New Teachers' Experiences of Hiring in New Jersey

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INTRODUCTION

Recent projections that the United States will need to hire 2.2 million new teachers over the next decade (Gerald & Hussar, 1998) lend new urgency to old concerns about the quality and composition of the teaching force. As the nation struggles to equip all students with the skills necessary to thrive in a changing society and economy, educators and policy makers are returning to a focus on teacher quality as a critical component of school reform. Efforts to improve the teaching force, however, are colliding with widespread teacher shortages and with new conceptions of career that are altering how individuals approach careers in teaching (Peske, Liu, Johnson, Kauffman, & Kardos, 2001).[1]

Despite increased attention paid to the importance of preparing and supporting new teachers, there has been little empirical research on how teachers are hired and even less on teachers' experiences with the hiring process. Most existing studies of teacher hiring were conducted at a time of teacher surplus rather than shortage. They also tended to analyze hiring from the perspective of districts and schools, thus depicting it as a one-way process in which schools evaluate candidates, and obscuring the role hiring also plays in providing information and signals to applicants. Today, however, prospective teachers hold a strengthened bargaining position in the labor market, and it is important to understand their perspectives on the hiring process.

This paper explores how new teachers experience the hiring process, the information they obtain through it, and the extent to which the organization of hiring influences the fit between new teachers' current positions and their interests, skills, and expertise. It presents the results of a pilot-study for a larger four-state survey of new teachers sponsored by The Project on the Next Generation of Teachers (PNGT). Analysis of the data reveals the following:

1. Almost 1/3 of new teachers in New Jersey are hired through a highly decentralized process; 1/3 are hired through a highly centralized process; and the remaining 1/3 are hired through either a moderately-centralized or a moderately-decentralized process.
2. New teachers in New Jersey have limited interactions with school-based personnel during the hiring process. This is true for both those who experience centralized hiring and those who experience decentralized hiring.
3. Charter school teachers in New Jersey submit a broader range of materials than non-charter school teachers as part of their applications.
4. New teachers in New Jersey form only moderately-accurate pictures of their schools prior to accepting their initial teaching positions.
5. On average, new teachers in New Jersey report a moderate to good fit between their skills, interests, and values and their teaching positions and schools.

Taken together, these findings suggest that many schools are not taking full advantage of decentralized hiring and its potential for improving the amount and quality of information exchanged between those who do the hiring and teaching candidates.

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[1] These shortages are particularly intense in urban and rural school districts and in math, science, foreign language, bilingual education, and special education.

BACKGROUND

Recent research suggests that public schools may not be hiring the best applicants (Ballou, 1996; Ballou & Podgursky, 1998). Using pooled data from the *Surveys of Recent College Graduates* (1976-1991), Ballou (1996) found that certain indicators of a strong academic background "do little to improve [and, in some cases, hurt] the prospects of an applicant for a public school teaching position" (p. 120). This pattern, he noted, contrasts starkly with those in other fields. Ballou, however, paid little attention to the policy and organizational constraints within which school officials conduct hiring, and he did not examine hiring practices.

In contrast, other researchers (David, 1988; Shivers, 1989; Wise, Darling-Hammond, & Berry, 1987) studied teacher hiring qualitatively and found important differences in how districts organized and conducted it. Districts differed in how they centralized or decentralized hiring processes, what information they used to assess candidates, and how they treated candidates.

How Hiring is Organized – The degree to which hiring processes are centralized influences how districts, schools, and applicants exchange information, and, potentially, how applicants experience hiring. In centralized hiring, the district office carries out most of the hiring activities, relies on standardized procedures, and uses generic job descriptions, interview protocols, and/or criteria for evaluating candidates (Shivers, 1989; Wise et al., 1987). In this arrangement, the specific characteristics of teaching vacancies (e.g., subject area, grade level) and the particular needs of local contexts (e.g., student population served, professional culture of the school) are not factored into the hiring equation until the late stages of the process, if at all. Indeed, in some cases, districts hire new teachers on the basis of their general qualifications and then find some place to put them (Wise et al., 1987). As a result, candidates may receive little information about specific positions and thus have little basis on which to evaluate the fit between their own skills, interests, and expertise and the positions that they are considering and for which they are being considered.

In contrast, in decentralized hiring, schools (and the individuals within them) carry out the activities and decision-making, and tend to pay more attention, earlier in the process, to whether candidates fit the requirements of a specific position and/or the needs and culture of the school. Principals and teachers (and, sometimes, students and parents) often devise their own criteria and interview questions for evaluating candidates (Wise et al., 1987).

Most school districts, of course, fall somewhere between these two extremes and divide hiring activities between the central office and the school site (Wise et al., 1987). Typically, early hiring activities, such as the initial screening of paper credentials, are performed by a district's central office, while others, such as the final decision on whom to hire for a specific position, are conducted by school-based administrators.

Hiring, Fit, and New Teacher Satisfaction – Theory suggests that decentralized hiring has the potential to provide teaching candidates and schools with more (and better) information about one another and, thus, facilitate better matches between them. Better matches—or closer fit between new teachers' skills, interests, and expertise and the positions that they obtain—are important both for improving the functioning of schools, as well as for improving teacher satisfaction and addressing teacher shortages. Over the

past decade there has been growing consensus among researchers and policy makers about the importance of giving individual schools more control over how they organize their work (Little, 1990; Murnane & Levy, 1996; Rosenholtz, 1989). Control over hiring decisions is said to be essential for building and maintaining effective teams, and for building organizational capacity (Newmann, Wehlage, & Rigdon, 1997). Research has also pointed to the importance of teacher collegiality and teamwork as critical components of school improvement (Newmann & Wehlage, 1995; Talbert & McLaughlin, 1996).

By fostering better matches between individuals and their teaching positions, decentralized hiring may also lead to more satisfying initial experiences in the profession. The importance of hiring in addressing the teacher shortage emerged from an earlier qualitative study that I conducted with the Project on the Next Generation of Teachers (Peske et al., 2001). In that study, my colleagues and I did not set out to examine teacher hiring, but it emerged as an important factor as new teachers described their initial teaching experiences. We found that many new teachers are approaching teaching tentatively or conditionally, rather than as a lifelong career. If teaching does not fit their interests and skills, they may choose not to teach or to leave after a short time. From this, I hypothesized that schools' and districts' hiring practices might play an important role in determining whether there is an appropriate fit between new teachers and their schools and that this fit (or lack thereof) might influence their satisfaction and retention.

This hypothesis is consistent with research in organizational behavior and management studies that has found links between person-organization or person-job fit and work outcomes such as job satisfaction and intentions to quit (Cable & Judge, 1996; Kristof, 1996; Rynes, Bretz, & Gerhart, 1991). Very few of these studies, however, have examined person-organization fit between teachers and schools. Moreover, as Kristof (1996) notes in her review of the person-organization fit literature, we still do not have a clear understanding of how specific recruitment or hiring activities affect levels of person-organization fit.

Taken together, the existing literature suggests the following hypotheses linking the organization of teacher hiring to the experiences of new teachers: (1) Decentralized hiring may, on average, facilitate better information exchange between hirers and prospective teachers; (2) This may contribute to a better fit between teachers' positions and their interests, skills, and expertise; (3) New teachers who experience better fit may, on average, be more satisfied with teaching at their school and with teaching in general.

This paper explores the following questions, focusing primarily on the first two[2]:

- How are teachers currently being hired in New Jersey? For instance, how prevalent is centralized hiring versus decentralized hiring?
- From the point of view of new teachers, to what extent do their current teaching positions provide a good fit with their individual interests, skills, and expertise?
- Do new teachers who experienced either decentralized or highly interactive hiring report higher levels of fit between their current teaching positions and their interests, skills, and expertise, than new teachers who experienced either centralized or less interactive hiring?

[2] The third question will be explored in greater depth with the larger four-state study.

In each case, I investigate whether responses to these questions differed for teachers in charter schools, which represent a distinctive form of decentralization, and teachers in non-charter schools.

NEW JERSEY CONTEXT

The Project on the Next Generation of Teachers conducted this pilot-study in New Jersey, since New Jersey is experiencing teacher shortages and has a policy context that resembles those of the states that we plan to research in the larger four-state study: Massachusetts, Michigan, California, and Florida. We are interested in these states because, in addition to experiencing teacher shortages, they have alternative routes to teaching, charter school legislation, collective bargaining for teachers, and because they are regionally distributed across the United States. These state characteristics are particularly relevant for the study of teacher hiring. Shortage situations pose particular challenges for schools and districts, and they can alter the balance of power between hirers and candidates. Alternative routes provide the opportunity to examine whether individuals who take different paths to teaching and who have different credentials experience hiring differently from those who take more traditional paths. The presence of charter schools is important, because charter schools represent a particular form of decentralization within public education.

Accurate measures of the extent of teacher shortage in New Jersey are difficult to obtain or nonexistent. However, at the time we initiated our studies, press reports suggested that both urban and suburban districts were having difficulty filling teaching positions (Nussbaum, 2001a, 2001b). School districts as diverse as Cherry Hill and Newark began the 2000-2001 school year with many unfilled teaching positions. Moreover, teacher turnover has continued to be a main contributor to school staffing challenges. Karen Harcar-Morris, director of the New Jersey Department of Education's Office of Innovative Programs and Practices, estimated that over 5,000 teachers a year leave New Jersey classrooms, and that she expected that number to continue to rise (Nussbaum, 2001b).

According to the New Jersey Department of Education (New Jersey Department of Education, 2000b), as of 15 October 1999, New Jersey employed 5,029 teachers with less than 1 year of teaching experience (5.3% of the teaching force) and 14,468 teachers with 1-3 years of teaching experience (15.3% of the teaching force). Based on these numbers, we estimated that in the Fall of 1999, approximately 10.4% of the New Jersey teaching force (9,819 teachers) consisted of teachers in their first or second year.

New Jersey's sixteen-year old Alternate Route to Teacher Certification Program is a component of the state's Provisional Teacher Program. Since the program's inception, approximately 7,000 candidates have been certified through the program (Cifone, Hermann, & Sunderville, 2000), by participating in state-approved training programs while working as full-time, salaried teachers. Prospective candidates who acquire a statement of eligibility and are offered a job by a district then apply for a provisional license and entry to the program. Candidates teach, attend courses in the evenings or weekends, and are supervised by in-school support teams.

New Jersey enacted charter school legislation in 1996 and had 54 charter schools operating in the 2000-2001 school year. In their "2001 Scorecard and Ranking," the Center for Education Reform (Center for Education Reform, 2001) awarded New Jersey's Charter School legislation a "B," indicating that the law "allow[s] for healthy growth of charter schools but contain[s] some significant provisions that may impede growth." Finally, New Jersey is a collective bargaining state.

SAMPLE AND MEASURES

Sample

The sample for this study consists of 110 first-year and second-year New Jersey full-time, public school teachers (grades K-12).[3] This represents a response rate of 79%.[4] The sample was drawn using two-stage cluster sampling (Levy & Lemeshow, 1999; Light, Singer, & Willett, 1990; Louis M. Rea & Richard A. Parker, 1997). First, working from a list of schools in New Jersey from the U.S. Department of Education's *Common Core of Data*, we drew a random sample of 25 schools, with schools entering the sample in proportion to the number of new teachers in those schools.[5] In addition, we stratified by school level (elementary, middle, high) and by school type (charter/non-charter), and we over-sampled charter schools. See Appendix 1 for a flowchart of the sampling procedure.

We sent each school principal a letter, followed by a phone call, asking for names and teaching assignments of all first-year and second-year teachers in the building. We included in our sample all new teachers from each randomly selected school. As an incentive to complete the questionnaire, we offered each new teacher a $15 Amazon.com gift certificate for returning the questionnaire to us. See Appendix 2 for a summary of the final sample of schools and teachers.

Measures

I measured new teachers' experiences of hiring using an 85-item survey instrument that I administered to the sample of teachers. I designed this instrument based on a review of the hiring and questionnaire-design literatures (L. M. Rea & R. A. Parker, 1997; Sudman & Bradburn, 1982) and the *NCES School and Staffing Survey* (1999-2000).

The survey instrument contains items that:

- request basic demographic information about the new teachers (Age, Gender, Race, Marital Status, Educational Level);
- request information from the new teachers about their teacher preparation, school workplace, current teaching assignments, career stage, and views on career;

[3] Excluding Arts and Physical Education.
[4] We mailed questionnaires to 140 teachers; 110 of them completed and returned them.
[5] Since the number of new teachers in each school was unknown, we used a proxy—number of students—to stand in place of the size of the new teacher cohort per school (Levy & Lemeshow, 1999)

- ask about the people with whom teachers interacted during the hiring process, the materials they were asked to submit, and the activities they were asked to do as part of their applications;
- ask new teachers to characterize in broad terms the type of hiring that they experienced from decentralized to centralized (a categorical variable, CENTRAL, and a continuous variable, PCTDIST);
- ask new teachers about the fit between their skills, interests, and expertise and the positions they ultimately obtained (these items are composited to form a measure of fit with position, AVGFITPO, and fit with school, AVGFITSK);
- measure to what extent the hiring process provided candidates with information that might have helped them develop an accurate picture of the position and school (these items are composited to form a measure, PREVIEW);
- measure the new teachers' satisfaction with their schools and with teaching (SATSCH and SATTCHG).

STATISTICAL ANALYSES

In all of my data analyses, I use estimation methods that are appropriate for the complex design of my survey sample, with suitable cluster, strata, and sample weight designations incorporated into the analyses. To avoid biased point estimates and standard errors as a result of clustering and stratification effects, I use a family of commands in STATA Version 6 that are specifically designed to handle survey data.

To answer the question of how new teachers in New Jersey are being hired, I summarize several measures of hiring, calculating descriptive statistics and displaying data in a series of comparative tables and charts that describe how elements of the hiring process differ by school type (charter/non-charter). I also develop and summarize a composite measure (PREVIEW) that captures the extent to which new teachers report that the hiring process provided them with accurate pictures of their job and school. To do this, I conduct item analysis (examining contributions to Cronbach's Alpha Internal Consistency Reliability) and use principal components analysis to create a composite from the various sub-items.

To explore the fit between new teachers and their positions, I develop and summarize two composite measures (AVGFITPO, AVGFITSK), which I create using item analysis and principal components analysis.

PRESENTATION AND DISCUSSION OF FINDINGS

How New Teachers in New Jersey Are Being Hired

Approximately thirty percent (30.4%) of new teachers report experiencing a highly *decentralized* hiring process for their current position. These individuals applied directly to and were offered a position by a specific school. Another thirty-five percent (34.7%) report experiencing either moderately decentralized or moderately centralized hiring. A final thirty-five percent of new teachers (34.7%) report experiencing a highly *centralized* hiring process. They were hired by the district central office and then assigned by the central office to a specific school. See Table 2 for a summary of new teachers' responses.

Table 2: New teachers' responses to a question asking them: "Which of the following best describes how you were hired?" with standard errors in parentheses (n=87). Variable name: CENTRAL.

	No. of Observations in Sample	Estimated Proportions in Population (using sample weights)
1 – HIGHLY DECENTRALIZED: Applied directly to a specific school and was offered a position by that school.	49	30.4 % (7.0)
2 – MODERATELY DECENTRALIZED: Screened by district central office (with no guarantee of job), then interviewed with and offered a job by a specific school.	13	19.5 % (5.8)
3 – MODERATELY CENTRALIZED: Offered a job by district office, then had to interview in the district to find a specific teaching position.	9	15.4 % (5.7)
4 – HIGHLY CENTRALIZED: Offered a job by district central office, then assigned to a specific school by district.	16	34.7% (9.0)

The above table and discussion somewhat overstate the proportion of new teachers that experience centralized hiring, however. Those teachers who chose response number 3 (moderately centralized) might also have participated in a considerable amount of hiring activity at the school level. Although they were offered a job by the district office, they still interviewed with specific schools to find a position and thus engaged in many of the same decentralized hiring interactions as new teachers who chose responses 1 (highly decentralized) or 2 (moderately decentralized). Another way to view the data, then, is to focus on the finding that only 35% of new teachers are hired entirely by the district office (i.e., experienced highly centralized hiring), while 65% are hired through processes that involve some interaction with the school site.

Another variable, PCTDIST, also provides a broad measure of the level of hiring centralization or decentralization that new teachers experience. Asked to estimate what

percentage of their time was spent interacting with the central district office during the hiring process for their current positions, new teachers give a weighted mean response of 44 percent (se: 4.5 percent).

Both of the above measures provide a very general description of the types of hiring that new teachers in New Jersey experience. They seem to suggest that one-half to two-thirds of new teachers experience hiring processes with considerable levels of decentralization and that, on average, new teachers spend more time interacting with specific schools than with central district offices. However, finer-grain data from survey items that ask about interviews, submitted materials, and teaching exhibitions complicate this picture. These data suggest that most teachers, even those who report experiencing what might be broadly characterized as decentralized hiring, have limited interactions with school-based personnel prior to accepting their positions. They thus point to an important distinction between the *locus* of hiring activities and the *nature* of these activities. Just because certain schools have control over hiring doesn't mean they will conduct hiring in ways that take advantage of this control.

Interviews

Interviews are one of most interactive parts of the hiring process and a potentially rich source of information for schools, districts, and teaching candidates. It is not surprising that almost all new teachers in New Jersey (93.1%) participated in at least one interview for their current positions. This is true for both non-charter school teachers (93.0%; se: 2.9) and charter school teachers (100.0%; se: 0.0). However, there are some differences between non-charter school and charter school teachers in the number of interviews they have and the identities of the people with whom they interview.

How Many Interviews? – Overall, new teachers in New Jersey report participating in an average of 1.77 interviews (se: .10) for their current positions. Non-charter school teachers, however, participate in more interviews than charter school teachers. Non-charter school teachers have an average of 1.78 interviews (se: .11), while charter school teachers have an average of only 1.26 interviews. The difference between these two averages is statistically significant ($p<.01$).

Table 2: Interviews

Selected weighted statistics regarding interviews for the position that new teachers ultimately obtained, reported by total population of new teachers, non-charter school teachers, and charter school teachers (with standard errors in parentheses).

	Total	Non-Charter (NC)	Charter (CH)	CH-NC
Percentage of new teachers who participated in at least one interview (n=110)	93.1 (2.9)	93.0 (3.0)	100.0 (0.0)	7.0
Percentage of new teachers who participated in group interviews (n=110)	53.2 (11.8)	53.8 (12.0)	17.0 (8.5)	-36.8 *
Mean number of interviews per teacher (n=110)	1.77 (.10)	1.78 (.11)	1.26 (.13)	-0.52 **

~ p<.10, * p<.05, **p<.01, *** p<.001

What might account for this difference? One explanation might be that charter school teachers participate in fewer interviews but that more of these interviews are group interviews with multiple interviewers. If this were the case, there might ultimately be no difference in the number of individuals with whom charter school and non-charter school teachers interact during the hiring process (and thus potentially no difference in the amount and quality of information they receive about the school or position). This, however, does not seem to be the case, since charter school teachers are significantly *less* likely to participate in group interviews than non-charter school teachers. Seventeen percent of charter school teachers participate in group interviews while fifty-three percent of non-charter school teachers participated in group interviews (the difference is statistically significant at the .05 level).

Another explanation might be that the higher average number of interviews for non-charter school teachers simply reflects the fact that many of these teachers interview at both the district and school levels, while charter school teachers interview solely at the school level. While this explanation is plausible (and some data in the next section partially support it), it does not seem to entirely explain the observed difference since the average number of interviews for the subset of non-charter school teachers who participate in highly decentralized hiring and thus do not interview at the district level is still higher at 1.55 (se: .14) than the average for charter school teachers (1.26), though this difference is not statistically significant (p=.31).

This leads to the conclusion that, at least with interviews, charter schools may not be taking full advantage of decentralized hiring in the sense of providing both hirers and candidates with multiple interactions with one another. This becomes even clearer upon examination of the identities of the personnel with whom non-charter school and charter school teachers interview.

With Whom Do New Teachers Interview? – Table 3 presents a list of school and district actors and the percentages of all new teachers, new non-charter school teachers, and new charter school teachers in New Jersey who interview with each. The school principal appears to dominate the interviewing process. Almost eighty percent of new teachers in New Jersey interview with the school principal, and this is true for both non-charter and charter school teachers. After the principal, the percentage of new teachers who interview with any given school- or district-related individual drops considerably. Approximately thirty-five percent (34.9%; se: 12.6) of new teachers interview with the district superintendent, and not surprisingly almost all of these teachers are non-charter school teachers.[6] Thirty-one percent of all new teachers interview with the district personnel or human resources office, and, again, most of these teachers are non-charter school teachers. Approximately one quarter of new teachers (27.6%; se: 7.8), whether non-charter or charter, interview with other school administrators besides the principal.

While relatively high percentages of new teachers interview with school and/or district administrators, very small percentages of new teachers interview with current

[6] In general, the vast majority of charter schools are independent entities that are not part of any school district. Thus, charter school teachers would not be expected to interview with district personnel such as superintendents or personnel officers. There are some charter schools, however, that are started under the auspices of a school district. These are sometimes referred to as "within district charter schools." The small numbers of charter school teachers who answered that they did interview with a district actor might have been individuals who work at such schools. Or they may have interviewed with a central office and were then referred to a local charter school that was physically within the boundaries of the district.

teachers, parents, or students. Fewer than one in five new teachers (19.2 %, se: 9.0) interview with a teacher at the school; about one in twenty-five interview with a parent (4.0%, se: 2.6); and none (at least in this study) interview with a student. Surprisingly, charter school teachers are quite a bit *less* likely to interview with a current teacher or parent than non-charter school teachers. Only 4.8% (se: 2.3) of charter school teachers interview with a teacher, and only 0.5% of them interview with a parent. The differences between these percentages and those of non-charter school teachers are significant at the .05 and .10 levels respectively.

Table 3: The Individuals With Whom New Teachers Interview (n=110)

Estimated percentages of new teachers (weighted) who interviewed with the following individuals as part of the hiring process, reported by total population of teachers, non-charter school teachers, and charter school teachers (with standard errors in parentheses). CH-NC is the difference between the percentages of charter and non-charter school teachers.

	Total n=110	Non-Charter (NC) n=82	Charter (CH) n=28	CH-NC
School principal	78.7 (6.0)	78.7 (6.1)	80.2 (9.6)	1.5
Superintendent	34.9 (12.6)	35.5 (12.8)	3.3 (2.5)	-32.3***
District personnel/HR office	31.2 (11.6)	31.7 (11.8)	6.8 (5.0)	-24.9*
Other school administrator(s)	27.6 (7.8)	27.6 (7.9)	24.8 (13.7)	-2.8
Teacher(s) at the school	19.2 (9.0)	19.5 (9.1)	4.8 (2.3)	-14.7*
Department chair at school	11.3 (2.8)	11.5 (2.8)	0.0 (0.0)	-11.5
Parent(s) at the school	4.0 (2.6)	4.1 (2.6)	0.5 (.6)	-3.6~
Student(s) at the school	0.0 (0.0)	0.0 (0.0)	0.0 (0.0)	0.0

~ p<.10, * p<.05, **p<.01, *** p<.001

These data suggest that, at both the district and school levels, hiring continues to be dominated by administrators. While teachers, parents, and students might have valuable insights for evaluating candidates and might also provide candidates with useful information about what a school is like, very few new teachers have opportunities to interact with them, at least in the interview part of the hiring process. Even charter schools, which represent a distinctive form of decentralized hiring, do not have new teachers interact with current teachers, parents, or students at the school. This point is further illustrated when one compares the average number of school personnel types with whom non-charter school and charter school teachers interview.

By counting the number of school-based personnel types with whom teachers interview (i.e., principal, department chair, other administrator, teacher, student, parent)

one can construct a very rough measure of the breadth of perspectives to which new teachers are exposed during their hiring interviews (I call this variable, INTLOC, for interviews with local actors). On average, non-charter school teachers in New Jersey interview with 1.31 (se: .11) different school personnel types while charter school teachers interview with 1.07 (se: .10). Thus, charter school teachers interact with a narrower range of school-based actors than non-charter school teachers and thus may be exposed to a narrower set of perspectives (most likely just that of the principal) and less diverse sources of information about the school. This finding is somewhat surprising. It suggests that while charter schools carry out school-based hiring, their hiring activities may be very principal-driven. In other words, *within* charter schools hiring activity may be centralized. This may be because charter school principals tightly control the decision making within their schools, or it may be a response to the many operational challenges of start-up organizations. Most charter schools are quite young—the charter schools in our sample had been in existence for an average of 2.4 years—and teachers within them may simply be too busy to participate in hiring activities.

The picture that emerges from an examination of the data about hiring interviews, then, is one in which most new teachers—both those who experience centralized hiring and those who experience decentralized hiring—have relatively limited interactions with school-based personnel.

Submitted Materials & Teaching Demonstrations

Table 4 presents a list of application materials and the percentages of all new teachers, new non-charter school teachers, and new charter school teachers in New Jersey who submit each as a part of their application for their current positions. The materials are ordered from the most frequently submitted to the least frequently submitted, for the total population of new teachers.

Table 4: Application Materials (n=110)

Estimated percentages of new teachers (weighted) who submitted the following materials as part of their application, reported by total population of new teachers, non-charter school teachers, and charter school teachers (with standard errors in parentheses).

	Total n=110	Non-Charter (NC) n=82	Charter (CH) n=28	CH-NC
Resume	99.7 (.3)	99.7 (.3)	97.3 (2.8)	-2.4~
Cover Letter	86.1 (3.1)	86.0 (3.1)	92.9 (6.0)	6.9
Undergraduate transcript	79.8 (6.6)	79.9 (6.7)	71.6 (17.8)	-8.4
References	76.8 (8.0)	76.7 (8.2)	83.3 (8.6)	6.7
Teacher test scores	58.0 (7.7)	58.0 (7.8)	58.4 (19.6)	0.4
Portfolio	47.1 (5.9)	46.6 (5.9)	74.1 (15.3)	27.5
Lesson Plan	38.6 (8.7)	38.3 (8.7)	60.7 (20.2)	22.4
Writing sample or essay	23.0 (5.2)	23.3 (5.4)	5.1 (3.7)	-18.2*
Graduate transcript	14.4 (4.9)	14.5 (5.0)	7.8 (5.1)	-6.8
Videotape of sample lesson	13.2 (5.3)	13.4 (5.4)	2.2 (2.0)	-11.2*
Other test scores	10.7 (5.5)	10.0 (5.5)	47.2 (24.9)	37.2*

~ p<.10, * p<.05, **p<.01, *** p<.001

The vast majority of new teachers submit standard documents such as resumes, cover letters, academic transcripts and references. In addition, sizeable percentages of new teachers submit two teaching-specific materials that require more effort to prepare. Forty-seven percent of new teachers (47.1%; se: 5.9) submit portfolios while thirty-nine percent of new teachers (38.6%; se: 8.7) submit lesson plans. For these two elements, there are large differences between non-charter and charter school teachers, though these differences do not rise to the level of statistical significance. Charter school teachers are more likely to submit these two materials than non-charter school teachers. Seventy-four percent of charter school teachers submit portfolios (74.1%, se: 15.3) while only forty-seven percent of charter school teachers do (46.6%; se: 5.9). Sixty-one percent of charter school teachers submit lesson plans while thirty-eight percent of non-charter school teachers do (38.3%; se: 8.7).

Charter school teachers are less likely to submit writing samples or videotapes of sample lessons than non-charter school teachers, however. Only 5.1% (se: 3.7) of charter

school teachers submit writing samples or essays, while 23.3% (se: 5.4) of non-charter school teachers do. This difference is statistically significant. Similarly, only 2.2% (se: 2.0) of charter school teachers submit videotape of a sample lesson, while 13.4% (se: 5.4) of non-charter school teachers do. This difference, too, is statistically significant.

On balance, it appears that charter school teachers submit a broader range of materials than non-charter school teachers as part of their applications. Seven of the application materials in Table 4 are submitted by more than half of charter school teachers. Only five of them are submitted by more than half of non-charter school teachers. This suggests that, while charter schools may be collecting less information about candidates through interviews, they may be collecting more written information on candidates than non-charter schools.

Written application materials, however, transmit information in only one direction, from candidate to hirer. While some might argue that by requiring certain materials, schools and districts can send signals to candidates about what they value, these signals are quite weak. As Spence (Spence, 1973, 1974) has argued, in order for a signal to be credible and useful for differentiating oneself from others, it must be more costly or difficult for some senders to enact than for others. Requiring the submission of materials is quite easy and is no more costly for one school or district to do than another. For instance, it is no more difficult for a school that does not value lesson planning to require candidates to submit a lesson plan than it is for a school that highly prizes careful lesson planning. Thus, the act of requiring a lesson plan does not provide unique information that would allow a teaching candidate to distinguish between the two types of schools.

While written applications materials transmit information in one direction, the same is not true of teaching demonstrations. On the surface, requiring candidates to teach a lesson while being observed might appear to be quite similar to requiring them to submit a specific written material. It seems to be an activity that provides hirers with information for evaluating candidates. From an organizational standpoint, however, arranging a teaching demonstration is quite difficult. First of all, it requires time, a scarce resources in most schools. Principals have to find time to conduct the observation.[7] Teachers at the school, if they are to be involved with observing, need to be released from their classes and substitutes found to cover for them. Coordinating individuals' schedules, finding a place to hold the demonstration, imposing on a teacher's class to have the candidate teach a lesson with his or her students all require considerable effort. In this way, requiring teachers to demonstrate their teaching while being observed can send a strong signal to candidates about a school's values and priorities regarding teaching or about the quality of a school's management—schools that are better managed and organized would find it easier to arrange an exhibition and be more likely to do it. Moreover, to the extent that teaching demonstrations involve some interactive component or discussion, they exchange information directly between schools and candidates.

[7] Some might argue that evaluating written application material requires time and skill, also. True, but candidates have no way of knowing what schools or districts actually do with their materials after they have been submitted (and, in fact, schools and districts might not read most of the materials). From the point of view of the candidate, the school's commitment of resources is simply to collecting the material, which is very easy to do. Thus, requiring specific materials still sends a very weak signal, at best.

So it is interesting, then, that charter school teachers are much more likely to be observed teaching a lesson than non-charter school teachers— 51.1% (se: 23.6) of charter school teachers, as opposed to 22.8% (10.9) of non-charter school teachers. While the difference is not statistically significant given the large standard errors for the point estimates, it is still quite large. This finding may help explain a somewhat puzzling finding in the data: despite having fewer interviews with school-based personnel, charter school teachers agree more strongly than non-charter school teachers with the assertion that they formed an accurate picture of their schools from the hiring process.

Reported Accuracy of the Pictures New Teachers Formed of Their Schools

On average, new teachers in New Jersey report that they form only moderately accurate pictures of their school from the hiring process. The composite variable PREVIEW measures the extent to which new teachers feel they formed an accurate picture of their individual schools from the hiring process (Cronbach's alpha reliability = .90). The composite is formed from the average of eight items that are each measured on a five-point Likert scale, with "1" indicating strong disagreement and "5" indicating strong agreement (See Appendix 3). New teachers in New Jersey have an average (weighted) PREVIEW value of just 3.37 (se: .19), which corresponds to a response between "Neutral" and "Agree Somewhat" with the general proposition that they formed an accurate picture of what their school was like from the hiring process.

Charter school and non-charter school teachers in New Jersey differ somewhat in their average PREVIEW values. Charter teachers agree a bit more strongly with the assertion that they formed accurate pictures of their schools from the hiring process (PREVIEW = 3.61; se: .29) than do non-charter school teachers (PREVIEW=3.31; se: .20). This difference, though, is not statistically significant (t= .84; p=.41). It would be somewhat surprising if, with a larger sample of new teachers, this difference holds and is statistically significant, since charter school teachers have fewer interviews with school personnel than non-charter school teachers. However, were this to be the case, the difference might be explained by differences in the content and nature of interviews in charters school as opposed to non-charter schools. While charter school teachers might participate in fewer interviews, they may have richer and more substantive discussions in these interviews. Also, as was mentioned in the previous section, charter school teachers may receive information about what a school is like through non-interview interactions such as teaching demonstrations.

Reported Fit Between New Teachers' Skills, Interests, and Expertise and Their Teaching Positions

Table 5 presents statistics describing the reported fit between new teachers and their positions (AVGFITPO) and between new teachers and their schools (AVGFITSK). The two measures are composite variables with high levels of internal reliability— Cronbach's alpha is .79 for AVGFITPO and .88 for AVFITSK. See Appendix 4.

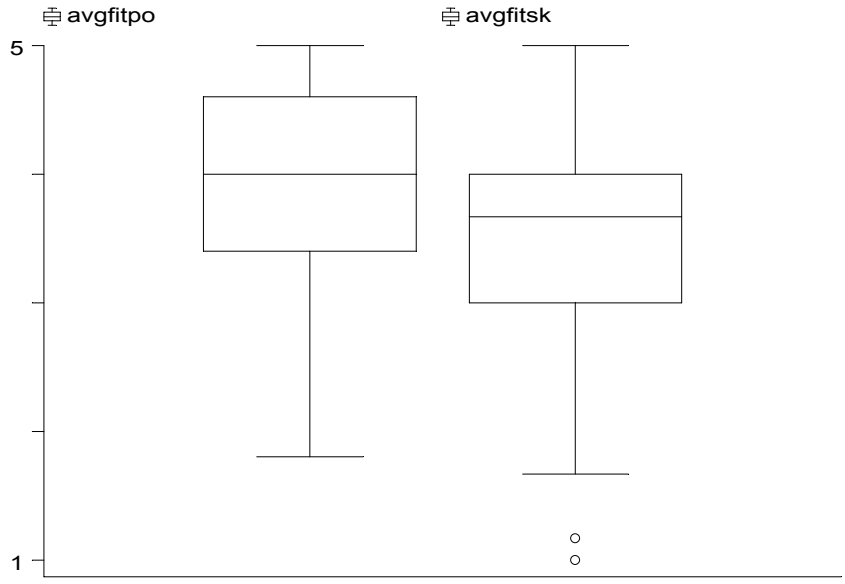
Table 5: Measures of Fit with Position and School (n=110).
Mean fit with position and school as reported by new teachers in New Jersey, by total population of teachers, non-charter school teachers, and charter-school teachers (standard errors in parentheses). The scale for these measures ranges from 1=very poor match to 5=very good match.

	Total	Non-Charter (NC) n=82	Charter (CH) n=28	CH-NC
Mean fit with position [AVGFITPO]	4.01 (.11)	4.01 (.11)	3.67 (.13)	-0.34~
Mean fit with school [AVGFITSK]	3.61 (.12)	3.61 (.13)	3.66 (.23)	0.05

~ p<.10, * p<.05, **p<.01, *** p<.001

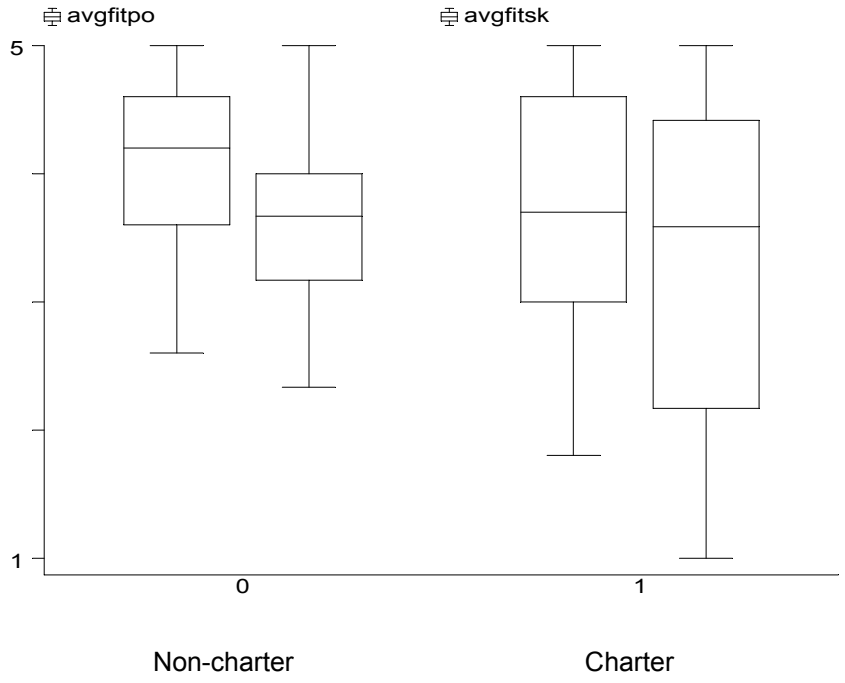
Overall, new teachers report a "good" fit with their position (mean AVGFITPO = 4.01; se: .11) and just a "moderate" to "good" fit with their school (mean AVGFITSK = 3.61; se: .12). The .40 difference between new teachers' mean fit with position and their mean fit with school is statistically significant (t=4.514; p<.001), though it largely reflects the differences in non-charter school teachers responses, which are weighted more highly. Figure 1 presents box plots depicting the distribution of unweighted AVGFITPO and AVGFITSK values for new teachers in New Jersey.

Figure 1 - Box plots depicting the distribution of unweighted values of AVGFITPO (fit with position) and AVGFITSK (fit with school) for new teachers in New Jersey (n=110). Scale runs from 1=very poor match to 5=very good match.



The comparison between non-charter school teachers and charter school teachers is interesting. Non-charter school teachers report a better fit with their position as charter school teachers (4.01 versus 3.67), and the difference is significant at the .10 level. On the other hand, they report about the same level of fit with school than charter school teachers (3.61 versus 3.66). Figure 2 presents box plots depicting the distribution of unweighted AVGFITPO and AVGFITSK values for non-charter school teachers and charter school teachers in New Jersey.

Figure 2 - Box plots depicting the distribution of unweighted values of AVGFITPO (fit with position) and AVGFITSK (fit with school) for non-charter school and charter school teachers in New Jersey (n=110). From left to right: non-charter AVGFITPO, non-charter AVGFITSK, charter AVGFITPO, charter AVGFITSK. Scale runs from 1=very poor match to 5=very good match.



The differences between charter school and non-charter school teachers' fit with position could be explained by the fact that many charter schools are small, young organizations and may thus have more fluid and loosely-defined positions and structures. Charter school teachers may thus be asked to take on responsibilities outside their expertise or comfort areas, or perhaps teach multiple subjects. Another possibility is that, attracted by a specific charter school with a distinctive identity, individuals may make trade-offs and accept less than ideal positions (i.e., positions that do not fit their skills, interest or expertise that well), with the hope that as the school grows they may have opportunities to move into positions that provide a better fit. In other words, they might accept an initial position just to get their foot in the door at the school.

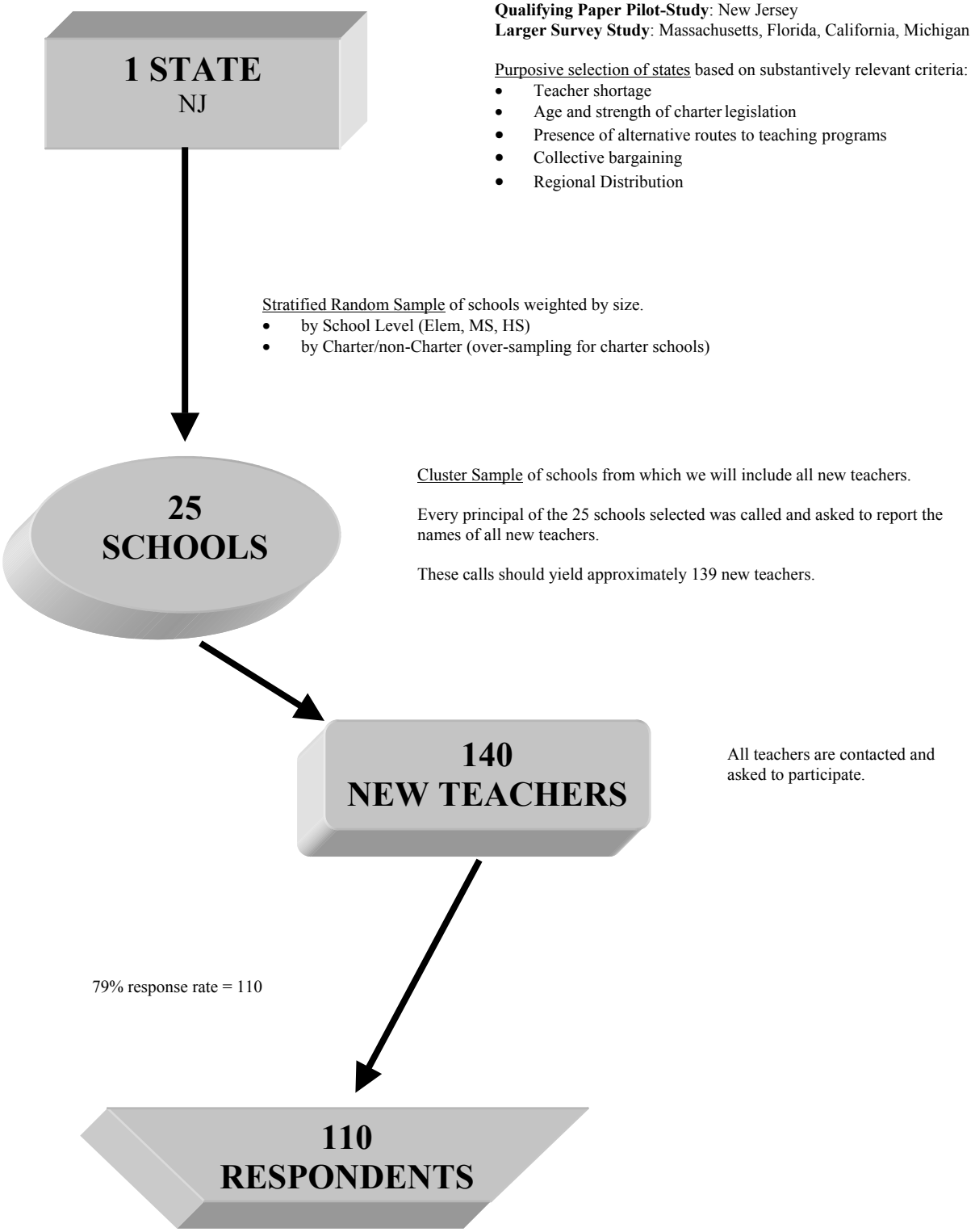
CONCLUSIONS AND IMPLICATIONS

My analysis has revealed that almost one third of new teachers in New Jersey are hired through a highly decentralized process; another third are hired through a highly centralized process; and a final third are hired through either a moderately centralized or a moderately decentralized process. My findings also suggest, however, that many schools may not be taking full advantage of decentralized hiring and its potential for improving the amount and quality of information exchanged between hirers and teaching candidates. New teachers in New Jersey—both those who experience centralized hiring and those who experience decentralized hiring—interact with a small number of school-based personnel, and they form only moderately accurate pictures of their schools prior to accepting their positions. This suggests that many new teachers may be surprised by what they find in their schools. Their expectations about what they would be doing and what their work environment would be like may not be met. To the extent that this may contribute to new teachers' dissatisfaction and turnover, this should be somewhat troubling.

These findings, while preliminary and limited by the small sample size, point to the importance of carefully designing hiring activities to take advantage of decentralization. Just because many schools may have significant control over hiring does not mean that they are using or know how to use hiring practices that generate quality information for both hirers and candidates. In other words, decentralized hiring does not automatically translate into more interactive hiring.

For researchers, these findings also suggest that many different hiring activities—even those that appear to provide information to hirers—can be viewed as providing information to candidates as well. Teaching demonstrations are an example of this.

Appendix 1:
Flowchart of Multi-Stage Sampling Plan For New Jersey Pilot-Study



Appendix 2:
Description of Final Sample of Schools and Teachers

Table A1. Description of School Sample from New Jersey (n=24)

	Total	*Non-charter*	*Charter*
Elementary School	15	12	3
Middle School	5	4	1
High School	4	3	1

Table A2. Description of the New Teacher Sample from New Jersey (n=110), constructed using two-stage cluster sampling. Counts and percentages are unweighted. Percentages may not add up to 100 due to rounding.

	n	%
Experience		
First-Year Teacher	63	57
Second-Year Teacher	47	43
First Career	59	54
Mid Career	51	46
School Type		
Elementary School	64	58
Middle School	19	17
High School	27	25
Non-Charter School	82	75
Charter School	28	25
Gender		
Female	82	75
Male	28	25
Race		
White	97	88
Hispanic/Latino	8	7
African American	4	4
Unknown	1	1
Age		
21–29	70	64
30–39	24	22
40–49	11	10
50–59	4	4
60	1	1

Appendix 3:
Item Analysis and Principal Components Analysis for PREVIEW

Table A3. Results of Item Analysis: Estimated Cronbach Alpha Coefficients (estimated reliabilities) for a composite of nine variables measuring the extent to which new teachers were able to form accurate pictures of certain aspects of the school from the hiring process, as well as for nine other composites in which only eight out of the nine variables are composited (i.e., one variable is excluded)

Excluded Variable	Alpha
NONE	**.903**
PICT (Accurate picture of teachers)	.891
PICSTUD (Accurate picture of students)	.892
PICPRIN (Accurate picture of principal's leadership style)	.892
PICCURR (Accurate picture of curriculum)	.905
PICASSGN (Accurate picture of teaching assignment)	.890
PICSUPP (Accurate picture of school support)	.889
PICAUT (Accurate picture of level of autonomy)	.889
PICSHAPE (Accurate picture of opportunity to shape school)	.890
PICPHIL (Accurate picture school's philosophy)	.881

PICASSGN was dropped after the item analysis and was not included in the principal following components analysis, since excluding it from the composite increased Cronbach's Alpha (i.e., reliability) very slightly.

Table A4. Results of Principal Components Analysis of Eight Variables
measuring the extent to which new teachers were able to form accurate pictures of certain aspects of the school from the hiring process.

Principal Components	Eigenvalues
1	4.84
2	.88
3	.61
4	.45
5	.38
6	.32
7	.30
8	.21

Variable	Eigenvector PC1	Eigenvector PC2
PICT	.356	.391
PICSTUD	.315	.552
PICPRIN	.336	.422
PICCURR	.347	-.387
PICSUPP	.339	-.101
PICAUT	.362	-.296
PICSHAPE	.365	-.290
PICPHIL	.401	-.183

The second column of Table A4 displays the eigenvalues for each of the principal components. The first component has a much higher eigenvalue (4.84) than the other seven and accounts for 60% of the total variance. A scree plot of eigenvalues versus the component numbers indicates that the first two components are important.

The first component can be composited to form an indicator (PREVIEW) that gives a measure of the extent to which new teachers were able to form an accurate picture of the school as a whole from the hiring process. Examination of the eigenvectors (loadings) of each variable on the first principal component shows that the eight variables contribute almost equally. To score high on this component, an individual would have to score high on each variable.

The second principal component is also important although it accounts for just 11% of the total variance. Examination of the eigenvectors of each variable on this principal component suggests that it measures the extent to which new teachers were able to form an accurate picture of the people (teachers, principal, and students) at the school. However, I did not use it for this pilot study

Appendix 4: Item Analysis and Principal Components Analysis for AVGFITPO and AVGFITSK

Table A5. Results of Item Analysis for AVGFITPO: Estimated Cronbach Alpha Coefficients (estimated reliabilities) for a composite of five variables measuring fit with different aspects of position, as well as for five other composites in which only four out of the five variables are composited (i.e., one variable is excluded)

Excluded Variable	Alpha
NONE	**.790**
FITKNOW (Fit with subject matter knowledge)	.759
FITINT (Fit with subject matter interests)	.761
FITSKILL (Fit with other skills and talents)	.765
FITLVL (Fit with grade level)	.728
FITSTUD (Fit with student population that they teach)	.737

The results of the item analysis suggests that a composite for AVGFITPO is most reliable when all five variables are composited together.

Table A6. Results of Principal Components Analysis of Eight Variables measuring fit with the different aspects of fit with the position.

Principal Components	Eigenvalues
1	2.79
2	.96
3	.60
4	.38
5	.27

Variable	Eigenvector PC1	Eigenvector PC2
FITKNOW	.457	-.535
FITINT	.451	-.541
FITSKILL	.405	.379
FITLVL	.465	.290
FITSTUD	.455	.440

The second column of Table A6 displays the eigenvalues for each of the principal components. The first component has a higher eigenvalue (2.79) than the other four and accounts for 56% of the total variance. A scree plot of eigenvalues versus the component numbers indicates that the first two components are important.

The first component can be composited to form a measure of overall fit with position (AVGFITPO). Examination of the eigenvectors (loadings) of each variable on the first principal component shows that the five variables contribute almost equally. To score high on this component, an individual would have to score high (report a high level of fit) on each variable.

The second principal component is also important and accounts for another 19% of the total variance. Examination of the eigenvectors of each variable on this principal component suggests that it measures fit with non-subject-matter aspects of the position. However, I did not use this component for this pilot study

Table A7. Results of Item Analysis for AVGFITSK: Estimated Cronbach Alpha Coefficients (estimated reliabilities) for a composite of six variables measuring fit with school, as well as for six other composites in which only five out of the six variables are composited (i.e., one variable is excluded)

Excluded Variable	Alpha
NONE	**.876**
FITPHIL (Fit with personal educational philosophy)	.844
FITAUT (Fit with preferred level of autonomy)	.867
FITDISC (Fit with views on discipline)	.869
FITCOLL (Fit with amount of collaboration desired)	.864
FITDDEC (Fit with amount of input on school decisions)	.840
FITDDEC (Fit with amount of input on department or grade level decisions)	.847

The results of the item analysis suggests that a composite for AVGFITSK is most reliable when all six variables are composited together.

Table A8. Results of Principal Components Analysis of Eight Variables measuring fit with different aspects of school.

Principal Components	Eigenvalues	Variable	Eigenvector PC1
1	3.72	FITPHIL	.432
2	.65	FITAUT	.379
3	.58	FITDISC	.372
4	.51	FITCOLL	.389
5	.33	FITSDEC	.445
6	.21	FITDDEC	.428

The second column of Table A8 displays the eigenvalues for each of the principal components. The first component has a much higher eigenvalue (2.79) than the other four and accounts for 62% of the total variance. A scree plot of eigenvalues versus the component numbers indicates that the first components is important.

The first component can be composited to form a measure of overall fit with school (AVGFITSK). Examination of the eigenvectors (loadings) of each variable on this principal component shows that the six variables contribute almost equally. To score high on this component, an individual would have to score high (report a high level of fit) on each variable.

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