching experience when they came to their current school and charter school teachers had an average of 3.8 years. There does appear to be some variation by charter affiliation. Charter school teachers who work in non-affiliated charter schools had an average of 4.4 years of teaching experience prior to this school (similar to traditional public school teachers). Charter school teachers who work in schools affiliated with the Best Academy or other management organizations had less prior teaching experience—an average of 3.0 and 2.3 years, respectively.

Charter school teachers also graduated from slightly less selective colleges than teachers in traditional public schools. However, the relative college selectivity of charter school teachers varies by charter affiliation. Charter school teachers who work for Best Academy schools earned their degrees in colleges that are significantly less selective than traditional public school teachers. Charter school teachers who work in non-affiliated charter schools or charter schools affiliated with a management organization other than Best Academy graduated from colleges that are similar to the colleges from which traditional public school teachers graduated in terms of selectivity.

Charter school teachers differ on other characteristics as well. Charter school teachers are slightly more likely to be midcareer teachers—that is, more likely to have switched into teaching from another career—although this varies by affiliation status. About 30 percent of traditional

public school teachers are midcareer changers. Charter school teachers from Best Academy are less likely to have switched into teaching from another career—just 23 percent did so. On the other hand, charter school teachers who work in independent charter schools are more likely to be midcareer changers, with almost 42 percent coming from another career. Teachers who work in charter schools affiliated with other management organizations are more likely to be midcareer changers, although the difference is not statistically significant from traditional public school teachers. There are also differences in the race/ethnicity of teachers. Charter school teachers who work in Best Academy schools are less likely to be Black when compared to traditional public school teachers, while other types of charter school teachers are more likely to be Black.

Table 2

*Teacher Qualifications and Characteristics, by School Type and Charter Affiliation*

Teacher characteristic	TPS		All charters		Affiliation with management organization					
	Mean	SD	Mean	SD	No affiliation		Other affiliation		Best Academy	
					Mean	SD	Mean	SD	Mean	SD
Less than full certification	0.032	0.175	0.187*	0.390	0.183*	0.387	0.169*	0.377	0.199*	0.400
Midcareer	0.300	0.458	0.354*	0.479	0.419*	0.494	0.352	0.481	0.232*	0.423
Advanced degree	0.589	0.492	0.338*	0.473	0.340*	0.474	0.282*	0.453	0.346*	0.476
Male	0.208	0.406	0.222	0.416	0.236	0.425	0.282	0.453	0.181	0.386
Race/ethnicity										
Black	0.030	0.171	0.051*	0.221	0.068*	0.251	0.113*	0.318	0.007*	0.086
Hispanic	0.031	0.172	0.026	0.159	0.033	0.178	0.014	0.119	0.016	0.125
Other minority	0.025	0.155	0.044*	0.206	0.060*	0.237	0.028	0.167	0.018	0.135
Total experience	12.73	9.501	7.45*	6.974	7.35*	7.189	5.60*	5.803	8.039*	6.726
Experience prior to this school	4.37	6.219	3.79*	6.119	4.38	6.530	2.25*	3.922	2.994*	5.543
College selectivity	3.19	0.919	3.07*	1.023	3.20	1.017	3.10	0.916	2.802*	1.008
Amount of job choice										
Actively chose school	0.608	0.488	0.635	0.482	0.702*	0.458	0.648	0.481	0.506*	0.501
Only option available	0.272	0.445	0.355*	0.479	0.290	0.454	0.310	0.466	0.488*	0.501
Assigned to school	0.120	0.325	0.010*	0.099	0.008*	0.090	0.042*	0.203	0.006*	0.078
N	1300		1015		618		71		326	

\* Indicates statistically significant difference with TPS mean.  $p < .05$ .

**Amount of Job Choice**

There are also differences in the amount of choice teachers in different school types had in working at their school (see Table 2). While all teachers made some choice to work in their school over options such as non-teaching jobs or leaving the workforce, some teachers may accept jobs because it is the only teaching job offered to them rather than because they want to work in that school. Also, public school districts or charter management organizations may have teacher assignment or hiring policies that give teachers, especially new teachers, little choice about where they work. Slightly more charter school teachers than traditional public schools said they actively

chose to work in their school, 64 percent to 61 percent, although this difference is not statistically significant. However, there was substantial variation among charter school teachers according to their affiliation status. Teachers in independent charter schools were much more likely to say they made an active choice to work in their school, with 70 percent of teachers choosing their school over other schools. Teachers in Best Academy schools were much less likely to say they made an active choice to work in their school, with only half of teachers actively choosing their school. Teachers in charter schools managed by other organizations were about equally likely to report they made an active choice to work in their school than traditional public school teachers.

Best Academy teachers were also much more likely than their peers in traditional public schools to indicate that their current school was the only option available to them, with 49 percent of these teachers indicating this was the case. Charter school teachers who worked for independent charter schools (29 percent) or those managed by other organizations (31 percent) were slightly more likely than traditional public school teachers (27 percent) to say their current school was the only option available to them, although the difference was not statistically significant. Charter school teachers across all affiliation groups were less likely to say they were assigned to their schools, which is consistent with the notion that charter schools are not using the same centralized hiring practices as school districts. Twelve percent of traditional public school teachers said they were assigned to their schools, compared to only one percent of charter school teachers.

The amount of job choice teachers had was likely related to their own characteristics, as more highly qualified teachers should have more job options. When controlling for other teacher characteristics that may be related to the amount of job choice teachers have, charter school teachers were more likely to report they made an active choice to work in their school (see Model 1 in Table 3). Charter school teachers have 1.36 times the odds of having made an active choice to work in their school than teachers in traditional public schools. The odds ratio is even higher when we controlled for the quality of the match between the charter and traditional public schools on school demographics (see Model 2 in Table 3), suggesting that our sampling procedure may have led to underestimating the charter school effect. Yet this is not true for all charter schools. While teachers in charter schools that are not affiliated with any management organization were 1.70 times more likely to have actively chosen their school, teachers working in charter schools managed by Best Academy were as likely to have made an active choice to work in their school as traditional public school teachers (see Model 3 in Table 3). Indeed, there is some evidence that Best Academy teachers were less likely to have made an active choice, but it was not statistically significant or consistent across models. There was some evidence that teachers in charter schools affiliated with other management organizations are more likely to have actively chosen their school, but the results were only statistically significant when controlling for match quality.

Table 3

*Multilevel Logistic Regression Results Predicting Whether Teachers Made an Active Choice to Teach in Their School*

Variable	Model 1		Model 2		Model 3		Model 4	
	Odds ratio	SE						
Intercept	2.008**	0.490	2.389***	0.609	1.893**	0.451	2.118**	0.540
Charter	1.355*	0.182	1.791**	0.333				
Charter affiliation								
No affiliation					1.697***	0.261	1.935***	0.364
Other affiliation					1.941	0.658	2.254*	0.806
Best Academy					0.850	0.159	1.063	0.277
Less than full certification	0.763	0.125	0.761	0.124	0.776	0.127	0.774	0.127
Midcareer	1.227*	0.125	1.226*	0.124	1.197	0.122	1.199	0.122
Advanced degree	1.109	0.109	1.104	0.108	1.125	0.110	1.120	0.110
College selectivity	1.094	0.055	1.088	0.055	1.080	0.054	1.078	0.054
Prior experience	1.057**	0.019	1.057**	0.019	1.056**	0.019	1.056**	0.019
Prior experience squared	0.998*	0.001	0.998*	0.001	0.998*	0.001	0.998*	0.001
Male	1.058	0.120	1.071	0.122	1.036	0.118	1.046	0.119
Black	1.804*	0.461	1.814*	0.462	1.701*	0.433	1.717*	0.437
Hispanic	1.670	0.511	1.690	0.516	1.674	0.512	1.685	0.515
Other minority	2.659***	0.788	2.657***	0.788	2.581**	0.766	2.592**	0.770
School size	0.9996*	0.000	0.9995**	0.000	1.000	0.000	1.000	0.000
Percent FRL students	0.147***	0.051	0.143***	0.048	0.162***	0.055	0.157***	0.053
Percent nonwhite students	1.005	0.003	1.006	1.000	1.003	0.003	1.004	0.003
Propensity score			0.565*	0.148			0.71723	0.194
N	2315		2315		2315		2315	

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

## Job Preferences

Table 4 presents data on teacher preferences for where to work for those teachers who made an active choice to work in their school. It reports both the average importance rating teachers gave to each school characteristic and the percentage of teachers who indicated each school characteristics was one of their three most important factors. For both charter and traditional public school teachers and whether we consider the forced choice or the mean rating,<sup>7</sup> principal support

<sup>7</sup> Teachers were asked about their preferences in two ways. First, they were asked to rate a variety of school characteristics using a Likert scale. Second, they were forced to choose the three most important characteristics.

was the most important factor in teachers' decisions to work at their current school. Other important characteristics for both charter and traditional public school teachers include working with like-minded colleagues, having autonomy over their teaching, and agreeing with their schools' missions. Some of the least important factors included working in a school that are similar to schools they attended, having a union or collective bargaining, teaching without certification, and having their tuition or student loans paid for.

Table 4

*Teacher Reported Importance of Various Factors in Decision to Work at Their Current School*

Variable	Forced ranking (percent)					Likert rating (mean)	
	TPS	All Charter	Affiliation with management organization			TPS	All Charter
			No affiliation	Other affiliation	Best Academy		
Principal support	0.461	0.386*	0.341*	0.239*	0.547*	4.293	4.38
Like-minded educators	0.361	0.367	0.351	0.478	0.378	3.773	4.077*
Agree with mission	0.203	0.335*	0.351*	0.435*	0.265	3.689	4.185*
Autonomy over my teaching	0.235	0.289*	0.34*	0.304	0.153*	3.829	4.058*
Positive reputation	0.307	0.236*	0.191*	0.043*	0.408*	3.610	3.522
At-risk students	0.149	0.186	0.194*	0.239	0.149	2.511	2.702*
Innovative instruction	0.153	0.179	0.194	0.261	0.115	3.603	3.890*
Close to where I live	0.278	0.156*	0.150*	0.130*	0.178*	2.909	2.582*
Small school	0.092	0.129*	0.157*	0.196*	0.036*	2.230	2.939*
Job security	0.226	0.118*	0.093*	0.065*	0.198	3.592	3.329*
Opportunities for advancement	0.099	0.107	0.121	0.087	0.075	3.327	3.585*
Particular instructional program in school	0.033	0.100*	0.139*	0.065	0.006	2.715	3.047*
Influencing school policies	0.034	0.086*	0.097*	0.152*	0.038	3.136	3.415*
High salary	0.086	0.078	0.085	0.043	0.067	2.363	2.301
Positive parent relations	0.104	0.077	0.041*	0.000*	0.190*	3.624	3.661
Teach without cert.	0.010	0.042*	0.051*	0.087*	0.006	1.264	1.478*
High achieving students	0.037	0.037	0.042	0.000	0.032	2.255	2.433*
Tuition or loans paid	0.008	0.027*	0.014	0.043*	0.056*	1.447	1.773*
Involved in school governance	0.006	0.023*	0.022*	0.109*	0.000	2.275	2.653*
Union or collective bargaining	0.041	0.014*	0.012*	0.000	0.024	2.236	1.406*
Similar to school I attended	0.065	0.006*	0.005*	0.000	0.012*	1.977	1.567*
N	791	645	434	46	165	791	645

\* Indicates statistically significant difference with TPS.  $p < .05$ .

Note: The forced ranking required teachers to list the top three characteristics that were important to them and represents the percentage of teachers who ranked each characteristic as one of the most important. For the Likert rating, teachers rated each characteristic on a 1 (Not important at all) to 5 (Extremely important) scale.

The relative importance of various school characteristics does vary depending on whether teachers are giving an overall rating to specific school characteristics or ranking their three most important factors. For example, consider the importance traditional public teachers gave to working in a school that was close to where they live. Only three other school characteristics were ranked

more highly when teachers were forced to choose their three most important factors in their job choice, suggesting this is a rather important feature. Yet when considering the mean Likert scale ratings, working in a school close to where they live appears less important to teachers than many other school features. Likewise, the mean rating by charter school teachers of working in a school with positive parent relations was the sixth highest of all the school characteristics rated, but it drops down to fifteenth when teachers are forced to name their most important features. Thus it appears that many charter school teachers think positive parent relations are important, but fewer would say it is one of the most important factors in their job search decision.

There are also differences between charter and traditional public school teachers in their preferences for various school characteristics. While both charter and traditional public school teachers rank principal support as the most important factor in their job search, more traditional public school teachers than charter school teachers say it is the most important (46 percent to 39 percent). Traditional public school teachers are also more likely to say that working in a school with a positive reputation, having job security, working close to where they live, working with a union, and working in a school that is similar to one they attended are one of the most important in their job choice. On the other hand, charter school teachers are more likely to rank agreeing with the school mission, autonomy over their teaching, working in a small school, influencing school policies, working with the particular instructional approach in the school, being involved in school governance, teaching without certification, and having their tuition or student loans paid as among the most important factors in their decisions to work at their current schools.

There are also differences among the different types of charter schools, with Best Academy teachers often differentiating themselves from other charter school teachers in their preferences for where to work. For example, while Best Academy teachers are less likely than traditional public school teachers to rank autonomy over their teaching and working in a small school as among the most important factors, charter school teachers in independent charter schools or schools managed by other organizations are more likely to consider these characteristics most important. Similarly, Best Academy teachers are more likely than traditional public school teachers to rank working in a school with principal support, a positive reputation, and positive parent relations as among the most important factors, charter school teachers in independent charter schools or schools managed by other organizations are less likely to consider these characteristics most important. Likewise, teachers in independent charter schools and charter schools affiliated with other management organizations are more likely than traditional public school teachers to rank being involved in school governance and teaching with certification as some of the top reasons they chose to work in their current school, while Best Academy teachers are not statistically different from traditional public school teachers.

Teachers' preferences may also be related to their own characteristics. Table 5 presents the results of logistic regression models predicting whether teachers named various school characteristics as the most important in their job search. As seen in Models 1 and 2, charter school teachers are more than twice as likely to want to teach in a school where they agree with the mission and less than half as likely to want a school that is close to where they live or provides good job security than teachers in traditional public schools. However, as seen in Models 3 and 4, these overall differences mask variation between teachers in different types of charter schools. For example, similar to the binary results, the logistic regression analyses also indicate that Best Academy teachers often distinguish themselves from other charter schools and have similar preferences to traditional public school teachers. Controlling for other teacher and school characteristics, teachers in independent charter schools and those affiliated with management organizations other than Best Academy are less likely than traditional public school teachers to name having a supportive principal, working in a school with a positive reputation, and having job security as their most important

factors in their decision to work at their current school, while Best Academy teachers were not statistically different from traditional public school teachers. Specifically, teachers in non-affiliated and other-affiliated charter schools have .59 times the odds and .39 times the odds, respectively, of ranking principal support as one of the most important characteristics; .49 times the odds and .11 times the odds of ranking a positive reputation as one of the most importance characteristics, respectively; and .35 times the odds and .20 times the odds of ranking job security as one of the most important characteristics, respectively

Table 5

*Multilevel Logistic Regression Results for Predicting Teacher Preference for Various School Characteristics in Job Search*

	Model 1,	Model 2,	Model 3			Model 4		
	All charter schools	All charter schools	No affiliation	Other affiliation	Best Academy	No affiliation	Other affiliation	Best Academy
Principal support	0.740 (0.118)	0.762 (0.168)	0.590** (0.103)	0.392* (0.163)	1.358 (0.309)	0.694 (0.146)	0.480 (0.212)	1.808 (0.557)
Like-minded educators	1.043 (0.153)	1.354 (0.271)	0.918 (0.155)	1.845 (0.678)	1.187 (0.267)	1.219 (0.244)	2.700* (1.048)	1.993* (0.604)
Agreeing with mission	2.066*** (0.436)	2.123* (0.625)	2.144** (0.520)	3.005* (1.495)	1.747 (0.583)	2.135* (0.644)	2.985 (1.636)	1.730 (0.788)
Autonomy over my teaching	1.444* (0.251)	1.568 (0.378)	1.960*** (0.366)	1.809 (0.643)	0.643 (0.179)	1.798* (0.411)	1.615* (0.699)	0.553 (0.195)
Positive reputation	0.656* (0.132)	0.768 (0.215)	0.494** (0.110)	0.114** (0.090)	1.473 (0.399)	0.673 (0.177)	0.178* (0.144)	2.557* (0.941)
At-risk students	0.814 (0.198)	0.688 (0.234)	0.877 (0.244)	0.581 (0.331)	0.753 (0.286)	0.732 (0.257)	0.481 (0.292)	0.552 (0.290)
Innovative instruction	1.308 (0.270)	1.328 (0.377)	1.421 (0.334)	2.102 (0.988)	0.988 (0.319)	1.367 (0.393)	1.997 (1.040)	0.869 (0.393)
Close to where I live	0.499*** (0.098)	0.354*** (0.093)	0.460*** (0.105)	0.423 (0.230)	0.615 (0.191)	0.353*** (0.096)	0.299* (0.172)	0.387* (0.156)
Small school	0.879 (0.252)	0.630 (0.230)	0.914 (0.300)	0.904 (0.585)	0.760 (0.456)	0.670 (0.250)	0.582 (0.400)	0.366 (0.264)
Job security	0.439*** (0.094)	0.394** (0.118)	0.349*** (0.090)	0.1967* (0.133)	0.727 (0.219)	0.356*** (0.110)	0.203* (0.144)	0.757 (0.322)

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Note: Results include odds-ratio and standard error. Only results for the charter school indicator variable (in Models 1 and 2) or the charter affiliation variables (in Models 3 and 4) are shown. Other variables in models include: male, midcareer, advanced degree, race/ethnicity dummies, college selectivity, total experience prior to coming to school, and total prior experience squared. Models 2 and 4 also include the propensity score to control for any potential mismatch in the sampling process. N=1436.

Independent and other affiliated charter school teachers were also more likely to say agreeing with the school mission was among the most important factors than traditional public school teachers (over twice or three-times the odds as traditional public school teachers), while Best Academy teachers were not statistically different. Further, independent charter school teachers were also more likely to value having autonomy over their teaching and less likely to value working close to where they live. None of the teachers' responses across the types of charter schools indicated statistically significant differences in their preferences for working with at-risk students, working in a small school, being able to do innovative instruction, and working with like-minded colleagues.

These findings suggest that charter school teachers do have different preferences for where to work than traditional public school teachers, but understanding these differences requires exploring differences among types of charter schools as well.

Models 2 and 4 in Table 5 shows results from models that also control for the quality of the match between the charter school and its matched traditional public school by including the propensity score variable. In general, the results are similar to the previous results, with a few exceptions. The odds-ratios for independent and other affiliated charter school teachers' preferences for principal support are close to one and no longer statistically significant. Likewise, the odds-ratio for independent charter school teachers' preferences for working in a school with a positive reputation is closer to one and no longer significant while Best Academy teachers now appear to have a larger likelihood (over 2.5 times the odds) of saying that working in a school with a positive reputation is one of their most important and more likely to say so than traditional public school teachers. Teachers in charter schools managed by Best Academy or other organizations are now more likely to say that working with like-minded colleagues is one of the most important factors in their decision to work at this school than traditional public school teachers, which is consistent with previous research on charter school teachers (Malloy & Wohlstetter, 2003; Miron et al., 2007; Miron & Nelson, 2002). The different results that are obtained when controlling for the match quality suggests that school characteristics—in addition to charter status—may influence why teachers are attracted to particular schools. For example, the charter schools in our sample were smaller than the traditional public schools and teachers who consider working in a small school may be concerned with having like-minded colleagues in a smaller faculty rather than support from a singular individual such as the principal.

## **Discussion and Conclusions**

Who are charter school teachers? Compared to their peers in matched traditional public schools, they are less experienced teachers who are more likely to lack full certification and express a greater preference for working in a school where they agree with the school mission. These results are consistent with past research on charter schools (Burian-Fitzgerald & Harris, 2004; Cannata, 2007, 2012; Malloy & Wohlstetter, 2003; Manno et al., 1998; Miron et al., 2007). Charter school teachers also express less preference for working in a school with a great deal of job security or are close to where they live.

Beyond these basic characteristics, however, the data suggest that charter school teachers are a diverse group and the variation between different types of charter schools may be just as important as the differences between teachers in charter and traditional public schools. For example, the findings indicate that Best Academy teachers are more likely to be recent college graduates, more likely to feel the school where they ended up working was the only option available to them, and less likely to have attended a selective college compared to their peers in both traditional public schools and other types of charter schools. They are also more likely than their peers in any of the other types of schools to rate a supportive principal, a positive school reputation, and positive parent relations as important in their job search. In other ways, however, Best Academy teachers appear more similar to teachers in traditional public schools than to teachers in other types of charter schools. This research, then, supports previous research that calls for more fine-grained understandings of what schools are doing and that highlight the importance of understanding variation within the charter school sector (Betts et al, 2006; Center for Research on Educational Outcomes, 2009).

How can we make sense of these findings? The context of the local labor market and charter school composition appear important. As charter and traditional public schools compete in a local labor market for teachers, we need to consider the factors that shape the labor market. For example, the finding that the relative college selectivity of charter school teachers varies by charter affiliation at first glance appears to contradict previous research on charter school teachers (Baker & Dickerson, 2006; Cannata, 2012; Hoxby, 2002; Podgursky & Ballou, 2001). Yet the difference may be due to the labor markets represented in this sample and their proximity to prestigious universities (Baker & Dickerson, 2006). In particular, Best Academy schools tended to be clustered in certain geographic regions where there were relatively few highly selective universities.

Likewise, the data paint a complicated picture about the amount of job choice charter school teachers have compared to traditional public school teachers. Considering them as a group, charter school teachers are slightly more likely to say they made an active choice to work at their schools and less likely to say they were assigned to the school, suggesting that charter school teachers have slightly more job choice than traditional public school teachers. This finding appears to conflict with a previous study on charter schools in the teacher labor market that suggests that most teachers try to avoid working in charter schools because they are unfamiliar with them and do not think they are public schools (Cannata, 2011a). This apparent difference may be due to the sampling strategy used here and the particular geographic areas. For example, a study of charter school teachers in a similar geographic area would appear to agree with the results in this paper as they found that charter school teachers indicated that they did not decide to work at their schools due primarily to their inability to find other jobs (Miron & Nelson, 2000).

Further, the overall finding about charter school teachers as a group masks differences in the charter school population itself. Teachers in independent charter schools appear to have a greater amount of job choice than traditional public school teachers, but teachers in Best Academy charter schools have no more job choice than their peers in traditional public schools and feel their options were more restricted. Thus studies of the charter school teacher labor market should pay attention to how teachers think about not only charter schools, but also different types of charter schools. Likewise, the applicant pools from which charter school principals are hiring teachers may vary by charter affiliation as management organizations may focus on particular regions. Turning to teacher preferences for where to work, both charter and traditional public school teachers consider principal support, working with like-minded colleagues, having autonomy over their teaching, and agreeing with the school's mission as the most important factors in their decisions to work at their current schools. There were differences between charter and traditional public school teachers in their preferences for various school characteristics, however, and these differences vary according to charter school affiliation status. As with teacher characteristics and amount of job choice, Best Academy teachers continue to differentiate themselves from other charter school teachers in their preferences for where to work. These findings suggest that charter school teachers do have different preferences for where to work than traditional public school teachers, but understanding these differences requires exploring differences among types of charter schools as well. This underscores the importance of not considering the charter sector as an undifferentiated collection of schools. Future research should explore why teachers in particular charter networks may be different from their peers in other types of charter schools, including non-affiliated charter schools. The recent attention to differences in the effectiveness of various charter management organizations—and the strategies used to attain those results (Ferguson et al., 2012)—are a step in the right direction, but this paper highlights some potential opportunities to learn from unaffiliated charter schools as well.

This study has important implications for charter school authorizers and policymakers. First, it highlights the importance of teacher recruitment and hiring practices. Charter school authorizers should pay close attention to the plans of potential charter schools to recruit and hire teachers.

Authorizers should examine the qualifications, teaching skills, and other attributes that the charter school will strive for in its teaching force. What will it be like to work in that charter school and what implications might those conditions have for teacher attrition? When reviewing a charter school application from an affiliation or network, or when renewing a charter for an individual school, the authorizer should review the school's track record of recruiting a high quality teaching force. Second, as this paper highlights the variability within the charter school sector in the qualifications and job preferences of teachers, federal and state lawmakers who influence charter school policy should work to identify models of success among charter schools to improve practices in both charter and traditional public schools. These models of success do not need to be limited to specific charter affiliations, but also should include practices of independent charter schools that are successful.

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