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Teacher Community in Elementary Charter Schools

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Abstract

The organizational context of charter schools may facilitate the formation of a strong teacher community. In particular, a focused school mission and increased control over teacher hiring may lead to stronger teacher professional communities. This paper uses the 1999–2000 Schools and Staffing Survey to compare the level of teacher community in charter public and traditional public schools. It also estimates the effect of various charter policy variables and domains of school autonomy on teacher community. Charter school teachers report higher levels of teacher community than traditional public school teachers do, although this effect is less than one-tenth of a standard deviation and is dwarfed by the effect of a supportive principal, teacher decision-making influence, and school size. Charter public schools authorized by universities showed lower levels of teacher community than those authorized by local school districts. Teachers in charter schools that have flexibility over tenure requirements and the school budget report higher levels of teacher community. This study reveals that charter schools do facilitate the formation of strong teacher communities, although the effect is small. The analysis also suggests that the institutional origin of the charter school and specific areas of policy flexibility may influence teacher community.

Keywords: professional community, charter schools, school autonomy, school choice, charter school authorizers.



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La Comunidad de Docentes en las Escuelas Primarias Charter

Resumen

El contexto organizacional de las escuelas charter podría facilitar la formación de una comunidad de docentes fuerte. Este sería el caso, si se concentraran en desarrollar los objetivos institucionales y tuvieran mayor control en la contratación de los docentes se podrían desarrollar comunidades de docentes profesionales más fuertes. Este trabajo utiliza los datos de la Encuesta de Escuelas y sus Empleados 1999–2000 para comparar el nivel de comunidad que existe entre las escuelas públicas charter y las escuelas públicas tradicionales. También se calculó el efecto de varias variables de la política de las escuelas charter y de los ámbitos de autonomía escolar de las comunidades de docentes. Los profesores de las escuelas charter reportan niveles más elevados de comunidad que los profesores de escuelas públicas tradicionales, aunque hay que hacer la salvedad que dicho efecto es de menor que un décimo de una desviación estándar y se reduce por el efecto que producen un director/a de escuela que brinde apoyo, por la influencia del poder de decisión del profesor/a, y por el tamaño de la escuela. Las escuelas públicas charter autorizadas por universidades muestran niveles más bajos de comunidad que las autorizadas por distritos escolares locales. Los profesores de escuelas charter que tienen flexibilidad sobre los requisitos para obtener su condición de titularidad y sobre el presupuesto escolar, tienen niveles de comunidad más altos. Este estudio revela que las escuelas charter sí facilitan la formación de comunidades de docentes fuertes, aunque el efecto sea pequeño. Este análisis también sugiere que el origen institucional de la escuela charter y flexibilidad en áreas específicas de política educativa pueden influenciar las comunidades docentes.

This study compares the level of teacher community in charter public and traditional public schools and identifies the institutional and policy environments of charter schools that facilitate stronger teacher communities. The idea of developing strong teacher professional communities is a stated goal of many charter schools (Wohlstetter & Griffin, 1998). Indeed, one argument for charter schools is that they facilitate the creation of coherent school communities. By waiving various state and district policies, charter schools have more flexibility to create a coherent school community united around shared educational values. According to charter proponents, these schools give teachers the ability to create schools focused on a particular educational mission or instructional approach (Hassel, 1999; Manno, Finn, Bierlein, & Vanourek, 1998).

Wohlstetter and Griffin (1998) note that charter school legislation often emphasizes the creation of communities focused on teaching and learning. Further, this study found that charter schools emphasize the school mission and try to relate all decisions back to that mission. Thus, charter schools appear to cohere around a focused mission, perhaps more so than traditional public schools. This paper explores the teacher community in charter schools, and is highly relevant given the proliferation of charter schools and projected expansion of school choice programs.

Teacher Professional Community

Previous research recognizes the importance of teacher community, collective responsibility, and collective efficacy for student achievement (Goddard, Hoy, & Woolfolk Hoy, 2000; Lee &

Smith, 1996; Louis, Marks, & Kruse, 1996). Teacher professional community refers to the extent to which teachers in a school interact frequently and possess shared beliefs about the school mission and commitment to student learning (Bryk, Camburn, & Louis, 1999). Schools with high levels of teacher professional community are places where instruction is a collective enterprise and continual learning about instruction takes place. Teacher professional community includes both behavioral and normative aspects (Bryk et al., 1999), and is characterized by five elements: shared norms and values, collective responsibility for student learning, collaboration, deprivatized practice, and reflective dialogue (Louis et al., 1996). Teacher community is normative in the sense that it involves shared values and a collective focus on learning, and is behavioral such that it requires certain teacher behaviors, such as collaboration, peer observation, and discussions of pedagogy and practice. A teacher professional community is a specific type of community of practice, in which teachers view instruction as a joint enterprise, interact through relationships that communicate norms, and have a shared understanding of how instructional resources should be used (Cobb, McClain, de Silva, & Dean, 2003; Wenger, 1998).

Shared Beliefs and Values

One key component of teacher community is shared beliefs and values among the school staff (Kruse & Louis, 1995; Louis, Kruse, & Bryk, 1995). Staff members have shared beliefs when there is a clear school mission and where the teachers have common values about the purpose of education and goals for student learning. These common goals and values help to define the organizational norms and create expectations for teacher behavior. When teachers in a school agree on a common educational philosophy, they are more likely to develop similar expectations for teacher behaviors and similar attitudes toward students and learning (Louis et al., 1996). The organizational norms for interactions encourage teachers to adopt similar attitudes and behaviors and thereby reinforce the common expectations for teachers.

A school may achieve shared beliefs and values through socialization or selection. Schools may actively recruit and hire teachers based on their commitment to the school mission or common educational values. For example, a school with a strong commitment to social justice may hire teachers that incorporate those principles into their teaching, rather than teaching “just math.” Shared beliefs are also enhanced through the socialization of teachers into a school. As teachers interact with each other, they develop norms for interacting, which teachers internalize through experience. While beliefs and values may be considered invariant, they do evolve as individuals have new experiences and interact with others. As new teachers are brought into the school, they learn the explicit and implicit rules for teacher behavior and interactions. This process of socialization may serve to facilitate shared beliefs and teacher community (Bryk et al., 1999; Hoy & Woolfolk Hoy, 1990; Kruse, Louis, & Bryk, 1995).

Responsibility for Student Learning

While schools may form an effective teacher community around any number of shared beliefs and values, the normative structure of the school must also include a sense of responsibility for student learning. For schools to develop an effective teacher professional community, teachers must believe that they have the ability to enhance student learning and achieve their educational goals (Goddard, Hoy, & Woolfolk Hoy, 2004; Lee & Smith, 1996). In other words, this cooperative effort must be framed appropriately, or it can fail to serve its intended purpose. For instance,

Lipman (1998) describes a school in which teachers collaborated, but their common perception of the low abilities and dismal prospects of their students led them to reduce the learning opportunities available. As a part of a school restructuring effort, teachers formed small teams to focus on the needs of individual students. In this case, however, these team meetings became opportunities for teachers to share frustrations about teaching in difficult contexts and blame the students or their families for failures to learn. Shared beliefs and expectations may enhance or undermine an effective teacher community, depending on the nature of these beliefs.

Teacher professional community develops when teachers share positive beliefs that they have the ability to impact student learning and believe that the success or failure of instructional activities is their own responsibility (Lee, Dedrick, & Smith, 1991; Lee & Smith, 1996). That is, positive teacher communities form when teachers take responsibility for the learning of all their students, even those students who may be underprepared or come from less supportive backgrounds. If many teachers in a school shared the belief that their students did not care about learning or were unprepared for class, then it would be difficult for teachers to develop a community focused on improving student learning (Lipman, 1998). In some cases, teachers may attribute student success or failure to the student's home environment, rather than to the teacher's own instruction.

In this way, responsibility for student learning is related to a teacher's sense of efficacy in teaching. Teachers who take personal responsibility for their students' learning have an internal locus of control and attribute student learning to their own instruction, rather than to perceived student deficiencies (Lee et al., 1991; Lee & Smith, 1996). Further, collective responsibility for student learning may be a school organizational property when teachers share the responsibility for educating all students in the school, not just those in their classrooms (Lee & Smith, 1996). Just as individual responsibility for student learning depends on a teacher's sense of efficacy for teaching, collective responsibility for student learning is related to the collective efficacy in a school. Collective efficacy can influence individual teacher behavior by shaping the normative environment of schools (Goddard et al., 2000, 2004). As teachers experience or witness successful teaching, they develop a positive sense of efficacy that they can affect student learning, both individually and collectively. A sense of collective efficacy also influences individual and group behavior and leads to higher student achievement (Goddard, 2001; Goddard et al., 2000).

Collaboration

While shared beliefs and a sense of responsibility for student learning are necessary for teacher community, they are not sufficient. In addition to having a common normative structure that guides behavior, teacher professional community also requires collaboration among teachers toward the common school mission as the presence of shared goals alone does not mean that teachers work toward those goals together (Johnson & Landman, 2000). For shared educational values to constitute a community, teachers must also engage in common projects working toward the common goal (Louis et al., 1995; Strike, 1999). Together, this shared commitment and collaboration around student learning enhance the organizational capacity of the school (Newman, King, & Rigdon, 1997).

Yet, teacher collaboration involves even more than working toward a common goal. Truly collaborative activities go beyond simply dividing up tasks among individuals, but also includes working on those tasks as a collective, sharing results, and improving each other's work. In collaborative projects, the whole is greater than the sum of the contributions of the individuals working alone. However, achieving collaboration has proven to be difficult, as mandating common

planning time or other formal structures aimed at increasing collaboration may lead to an intensification of teachers' work and a sense of contrived collegiality (Hargreaves, 1994). Teacher collaboration and professional community is not easily created through formal policies (Talbert & McLaughlin, 1994), partly because of its normative component. Teachers not only need to behave in certain ways, but also need to develop a collective focus and internalize schools goals.

Facilitating and Inhibiting Structures

Characteristics of schools may enhance or inhibit the development of teacher community. These characteristics include structural features, such as school size (Lee & Loeb, 2000; Lee & Smith, 1996) and teacher influence over school decisions (Louis et al., 1996), as well as social support features, such as principal support (Bryk et al., 1999; Louis et al., 1996). Small schools may facilitate teacher community since teachers may have more opportunities for frequent and sustained interaction with colleagues. Professional community is more likely to develop when teachers work in close proximity and interact frequently, suggesting that school size facilitates the development of teacher community (Kruse et al., 1995). Likewise, schools in which teachers have more influence over school-wide decisions may present more opportunities for them to present their goals for the school and discuss what educational mission the staff should strive toward (Kruse et al., 1995; Louis et al., 1996).

School leadership is another important component of teacher community, as principals may facilitate dialogue about teaching and learning or help create an open environment in which teachers feel safe to discuss instructional challenges without fear of sanctions (Louis et al., 1996). School leaders serve as an important human resource as they may also stimulate teachers to discard existing ways of thinking about and doing their work and adopt new practices (Kruse et al., 1995). Principals that lead from the center, support teachers' instruction, focus on change, and create opportunities for all teachers to come together can help facilitate the formation of a strong professional community (Louis & Kruse, 1995). Further, principals that view teachers as learners and are open to innovations can support the development of teacher community (Scribner, Hager, & Warne, 2002).

Demographic features of schools and their teachers may also influence teacher community. For example, central city schools may have fewer resources to support collaborative work and increased political conflict due to greater heterogeneity (Louis et al., 1995). Likewise, schools with more low-income students have lower levels of teacher collective responsibility (Lee & Loeb, 2000), which may also be due to the lack of resources to support collaborative work. Schools with a greater proportion of female staff members have a greater focus on student learning (Louis et al., 1996) and experienced teachers have lower levels of responsibility for student learning (Lee & Loeb, 2000). This suggests that teacher demographics, including gender and experience, may affect the formation of a teacher community within a school.

Charter Schools and Teacher Community

Charter school teachers may be expected to engage more in a teacher community than traditional public school teachers due to the structural and organizational contexts of charter schools. Charter schools are institutions in which people have voluntary associations; teachers often give up higher benefits and salaries and better working conditions to teach in charter schools (Johnson & Landman, 2000; Malloy & Wohlstetter, 2003). This sacrifice may demonstrate some commitment to the ideals of the charter school. Further, charter schools often cater to a specific

educational niche, emphasizing a particular instructional approach (Arsen, Plank, & Sykes, 1999). Teachers are attracted to the specific instructional approach or educational philosophy advanced by individual charter schools. Indeed, charter school teachers report that having colleagues that share their beliefs about education as the most important reason for choosing to teach in their school (Malloy & Wohlstetter, 2003; Miron & Nelson, 2000; Nelson & Miron, 2004). In addition to sharing educational beliefs, charter school teachers are often involved in developing school curricula and collaborating with their colleagues (Miron & Nelson, 2000).

The presence of individuals who actively select a particular school with greater flexibility in hiring may translate into a school with coherent goals and a strong teacher community. In particular, another key facilitating feature is the presence of voluntary association, or the degree to which the staff at the school willingly agree to be there (Bryk, Lee, & Holland, 1993; Bryk & Schneider, 2002). Voluntary association relies on both the choice of the teacher to teach at that particular school and the choice of the school to hire that particular teacher. Voluntary association with the school signals that teachers, students, and parents agree with the school mission, thus facilitating trust between school actors and enhancing organizational effectiveness (Bryk & Schneider, 2002). The staffing procedures in many traditional public school districts, however, limit the extent to which public school teachers have a voluntary association with the school. These staffing policies—often the result of union contracts—include assignment by seniority and may allow more senior teachers to bump new teachers from particular schools. For example, when declining enrollment trends require eliminating a teaching position from a traditional public school, seniority provisions in union contracts often allow veteran teachers to bump new teachers from positions in other schools in the district. While the process of assigning teachers to schools based on seniority does not preclude the formation of teacher community, it does inhibit relational trust. That is, when a teacher is assigned to a school based on seniority, the other teachers in the school may not be sure that the teacher shares their educational values or commitment (Bryk & Schneider, 2002). Charter schools, however, have more flexibility in staffing policies and are usually not constrained by union contracts that preference seniority. As charter school teachers are less likely to be assigned to a school based upon seniority or bumped from their positions by more senior teachers, charter school teachers may have a greater degree of voluntary association with the school. The voluntary association of charter school teachers to their schools may thus facilitate teacher community as teachers know their peers have chosen to work in the school.

In addition, charter schools also have more flexibility to organize the school to facilitate teacher community. Charter school staffing policies may enable school principals to recruit likeminded teachers. Teacher hiring practices in traditional public schools may be inefficient due to policies that inhibit the ability of schools to hire the most appropriate applicant (Ballou & Podgursky, 1997; Wise, Darling-Hammond, & Berry, 1987) or to give the teacher an adequate picture of the school and its mission (Liu & Johnson, 2006). Although charter laws vary by state, charter schools are generally free from district hiring procedures (Gill, Timpane, Ross, & Brewer, 2001). The school has much more authority to recruit teachers that match its educational vision. This flexibility may allow charter schools to create a more coherent staff that works together to achieve a shared goal. Through waiving specific requirements for teachers and increasing school autonomy over teacher hiring and firing, charter schools may be more effective in creating a coherent school community and a more competent and committed school staff (Bryk & Schneider, 2002).

It should be noted that these features of charter schools—the presence of a specific educational mission, the voluntary association of teachers to charter schools due to the lack of assignment by seniority, and the ability to hire teachers that share the school vision—represent the hypothesized ideal of charter schooling. Whether or not charter schools actually meet this ideal is an

empirical question. Charter schools may have other constraints on their autonomy, internal operations, or staffing procedures that restrict teacher community. In addition, the guiding mission and most important policies may be decided by the school founders, leaving teachers with no more influence or sense of community than traditional public schools. Further, some features of charter schools may inhibit teacher community. For example, charter schools have high teacher attrition and more underqualified and inexperienced teachers (Bomotti, Ginsberg, & Cobb, 1999; Burian-Fitzgerald, Luekens, & Strizek, 2004; Gill et al., 2001; Podgursky & Ballou, 2001; Texas Education Agency, 2001). The high turnover and lack of experienced teachers in charter schools may be detrimental to creating a safe environment in which teachers share goals, trust each other, and open their classrooms for critique.

Existing studies on teachers in charter schools provide mixed evidence on the influence of the charter school setting for teacher community. While charter school teachers are generally more satisfied with their jobs and the teaching and learning conditions in their schools, they feel less empowered in the school-wide arena than traditional public school teachers (Bomotti et al., 1999). Charter school teachers also report a greater emphasis on academic learning and higher collective responsibility for teaching and learning, despite receiving fewer supports (Bomotti et al., 1999). Also, while charter schools place a great deal of emphasis on the school mission, that mission often lacks specificity (Wohlstetter & Griffin, 1998). Charter schools may be mission- or market-oriented schools and mission-oriented charters are more likely to target a specific student group and maintain a small school size (Henig, Holyoke, Brown, & Lacireno-Paquet, 2005). Further, some charter schools vary in the extent to which they stay true to their mission or educational vision and this fidelity affects student achievement in the school (Nelson & Miron, 2005).

In addition, charter schools operate under widely varying institutional contexts. In particular, the authorizing agency and the prior status of the school may affect the school's structures and policies. Some traditional public schools convert to charter status to seek flexibility in one specific domain and therefore do not make whole-scale changes to their operations; many of these conversion charter schools continue to look quite similar to traditional public schools (Buddin & Zimmer, 2005). At least one state requires public schools that wish to convert to charter status to have the support of half of its teachers and parents (Miron & Nelson, 2000). Schools that pass this hurdle are likely to have a shared educational vision, but this may not be true for newly created charter schools. Charter schools also vary in their access to financial resources, with newly created charter schools facing greater difficulties than conversion schools in obtaining necessary funding and facilities (Krop & Zimmer, 2005; RPP International, 2000). Many charter schools are authorized by state-level organizations or universities while others are authorized by local school districts and the authorizing agency may affect the development of teacher community in a charter school. For example, local school districts that authorize charter schools are more likely to focus on compliance with existing rules rather than providing flexibility of school policies (Bierlein Palmer & Gau, 2003). Further, authorizers vary in the resources they devote to the support and oversight of their charter schools (Bierlein Palmer & Gau, 2003).

Many charter schools are also newly-opened schools or may have recently converted to a charter school. The process of creating a new charter school may have implications for the teacher community in a school, although it is hard to predict the nature of the relationship. On the one hand, creating a new school may involve a great deal of collaborative activity as teachers must develop new curricula and discuss the focus and future of the school. These activities may lead to an enhanced level of teacher community in new charter schools. On the other hand, some charter school founders may establish the vision and curricula of the school before hiring teachers, with less room for teachers to develop the school's vision as a collective group. Teachers hired after the

founding vision of the school was established may instead focus their attention on more administrative matters or their own classroom.

The presence and type of relationship a charter school has with an education management organization (EMO) may also affect teacher community. Some EMOs provide structures that support teacher interaction and thereby facilitate teacher professional community, while other EMOs do not provide these support structures (Bulkley & Hicks, 2005). In addition to these institutional characteristics of charter schools, the specific types of flexibility available to charter schools may also influence the level of teacher community. Union contracts place several constraints on teacher hiring that may influence teacher community, such as assignment by seniority. Thus, considering whether the presence of a union contract or specific provisions of union contracts is related to teacher community is important. Further, facilitating teacher community may require schools to reallocate funds to support certain initiatives or collaborative activities. As such, it is reasonable to expect schools with greater control over the budget to have higher levels of teacher community. The variation among the institutional and policy contexts of charter schools requires distinguishing between types of charter schools when comparing them to traditional public schools. As such, this paper compares both the overall level of teacher community in charter schools and traditional public schools and the level of teacher community among different types of charter schools.

Study Methods

Data and Sample

This paper uses the restricted-use version of the 1999–2000 Schools and Staffing Survey (SASS) to compare the levels of teacher professional community in charter and traditional public schools. Administered by the National Center for Education Statistics, the 1999–2000 SASS surveyed a sample of public schools and their teachers, as well as the population of public charter schools open in 1998–99 and still operating in 1999–2000 and a sample of teachers within these charter schools. As the largest survey of charter schools and their teachers to date, SASS presents a unique opportunity to explore the level of teacher community among teachers in charter and traditional public schools. The SASS measure of teacher community includes components of shared beliefs and values, responsibility for student learning, and collaboration.

The U.S. Census Bureau collected the SASS data in the 1999–2000 school year. SASS employs a stratified random sampling design, with teachers clustered within schools. Schools served as the unit for first-stage sampling, and some teachers within selected schools were also sampled. The overall weighted response rates are 77% for traditional public school teachers and 72% for charter public school teachers and reflect nonresponse on the part of both schools and teachers. Teachers are weighted to reflect the sampling design and school and teacher nonresponse. Additional information on the data can be found in Gruber, Wiley, Broughman, Strizek, and Burian-Fitzgerald (2002). The analytic sample used here combines the public and charter school teacher files.

This paper focuses specifically on elementary schools because charter schools are more likely to be elementary schools (Arsen et al., 1999; Bomotti et al., 1999) and because the different organizational structures of elementary and secondary schools may result in differences in the strength and structure of teacher professional community by school level due to differences in how teachers interact with each other in a departmentalized setting (Talbert & McLaughlin, 1994). Due to

the low number of charter schools in some states, charter school teachers are only compared to teachers in public schools in those states that have at least five charter schools in the SASS sample. The final sample consists of 7341 teachers in 1971 schools. This includes 5961 teachers in 1545 traditional public schools and 1380 teachers in 426 charter public schools.

Dependent Variable

The dependent variable for this paper—teacher community—was created using a Rasch Rating Scale Measurement (RRSM) Model. Rasch models are unidimensional item response theory models, and they represent the measured construct as a latent trait that guides teachers' responses to survey items. Rasch models are useful methods for creating measures as they scale individuals on a common interval scale (Karabatsos, 2000), more accurately estimate variance for individuals at the extremes (Smith, 2001), provide a better measure of internal consistency (Smith, 2001), and make no assumption of a normal distribution of responses (Smith, 2001). The items included in the teacher community measure reflect three dimensions of teacher professional community—shared beliefs and values, collaboration, and responsibility for student learning and draw on previous measures of teacher community, collective responsibility, shared vision, and collaborative activity (Lee et al., 1991; Lee & Loeb, 2000; Lee & Smith, 1996; Louis et al., 1996). In particular, items 2, 5, 6, 7, 8, 9 are identical to items used in other studies on teacher community (Lee et al., 1991; Lee & Smith, 1996; Louis et al., 1996). Items 1 and 4 are similar to items in previous research that ask about the amount of time spent in collaborative activities and the extent to which teachers maintain discipline for all students in the school (Lee et al., 1991; Lee & Loeb, 2000; Louis et al., 1996). Items 10 and 11 are similar to measures in existing literature that focus on the attitudes and habits that students have and teachers' perceptions of whether their students are not capable of learning (Louis et al., 1996). Teachers responded to a series of questions about their collaboration with other teachers, their agreement with the school mission, and their sense of responsibility for student learning. The RRSM has the following item response function:

$$\Pi_{nix} = \frac{\exp \sum [\beta_n - (\delta_i + \tau_j)]}{\sum \exp \sum [\beta_n - (\delta_i + \tau_j)]}$$

Where Π_{nix} is the probability of teacher n responding with rating x to item i . β_n is the teacher's level of teacher professional community, δ_i is the item's endorsability, and τ_j is the category threshold (Wright & Masters, 1982). The data was calibrated using the WINSTEPS software (Linacre, 2002). The variable is standardized with a mean of zero and standard deviation of one.

The model scales data to a single underlying dimension (i.e., it is a unidimensional model), and therefore a principal component analysis of the residuals from the Rasch scaled measures was performed to determine whether this condition is satisfied. The eigenvalues were examined for the residual factors, and factors with eigenvalues greater than the Kaiser criterion of one were evaluated for potential substantive interpretability. The absolute values of the factor loadings for each residual factor was examined using Stevens' (1996) criteria for reliable factor loadings. Item text for items loading on factors that met these criteria were examined for content similarities.

Table 1 presents the results of the principal components analysis of the residuals from the Rasch model. WINSTEPS extracted three factors in addition to the Rasch factor. The Rasch factor is clearly the dominant factor, accounting for just over half of the variance. The next largest factor accounts for 9 percent of the variance.

Table 1

Principal Components Analysis of Teacher Community Measure

Factor	Eigenvalue	Proportion of Variance
Rasch	5.8	52.8%
1	1.0	9.0%
2	0.7	6.0%
3	0.6	5.2%
Residual	11	
Total	23.3	

A scree plot for the data in Figure 1 shows that the Rasch factor is the dominant factor. The second factor is at the Kaiser criterion, but the line also appears to approach its asymptote after the Rasch dimension. Examining the loadings on the three residuals factors revealed that no factor meets Stevens' (1996) criteria for reliable factor loadings. Further, the teacher community measure has a reliability of .74, with a Cronbach's alpha of .75. The correlation of teachers' raw scores to their RRSM community measure is .97. This analysis supports using these items as a single unidimensional construct to measure teacher community.

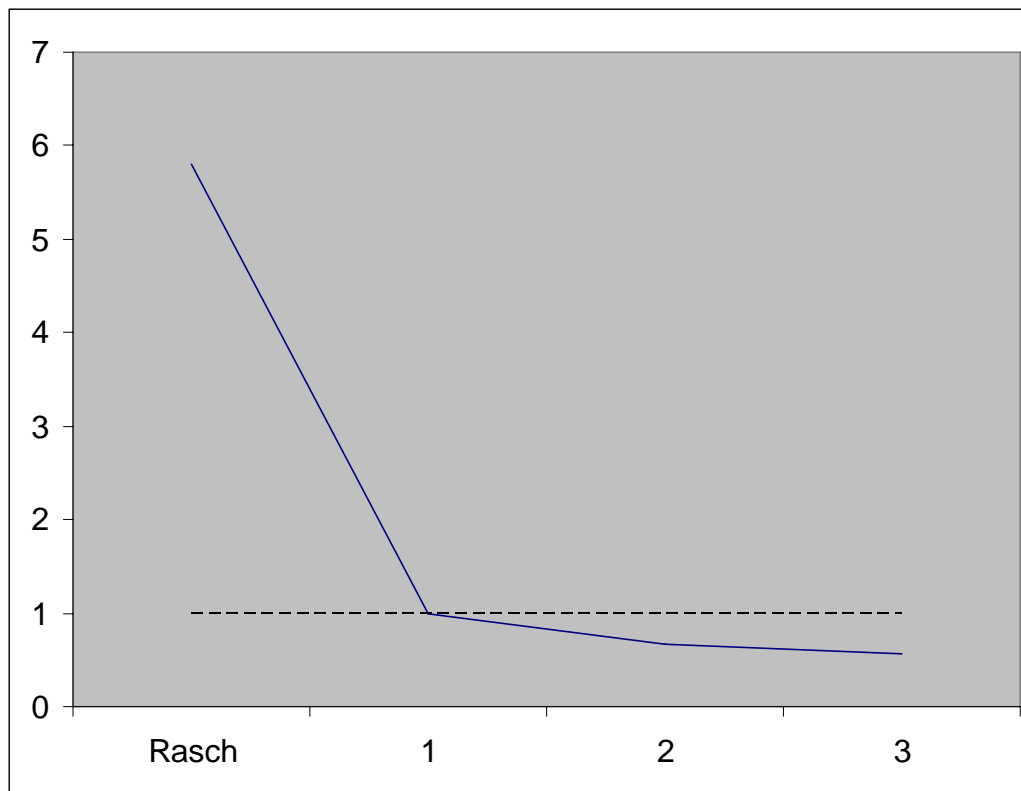


Figure 1. Scree plot of eigenvalues

Table 2 shows the item wording, response options, and point-measure correlations for the teacher community measure. The items show good correlation to the overall construct. One item indicating whether teachers participate in regularly scheduled collaboration with other teachers has a low point-measure correlation, although it is a dichotomous variable and the low correlation may be related to range restriction.

Table 2

Item Wording and Point-Measure Correlations for Teacher Community Measure

Item	Item text	Response options				Point-Measure Correlation
		Yes	No			
1	I participate in regularly scheduled collaboration with other teachers on issues of instruction (reversed)	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.22
2	The level of student misbehavior in this school interferes with my teaching	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.57
3	Necessary materials, such as textbooks, supplies, and copy machines are available as needed by the staff (reversed)	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.44
4	Rules for student behavior are consistently enforced in this school (reversed)	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.64
5	Most of my colleagues share my beliefs about what the mission of the school should be (reversed)	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.54
6	There is a great deal of cooperative effort among the staff (reversed)	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.56
7	I make a conscious effort to coordinate the content of my courses with that of other teachers (reversed)	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.36
8	The amount of student tardiness and class cutting in this school interferes with my teaching	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.54
9	I sometimes feel it is a waste of time to try to do my best as a teacher	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	.48
10	Student apathy	Serious problem	Moderate problem	Minor problem	Not a problem	.64
11	Students unprepared to learn	Serious problem	Moderate problem	Minor problem	Not a problem	.64

Independent Variables

As noted above, some characteristics or structures may facilitate or inhibit teacher community. These include support from the principal, teacher influence over school decisions, and school size (Bryk et al., 1999; Lee & Loeb, 2000; Lee & Smith, 1996; Louis et al., 1996). There are also teacher and school demographic features that are related to teacher community, in particular whether the school is an urban school, the proportion of female staff members, years of experience, and student socioeconomic status (Lee & Loeb, 2000; Louis et al., 1995; Louis et al., 1996). The independent variable of central interest in this paper is whether the teacher is in a charter school. The independent variables in model (described below) are the following:

Supportive principal. The teacher's perception of how much support the principal provides. The variable was created using a Rasch measurement model and a principal components analysis suggests one dimension underlying the observed responses. The items used to construct this measure are as follows: the principal lets staff members know what is expected of them, the school administration's behavior toward the staff is supportive and encouraging, the principal talks with me frequently about my instructional practices, the principal knows what kind of school he/she wants and has communicated it to the staff, and my principal enforces school rules and backs me up when I need it. It has a reliability of .75.

Teacher influence. The teacher's perception of how much influence they have over schoolwide decision-making. The items used to construct this measure are influence over schoolwide policy in the following areas: establishing curriculum, determining the content of in-service professional development programs, evaluating teachers, hiring new full-time teachers, setting school discipline policy, and setting the school budget. It has a reliability of .81. Additional information on the teacher influence variable may be found in Wolfe, Ray, and Harris (2004).

School size. The number of students in kindergarten and higher enrolled in the school.

Male. A dummy variable coded one if the teacher is male.

Total experience. Total years of teaching experience, including teaching in both public and private schools.

Percentage free lunch. Percent of students in the school that are eligible for free or reduced-price lunch.

Central city. A dummy variable coded one if the school is located in a central city.

Rural/small town. A dummy variable coded one if the school is located in a small town or rural area (the omitted category is schools in the urban fringe or large towns).

Charter. A dummy variable coded one if the school is a charter public school.

As noted above, charter schools operate in a variety of institutional and regulatory contexts. For example, the conversion status and authorizing body may reflect the charter school's relationship with a traditional public school district and, hence, its similarity to traditional public schools (Buddin & Zimmer, 2005). Likewise, the type of policy waivers held by charter schools indicates the extent to which they operate under regulatory structures similar to traditional public schools. In particular, the presence of a tenure waiver or lack of collective bargaining may suggest charter schools have more flexibility around seniority provisions in teacher staffing. Schools that opened within the past three years may experience temporary effects on their level of collaboration and interaction between teachers and may face additional difficulties in acquiring adequate funds (Krop & Zimmer, 2005). Further, some EMOs may facilitate teacher professional community by providing structures that support teacher interaction (Bulkley & Hicks, 2005). For these reasons, several charter policy variables are also included:

Conversion status. A series of dummy variables indicating how the school was created. Charter schools may be newly created schools or converted from an existing public or private school. Converting from an existing public school is the omitted category.

Open less than three years. A dummy variable indicating whether the charter school has been open less than three years.

Authorizing body. A series of dummy variables indicating the charter authorizing body. Charter schools may be authorized by a state-level body (such as the state department of education or state charter authorizing board), a university, or a local education agency. Being authorized by a local education agency is the omitted group.

Operated by EMO. A dummy variable indicating whether the charter school is operated by an education management organization.

Collective bargaining agreement. A dummy variable indicating whether the school has a collective bargaining or meet and confer agreement with a teachers union.

Tenure waiver. A dummy variable indicating whether the charter school has a waiver exempting it from teacher tenure requirements. The school principal indicated on the school survey whether or not the charter school has this type of waiver.

Budget waiver. A dummy variable indicating whether the charter school has a waiver exempting it from budget requirements. The school principal indicated on the school survey whether or not the charter school has this type of waiver.

Data Limitations

While it has become increasingly common to use hierarchical models when analyzing teacher community due to teachers being clustered within schools, this study does not do so. The SASS sample is not designed to support hierarchical models and the result is that the within-school sample size ranges from 1 to 19, with a mode of 3 teachers per school, making it difficult for hierarchical models to disentangle school and teacher effects. Despite this limitation, the findings are relatively robust and thus suggest there is a slightly higher level of teacher community in elementary charter schools. This limitation also points to possible areas to improve the SASS data. As SASS is increasingly being used to model school organizational effects on teachers' satisfaction and career patterns (see, for example, Ingersoll, 2001), perhaps the sampling strategy should allow for larger within-school sample sizes.

Researchers and policymakers interested in teacher community in charter schools should also note that these data come from the 1999–2000 school year. This represents a relatively early period in charter schooling and many charter schools were newly opened. The number of states with charter school legislation and the number of charter schools has increased since 1999–2000. This paper represents an important investigation into the teacher community in early charter schools that led the way for a growing group of charter schools. Further, the notion of charter schooling as a way to increase teacher community was an early goal of charter school supporters and it is likely that these early charter operators were particularly attuned to the ability to create new collaborative structures for schools and working environments for teachers. Future examinations of teacher community in charter schools should explore how the population of charter schools has changed since this period and whether those changes have implications for the development of teacher professional community.

Model

This study explores the following questions: *How does the level of teacher engagement in the school community in charter elementary schools compare to that of traditional public elementary schools?* and *How do different policy environments and governance structures influence teachers' engagement in the school community?*

To address both of these research questions, this paper unfolds in two stages. First, it compares the level of teacher professional community in charter and traditional public schools using multiple regression techniques. This paper controls for a number of variables that may also affect the level of teacher community but differ by school sector, including school size, teacher influence, principal support, school urbanicity, percent of students eligible for free or reduced-price lunch, teacher gender, and years of teaching experience.

Not only does the policy context of charter schools vary between states, but it also varies within states, as charter schools may face different regulations depending on the authorizing body, school conversion status, and other policy waivers. For this reason, the second stage of analysis in this paper compares the level of teacher community among teachers in different types of charter schools. Again using multiple regression, this paper explores factors that affect the teacher community within the charter school population. Relevant variables include the charter authorizing body (such as a university, local school district, or state agency) as well as whether the school opened in the past three years, whether the school is a newly-created or conversion school, whether the school is operated by an education management organization (EMO), whether the school has an agreement with a teachers union, and whether the school is released from tenure or budget requirements.

The theoretical model assumes that teacher engagement in the teacher professional community is a linear function of various school and teacher attributes. The basic model is written as follows:

$$y_{is} = \beta_0 + \beta_1 \text{charter}_s + \beta_2 \text{schsize}_s + \beta_3 \text{pfreelunch}_s + \beta_4 \text{centcity}_s + \beta_5 \text{rursmltn}_s + \beta_6 \text{tchinfluenc}_{is} + \beta_7 \text{sprtprinc}_{is} + \beta_8 \text{totexper}_{is} + \beta_9 \text{male}_{is} + \mu_{is} \quad (1)$$

The dependent variable (teacher community) of teacher i in school s is y_{is} . School-level variables are charter status, number of students enrolled, the percent of students in the school eligible for free or reduced-price lunch, whether the school is located in a central city, and whether the school is located in a rural or small town setting. Teacher level variables are the teacher's level of influence over school-wide decisions, the level of support the teacher receives from the principal, the total years of teaching experience, and whether the teacher is a male. Equation (1) is the basic econometric model estimated in the first half of this paper. Teachers in the SASS sample are clustered within schools. Unless this clustering is taken into account, the standard errors will be too small, resulting in a perception of greater precision than is warranted. For this reason, the standard errors are robust to heteroskedasticity due to the clustering of teachers within schools in the dataset. The sample is a stratified probability sample and is weighted to reflect the fact that it is not a simple random sample.

A second model is estimated to include interactions with relevant charter school policy variables:

$$y_{is} = \beta_0 + \beta_1 \text{charter}_s + \beta_2 \text{schsize}_s + \beta_3 \text{pfreelunch}_s + \beta_4 \text{centcity}_s + \beta_5 \text{rursmltn}_s + \beta_6 \text{tchinfluenc}_{is} + \beta_7 \text{sprtprinc}_{is} + \beta_8 \text{totexper}_{is} + \beta_9 \text{male}_{is} + \beta_{10} \text{policyvariables} + \beta_{11} \text{charter} * \text{policyvariables} + \mu_{is} \quad (2)$$

The same dependent variable and independent variables are used. An additional school-level independent variable is used in each model: a dummy variable indicating whether the school opened within the last three years, dummy variables indicating whether the school is a newly created school or converted from a private school (converted from public school serves as the base group), dummy variables indicating whether the charter was authorized by a university or state level entity such as state board of education or state charter agency (authorized by district serves as the base group), a dummy variable that indicates whether the school is operated by an education management organization (EMO), a dummy variable indicating whether the teachers are covered by a collective bargaining agreement, and dummy variables indicating whether the school's charter includes waivers over budget and finances and teacher tenure policies. Except for the collective bargaining variable, these policy variables are assumed to be zero for all public school teachers in the sample. For the collective bargaining variable, both traditional public and charter schools were coded as one if the school has an agreement with a teacher union and zero if otherwise.

In some cases, the charter policy variables will also affect traditional public schools, as all public schools are affected by local and state policies. For example, decentralization reforms have given school budgeting authority to many principals in traditional public schools. Traditional public schools may also be operated by EMOs, and a small percentage of public schools are also less than three years old. For this reason, a third set of regressions were run with only the sample of charter school teachers:

$$y_{is} = \beta_0 + \beta_1 \text{schsize}_s + \beta_2 \text{pfreelunch}_s + \beta_3 \text{centcity}_s + \beta_4 \text{rursmltn}_s + \beta_5 \text{tchinfluenc}_{is} + \beta_6 \text{sprtprinc}_{is} + \beta_7 \text{totexper}_{is} + \beta_8 \text{male}_{is} + \beta_9 \text{policyvariables} + \mu_{is} \quad (3)$$

The same policy and governance context variables are used. This model only includes the 1380 teachers in charter schools. Equations (2) and (3) are the econometric models estimated in the second half of this paper.

Results

Table 3 includes descriptive statistics for the dependent and independent variables used in these analyses. Charter school teachers do report significantly higher levels of teacher professional community than teachers in traditional public schools. Yet charter school teachers are also more likely to have characteristics that facilitate teacher community. In particular, charter school teachers report having more influence over school decision-making, slightly more supportive principals, and are more likely to teach in smaller schools. As these factors have been associated with the strength of the teacher community in schools in previous research and may be present in traditional public schools as well, it is useful to examine whether being in a charter school is associated with higher levels of teacher community independent of these other factors.

Table 3
Descriptive Statistics

Variable	Total		Traditional Public		Charter Public	
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>
Teacher Community	0.0	1.0	0.0	0.9	0.12***	0.89
Teacher influence	0.0	1.0	0.0	0.9	0.37***	1.03
Supportive principal	0.0	1.0	0.0	0.9	0.05~	0.87
Total experience	14.4	14.1	14.4	12.8	7.09***	8.74
% eligible for lunch program	41.4	41.9	41.3	38.1	44.5	38.1
School size	632.1	462.0	633.6	419.6	459.3***	441.4
	%		%		%	
Male	14.9		14.9		18.2**	
Central city	29.0		28.8		48.4***	
Rural/small town	15.5		15.6		7.28***	
School has collective bargaining agreement	71.0		72.7		17.0***	
Newly created school					61.8	
Private conversion school					6.18	
Public conversion school					32.0	
School open less than three years					70.7	
Authorized by state					50.2	
Authorized by university					12.9	
Authorized by district					37.0	
Operated by EMO					27.7	
Budget/finances waiver					47.2	
Tenure waiver					42.6	
Sample size	7341		5961		1380	

~ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. These p -values reflect t -tests with the null hypothesis of no difference between traditional public and charter public schools.

The first model, presented in Table 4, controls for organizational and demographic characteristics to explore whether charter school teachers report higher levels of teacher community than teachers in traditional public schools. The charter school coefficient is statistically significant but small (0.08 standard deviations). The largest association with teacher community is the presence of a supportive principal (0.41 SD), followed by increased influence over school decision-making (0.13 SD). Increasing school enrollment is associated with decreasing teacher community, which indicates that smaller schools have higher levels of teacher community. Most of the difference between charter and traditional public schools, then, appears to be explained by the fact that charter schools are more likely to have principals that have a clear mission for school and talks about instruction with teachers, teachers with more influence over school policies, and be smaller schools. This is consistent with previous research that suggests principal leadership, control over decisions, and school size facilitate the development of teacher professional community (Lee & Smith, 1996; Louis et al., 1996; Scribner et al., 2002). While there is a small relationship between teacher

community and charter school status independent of these other factors, the organizational conditions of schools are most strongly associated with stronger teacher communities.

Table 4
Regression Analysis for Teacher Community (Model 1)

Variable	Parameter (<i>SE</i>)
Charter school	0.078** (0.029)
School size	-0.0002*** (0.00003)
Teacher influence	0.132*** (0.033)
Supportive principal	0.406*** (0.016)
Total experience	-0.006*** (0.0004)
Percent free lunch	0.006*** (0.001)
Male	-0.121*** (0.027)
Central city	-0.059* (0.029)
Rural/Small town	-0.068* (0.030)
Intercept	0.355*** (0.033)
R^2	0.348
N	7341

$\sim p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Standard errors in parentheses.

Comparing the relationships between teacher community and charter status and school size may help understand the relative size of the charter status effect. Reducing school size by 100 students is associated with a level of teacher community that is 0.02 *SD* higher, while charter schools are associated with 0.08 *SD* higher teacher community. Thus, being in a charter school is roughly equivalent to being in an elementary school with 400 fewer students in terms of the difference in teacher community. As the average elementary charter school has 174 fewer students than the average elementary public school, the difference in teacher community that may be related to school size appears to be smaller than the difference that may be related to charter status.

Although charter school teachers in general report higher levels of teacher professional community than do traditional public school teachers, some aspects of the institutional environment or governance context of charter schools may be associated with higher or lower levels of teacher professional community. The second stage of this analysis explored the relationship between various charter governance and policy variables and teacher community. Table 5 presents results from Models 2 through 9 on the relationship between various charter governance variables and teacher community. There is mixed evidence about the relationship between school conversion status and teacher community. Using the full sample in Model 2, teachers in charter schools that converted

from an existing public school report greater levels of teacher professional community (0.17 *SD*) than teachers in traditional public schools. Yet teachers in charter schools that were newly created schools or converted from an existing private school report lower levels of teacher professional community than their peers in public-conversion charter schools (-0.13 *SD* for newly created schools and -0.19 for private-conversion schools). However, when the sample is restricted to only teachers in charter schools in Model 3, the coefficient is positive, but near zero and not statistically significant. As such, there is not consistent evidence for a relationship between conversion status and teacher community.

The charter school movement was still relatively young in 1999–2000, and many charter schools may have only been open for a few years at the time of data collection. The period of opening a new school may have temporary effects on the level of teacher community. For this reason, Models 4 and 5 include a dummy variable indicating schools that have been operating as a charter public school for fewer than three years. Newly-opened schools appear to have lower levels of teacher community than schools that are more established, with an effect of -0.12 standard deviations for charter schools that are newly formed than for charter schools that have been operating for at least three years. It appears that the activities involved in opening a school, or operating a school under a new governance structure, are negatively related to the level of teacher community. This is somewhat surprising given that newly created schools have to design school-wide policies and procedures, develop the curriculum and materials, and many other tasks associated with starting a school, all of which may lead to greater collaboration and schoolwide discussions of the school goals. The relationship between charter status and teacher community is stronger for schools that have been open for at least three years. Charter schools that have been operating for at least three years report a 0.16 standard deviation higher level of teacher professional community than traditional public schools. The relationship between being a new charter school and teacher community becomes smaller and statistically insignificant when the sample is restricted to teachers in charter schools only in Model 5.

Models 6 and 7 examine the relationship between authorizing agency and teacher professional community. Teachers in charter schools authorized by a local school district have a higher level of teacher professional community than teachers in traditional public schools (0.14 *SD*). Yet teachers in charter schools that are authorized by universities report lower levels of teacher community (-0.15 *SD*) than those in charter schools authorized by a district. This relationship holds when the sample is restricted to only teachers in charter schools in Model 7.

Another key policy variable is whether the charter school is run by an education management organization (EMO), and Models 8 and 9 examine the relationship between EMO operation and teacher community. The effect of EMO operation remains near zero and insignificant for both models. This null finding for EMO operation may be masking variation within the sample of schools run by education management organizations. Some EMOs provide resources that help facilitate school instructional dialogue while others focus on more administrative matters and do little to facilitate collaboration among teachers (Bulkley & Hicks, 2005). The data available in SASS only specify whether the school has a relationship with an EMO; the SASS data do not specify the nature of that relationship.

Table 5
Regression Analyses for Teacher Community (Models 2–9)

Variable	Conversion status			Years of operation		Authorizer			EMO	
	Model 2 (All)	Model 3 (Charters)	Model 4 (All)	Model 5 (Charters)	Model 6 (Full)	Model 7 (Charters)	Model 8 (All)	Model 9 (Charters)		
Charter school	0.170*** (0.053)		0.160** (0.057)		0.137*** (0.047)		0.078* (0.034)			
School size	-0.0002*** (0.00003)	0.0000 (0.0001)	-0.0002*** (0.00003)	-0.0000 (0.0001)	-0.0002*** (0.00003)	-0.0000 (0.0001)	-0.0002*** (0.00003)	-0.0000 (0.0001)		
Teacher influence	0.132*** (0.017)	0.226*** (0.036)	0.132*** (0.016)	0.219*** (0.035)	0.132*** (0.016)	0.225*** (0.035)	0.132*** (0.016)	0.225*** (0.035)		
Supportive principal	0.406*** (0.016)	0.423*** (0.034)	0.406*** (0.016)	0.424*** (0.034)	0.406*** (0.016)	0.420*** (0.033)	0.406*** (0.016)	0.423*** (0.034)		
% free lunch	-0.006*** (0.0004)	-0.004*** (0.001)	-0.006*** (0.0004)	-0.004*** (0.001)	-0.006*** (0.0004)	-0.004*** (0.001)	-0.006*** (0.0004)	-0.0042*** (0.001)		
Total experience	0.006*** (0.001)	0.006*** (0.002)	0.006*** (0.001)	0.006* (0.002)	0.006*** (0.001)	0.006* (0.002)	0.006*** (0.001)	0.006* (0.002)		
Male	-0.121*** (0.027)	-0.150*** (0.049)	-0.121*** (0.027)	-0.150*** (0.048)	-0.121*** (0.027)	-0.150*** (0.048)	-0.121*** (0.027)	-0.150*** (0.048)		
Central city	-0.058* (0.029)	-0.040 (0.053)	-0.059* (0.029)	-0.042 (0.051)	-0.059* (0.029)	-0.038 (0.052)	-0.059* (0.029)	-0.038 (0.055)		
Rural/Small town	-0.068* (0.030)	-0.026 (0.068)	-0.068* (0.030)	-0.029 (0.069)	-0.068* (0.030)	-0.024 (0.068)	-0.068* (0.030)	-0.026 (0.068)		
Newly created school	-0.130* (0.060)	0.012 (0.060)								
Private conversion	-0.192* (0.085)	0.004 (0.093)								
School open less than 3 years			-0.116~ (0.060)		-0.069 (0.052)					
Authorized by state					-0.080 (0.054)	-0.054 (0.049)				
Authorized by university					-0.147* (0.073)	-0.123* (0.068)				
Operated by EMO							0.001 (0.051)	-0.001 (0.053)		
Intercept	0.356*** (0.034)	0.189* (0.096)	0.355*** (0.033)	0.258*** (0.067)	0.355*** (0.033)	0.250*** (0.067)	0.355*** (0.033)	0.201** (0.063)		
R ²	0.348	0.380	0.348	0.382	0.348	0.383	0.348	0.380		
N	7341	1380	7341	1380	7341	1380	7341	1380		

~ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Standard errors in parentheses

Table 6
Regression Analyses on Teacher Community (Models 10–15)

Variable	Collective bargaining		Tenure waiver		Budget/finances waiver	
	Model 10 (All)	Model 11 (Charters)	Model 12 (All)	Model 13 (Charters)	Model 14 (All)	Model 15 (Charters)
Charter school	0.129* (0.056)	-0.0002*** (0.00004)	0.038 (0.032)	0.0000 (0.00003)	0.020 (0.034)	-0.0000 (0.00003)
School size	-0.0002*** (0.00004)	-0.0000 (0.0001)	-0.0002*** (0.00003)	0.0000 (0.0001)	-0.0002*** (0.00003)	-0.0000 (0.0001)
Teacher influence	0.135*** (0.018)	0.225*** (0.036)	0.132*** (0.016)	0.221*** (0.035)	0.132*** (0.016)	0.220*** (0.035)
Supportive principal	0.410*** (0.017)	0.424*** (0.034)	0.406*** (0.016)	0.421*** (0.033)	0.406*** (0.016)	0.422*** (0.034)
Percent free lunch	-0.006*** (0.0005)	-0.004*** (0.001)	-0.006*** (0.0004)	-0.004*** (0.001)	-0.006*** (0.0004)	-0.004*** (0.001)
Total experience	0.006*** (0.001)	0.006*** (0.002)	0.006*** (0.001)	0.007*** (0.002)	0.006*** (0.001)	0.007*** (0.002)
Male	-0.127*** (0.029)	-0.149** (0.049)	-0.121*** (0.027)	-0.155*** (0.048)	-0.122*** (0.027)	-0.151*** (0.047)
Central city	-0.065* (0.031)	-0.038 (0.052)	-0.059* (0.029)	-0.045 (0.051)	-0.058* (0.029)	-0.036 (0.052)
Rural/Small town	-0.067* (0.033)	-0.027 (0.068)	-0.068* (0.030)	-0.040 (0.068)	-0.068* (0.030)	-0.030 (0.066)
School has collective bargaining agreement	0.041 (0.028)	0.007 (0.063)				
School has collective bargaining agreement*charter	0.032 (0.066)					
Tenure waiver			0.094~ (0.050)	0.106* (0.048)		
Budget/finances waiver					0.122* (0.049)	0.095* (0.044)
Intercept	0.373*** (0.037)	0.201** (0.067)	0.355*** (0.033)	0.146~ (0.076)	0.355*** (0.033)	0.160* (0.071)
R ²	0.354	0.380	0.348	0.384	0.348	0.384
N	7341	1380	7341	1380	7341	1380

~ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$. Standard errors in parentheses

Table 6 explores the relationship between specific areas of policy flexibility and teacher community between charter schools. One argument for charter schools is that lifting the requirements imposed by the district will give the school the flexibility needed to create coherent learning communities. In particular, collective bargaining agreements may restrict schools' abilities to hire desired teachers by defining how teachers are assigned to schools and regulating the hiring and firing of teachers. As shown in Models 10 and 11, however, the presence of collective bargaining appears to have little relationship to the teacher community in charter schools. Teachers in charter schools that have a collective bargaining agreement do not report statistically significant differences in teacher community from teachers in charter schools without collective bargaining agreements. This finding remains consistent in Model 11 when the sample is restricted to charter school teachers only.

While collective bargaining as a whole is not associated with teacher community, particular components of collective bargaining agreements may be related to higher levels of teacher community. Models 12 and 13 show that waiving tenure requirements is associated with the level of teacher professional community among teachers. Teachers in charter schools that have teacher tenure requirements waived report levels of teacher professional community that are 0.094 *SD* higher than teachers in charter schools that do not waive teacher tenure requirements. When the sample includes only teachers in charter schools (Model 13), the relationship remains about the same (0.11 *SD*).

In addition to having more control over teacher tenure, increased school autonomy over key decision-making domains may also be related to the level of teacher professional community. One key element of school autonomy is having control over the school's budget and financing. Models 14 and 15 examine the relationship between budgetary flexibility and teacher community. Teachers in charter schools that have control over their own budget report greater levels of teacher professional community than teachers that do not have this type of autonomy (0.12 *SD*). Moreover, teachers in charter schools that do not have control over their budget report levels of teacher community that are not statistically different from teachers in traditional public schools. Due to increasing attention to school budgetary authority and, hence, potential difficulties in assuming certain characteristics of traditional public schools, Model 14 may be biased. The analysis was replicated in Model 15 using only the sample of charter school teachers and excluding the charter school dummy variable. While the effect of having control over the school budget is slightly reduced, it remains statistically significant (0.095 *SD*).

The models used in this analysis explain slightly more than one-third of the variance in teacher community. This is a relatively small amount of explained variance and it may be due to the reliance on teachers' subjective perceptions of teacher professional community or the lack of multilevel models. The dependent variable in this analysis comes from responses to survey items, which is standard in analyses of teacher community. Still, teachers may interpret the survey items in idiosyncratic ways, thereby reducing the ability to explain variation. Further, the use of a multilevel model would partition the variance into teacher-level and school-level variance to more accurately estimate the effects, but it is not possible to do with this data.

Discussion and Conclusions

The opportunity for educators to form schools around a specific educational mission is a goal of many charter schools (Hassel, 1999; Manno et al., 1998). Likewise, charter school legislation in many states emphasize developing stronger school communities through charter schools (Wohlstetter & Griffin, 1998). This study represents a first step in determining whether or not

charter schools are fulfilling this goal. Overall, teachers in charter schools report slightly higher levels of teacher professional community than teachers in traditional public schools. While the difference is small, it does suggest that charter schools are somewhat successful in facilitating stronger teacher communities.

Charter schools exist in an array of institutional contexts (Bierlein Palmer & Gau, 2003; Buddin & Zimmer, 2005; Krop & Zimmer, 2005). Given the variety within the charter school population, it is useful to explore whether different types of charter schools are more or less successful in facilitating strong teacher communities, especially as the variance in state charter school legislation means there is no singular definition of a charter school. This study suggests that charter governance variables are related to teacher community in charter schools. For example, charter schools that are authorized by universities have lower levels of teacher community than those that are authorized by local school districts. University authorizers are more likely to sponsor multiple schools, while local school districts are more likely to sponsor a limited number of charter schools, possibly allowing district authorizers to provide more support and oversight to their charter schools compared to university authorizers (National Association for Charter School Authorizers, 2005). Another interpretation of these results, however, may be that the types of charter schools authorized by local districts already have the conditions that facilitate higher teacher community than those authorized by universities. Given that districts are hesitant to authorize charter schools and often do so only under political and fiscal pressure (Bierlein Palmer & Gau, 2003), then it is reasonable that those charter schools authorized by local districts may represent a more select group in terms of the cohesiveness of the school community.

Another key contextual variable for charter schools is how long the school has been operating (RPP International, 1998). There is limited evidence that charter schools that opened in the last three years have lower levels of teacher community than more established charter schools. These findings are somewhat surprising as one would assume that starting a new school involves a great deal of work, such as developing the curriculum, hiring teachers, recruiting students, and developing or choosing instructional materials, and that these activities would provide greater opportunities for teachers to collaborate. However, this enhanced level of collaboration in the creation of a new school is not supported by the evidence presented here. It may be that newly formed charter schools are highly influenced by their founders, who may or may not leave room for teachers to contribute to the educational vision of the school. Another explanation for why newly chartered schools have lower levels of teacher community is that the process of opening a new school focuses attention on administrative matters rather than core instructional concerns. In starting a new school, school personnel deal with many of the same problems of individuals starting any new business (RPP International, 1998). As such, teachers may become burned out and have little time for collegial reflection or collaboration (Johnson & Landman, 2000), thus limiting the opportunity to develop a cohesive community.

According to charter school proponents, bureaucratic regulations and teacher union contracts constrain schools and inhibit teacher community and school effectiveness (Hill, Rainey, & Rotherham, 2006; Manno et al., 1998). Giving charter schools more flexibility over key policy areas should facilitate stronger communities. This study also tried to specify the elements of charter school policies and school autonomy that facilitate or inhibit teacher community in charter public and traditional public schools. One rationale behind charter schools is that certain district hiring policies such as tenure requirements impede the ability of schools to hire the most effective teachers (Podgursky, 2006). The presence of tenure requirements may indicate that schools reward seniority and experience with the school when making staffing decisions. One would expect schools without these restrictions might be more likely to hire teachers with a shared educational vision and facilitate the formation of a teacher professional community. While the presence of collective bargaining was

not related to the level of teacher community, schools with autonomy over key staffing policies such as tenure requirements report higher levels of teacher professional community. The ability to fire unproductive teachers or teachers who do not agree with the school's goals does appear to enhance the teacher community. Thus, it may be that the component of teacher union agreements with the largest impact on teacher community is tenure. This indicates that flexibility over particular decision domains facilitate positive teacher interactions.

Likewise, teachers in charter schools with greater control over their budget reported higher levels of teacher community than teachers in schools without control over this decision domain. While devolving decision-making power over the school budget to schools does not ensure that teachers rather than school administrators are making these important decisions (Johnson & Boles, 1994; Murphy & Beck, 1995), it does seem to enhance the school's ability to facilitate the formation of a teacher community. This finding is consistent with other research on decentralized budgeting that individuals in schools are at the best position to efficiently allocate resources (Wohlstetter & Odden, 1992). Educational administrators should consider enhancing school and teacher autonomy over school finances and teacher tenure to facilitate teacher professional community in both charter and traditional public schools.

This analysis has implications for all schools, charter public and traditional public, as it contributes to our knowledge of teacher professional community. Consistent with previous literature, the largest effect on teacher community came from the principal (Louis & Kruse, 1995; Louis et al., 1996; Scribner et al., 2002). Teachers in schools with principals that supported them, had a clear mission for the school, and encouraged teachers to discuss instructional matters showed higher levels of engagement in the teacher professional community, regardless of the charter status or school context. Further, smaller schools and schools where teachers had more influence over school and instructional decision-making also had higher levels of teacher professional community. Thus, the positive relationship between teacher community and being in a charter school is partly explained by the finding that charter school teachers tend to have more influence over schoolwide decisions. These findings are consistent with literature that suggests that school organizational conditions are related to teacher community and can be present with or without charter status (Lee et al., 1991; Louis et al., 1996; Scribner et al., 2002). Selecting principals based on their ability to involve teachers in collaborative decision-making and develop a teacher professional community, or supporting principals as they learn the new roles required for such a goal, may help increase the presence of teacher learning communities, and ultimately student achievement, more than changes in charter school laws or an increase in the number of charter schools. If teacher professional communities are to be a goal of schools, then principal training and professional development should focus on developing leaders of teacher learning communities. Additional research should explore the specific attributes and behaviors of principals that are successful in developing and maintaining teacher professional communities.

Teacher professional community is something that all schools should strive for, due to its relationship to increased student achievement (Louis et al., 1996). This analysis highlights some important governance structures that may facilitate teacher communities in all types of schools, charter as well as traditional public schools. In particular, supporting principals as leaders of school communities, giving teachers more control over schoolwide decisions, and creating smaller schools should increase teacher community among all schools. Further, giving schools more authority over their budget and teacher tenure requirements may help to create teacher communities that can more effectively develop a coherent instructional program for their students. Additional research should explore how schools use their autonomy in these areas and the mechanisms through which these types of flexibility lead to enhanced teacher professional community.

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