

New Teachers' Experiences of Hiring: Late, Rushed, and Information-Poor

Edward Liu
Susan Moore Johnson

Purpose: Teacher hiring decisions have far-reaching consequences for a school, its students, and faculty. This article examines how new teachers in four states are hired and explores whether the process leads to good matches between these individuals and their schools. The authors conceive of hiring as a two-way process and examine the extent to which the hiring process provides opportunities for prospective teachers and schools to collect rich information about, and form accurate impressions of, one another.

Research Methods: This study surveyed a representative random sample of 486 first-year and second-year teachers in California, Florida, Massachusetts, and Michigan. Participants were chosen using two-stage stratified cluster sampling, and the study achieved a response rate of 65%. Statistical methods used in the analysis include principal components analysis, chi-square analysis, and t tests.

Findings: The data reveal that the majority of new teachers in these states are hired through a decentralized, school-based process. Despite the opportunity this provides schools and prospective teachers to explore the potential match between them, most new teachers actually have limited interactions with school-based personnel during the hiring process, and the process is relatively information-poor. Many new teachers are also hired quite late—more than one third of new teachers in California and Florida are hired after the school year has already started.

Implications: The results of our analysis suggest that shifting hiring decisions to the school level is not sufficient to guarantee information-rich hiring. They also suggest that schools may need help removing barriers to conducting more information-rich hiring.

Keywords: teacher hiring; personnel; human resources

In recent years, the issue of teacher quality has once again risen to the top of the school reform agenda. The federal *No Child Left Behind Act of 2001* (NCLB) introduced sweeping new regulations requiring that all teachers in core academic subjects be “highly qualified” by 2005–2006. These new mandates pose significant challenges for schools and districts at a time when they

are also seeking to hire 2.2 million new teachers in the course of the decade (Hussar, 1999).

The NCLB regulations fall in a long tradition of efforts to raise minimum standards for teachers. Although improving teacher qualifications is important, it is also important to consider whether district hiring practices are effectively matching new teachers to schools and positions. Good matches between teachers and their jobs are important for two reasons. First, a good match can be an important contributor to teacher effectiveness. No two schools and no two teaching positions are the same. The skills, knowledge, and dispositions needed to be effective teaching Advanced Placement chemistry in an affluent, suburban, and homogeneous high school are different from those needed to teach untracked general science in a working-class, urban, and heterogeneous middle school. Thus, a new teacher's effectiveness in working with students may depend not only on her general qualifications but also on the fit between her particular skills, knowledge, and dispositions and the school position she has been hired to fill.

Second, the fit between a new teacher and his position can have implications for his job satisfaction and retention. If a position does not closely match a new teacher's preparation, interests, or preferences, he may quickly become dissatisfied and not stay in the job (or in teaching) for long. Research has long shown that, as a group, teachers are highly motivated by intrinsic, or psychic, rewards (Johnson, 1986; Lortie, 1975). In a longitudinal study of the early careers of 50 Massachusetts teachers, Johnson and Birkeland (2003) found that, although financial considerations were certainly a factor, the new teachers' decisions on whether to stay in teaching, switch schools, or exit the profession were heavily influenced by their "sense of success" in the classroom. To the extent that a poor fit compromises a new teacher's effectiveness on the job and therefore her sense of success, it may contribute to her leaving her school or exiting teaching altogether. Approximately 30% of new teachers leave the classroom within 3 years of entering the profession, and 40% to 50% leave within 5 years (Huling-Austin, 1990; Ingersoll, 2002; Ingersoll & Smith, 2003; Murnane, Singer, Willett, Kemple, & Olsen, 1991). These high

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levels of attrition have serious consequences for schools and the students they serve.

This study builds on an earlier qualitative study, which suggested the importance of hiring as a potential factor influencing the satisfaction of new teachers and their retention (Johnson & The Project on the Next Generation of Teachers, 2004; Kardos, Johnson, Peske, Kauffman, & Liu, 2001; Kauffman, Johnson, Kardos, Liu, & Peske, 2002; Peske, Liu, Johnson, Kauffman, & Kardos, 2001). In that study, we did not set out to examine teacher hiring and the fit between new teachers and their positions, but these emerged as important themes when new teachers described their early career experiences and their decisions about whether to stay in teaching.

This research also seeks to address a gap in the literature on teacher selection and hiring. During the past two decades, research on teacher recruitment and selection has generated important insights into the decision making of applicants and school administrators who are involved in hiring. Most of this research has been “experimental rather than applied” (Young & Delli, 2002) and has involved researchers manipulating the content, format, and delivery of information presented to study participants under controlled conditions (e.g., simulated interviews or résumé reviews) and observing the decisions participants make. To date, however, there has been relatively little research on how schools and districts actually organize and conduct teacher hiring across a broad range of contexts. Moreover, as Young and Delli (2002) have noted, there has been relatively little research in the field of education on the relationship between the hiring process and posthire outcomes.

Thus, in this article we explore how new teachers are being hired in four states—California, Florida, Massachusetts, and Michigan—and present findings from a survey of a representative random sample of 486 new teachers. We conceive of hiring as a two-way process and examine the extent to which the hiring process provides opportunities for prospective teachers and schools to collect rich information about, and form accurate impressions of, one another. Such opportunities are an important prerequisite for achieving good matches between individuals and schools. After reviewing related literature, we introduce the idea of an “information-rich hiring process” and then use this concept to frame our presentation and discussion of the data. Rather than probing the intricacies of a single type of hiring activity, we attempt to provide a broader, “bird’s-eye” view of the full set of opportunities that candidates and school personnel involved in hiring have to learn about one another. We conclude this article by discussing the implications that our findings have for the fit between new teachers and their schools and for new teacher effectiveness, satisfaction, and retention.

RELATED LITERATURE

Recent research suggests that public schools may not be hiring the best teaching 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 notes, contrasts starkly with the patterns in other fields and suggests that, when hiring new teachers, “school districts . . . place little or no weight on measures of academic achievement and cognitive ability that are valued in other professions” (Ballou & Podgursky, 1997, p. 85). Ballou, however, did not examine hiring practices directly.

A recent report by the New Teacher Project (Levin & Quinn, 2003), a not-for-profit organization that works with school districts to improve staffing practices, suggests a different explanation for the pattern that Ballou observed. Levin and Quinn (2003), the authors of the report, documented the negative effects of late hiring in four urban districts. They used applicant tracking data and telephone and e-mail surveys to quantify the length of hiring delays and to examine their impact on applicant attrition. Their analysis revealed that, although these districts were successful in recruiting large numbers of applicants, the drawn-out hiring process led many of the strongest candidates—candidates with the highest grade point averages and those who could teach shortage subjects—to drop out of the applicant pool. Thus, the timing of the hiring process and applicant attrition patterns, rather than school districts’ failure to value candidates’ academic credentials, might explain the fact that individuals with strong academic backgrounds appear to be no more likely than individuals with weaker backgrounds to be hired for a teaching position.

Both of these studies hint at possible weaknesses in how schools and districts are hiring teachers. However, they largely adopt the perspective of the school district and its aims. Teacher hiring should properly be viewed as a two-way process (Winter, Ronau, & Muñoz, 2004) in which schools and candidates exchange information and evaluate each other. This is important because two decisions need to be made. The school or district has to decide whether to extend a job offer, and the teacher candidate has to decide whether to accept a job if it is offered. For these two decisions to lead to a good fit between the new teacher and his school, both must be well informed.

Better matches—or closer fit between new teachers’ skills, interests, and expertise and the positions that they secure—are important both for improving schools and for improving teacher satisfaction and addressing teacher shortages. In the past decade, there has been growing consensus among

researchers and policy makers about the value of individual schools having 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 (Bryk & Schneider, 2002; Newmann, Wehlage, & Rigdon, 1997).

Better matches between individuals and their teaching positions may also lead to more satisfying initial teaching experiences. In an earlier study, we found that many new teachers are approaching teaching tentatively or conditionally, rather than as a lifelong career (Peske et al., 2001). If teaching does not fit their interests and skills, they may choose to leave after a short time. This is consistent with research in organizational behavior and management 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; Chatman, 1991; Kristof, 1996; O'Reilly, Chatman, & Caldwell, 1991; Rynes, Bretz, & Gerhart, 1991).

Teacher Recruitment and Candidates' Job Choices

One strand of research on teacher hiring has focused on understanding how recruitment messages influence applicants' perceptions of jobs and their desirability. As Young and Delli (2002) have noted, this research "treats applicants as active decision makers within the selection process" (p. 588) and probes what they find appealing about a job or work setting. The practical goal of this research is to generate knowledge that can help schools and districts make their recruitment messages more effective in attracting applicants and convincing candidates to accept job offers.

Much of this research has been guided by job choice theory (Behling, Labovitz, & Gainer, 1968; Pounder & Merrill, 2001; Young, Rinehart, & Place, 1989). Originally articulated by Behling et al. (1968), job choice theory posits three distinct theories for how candidates make decisions about jobs: objective theory, subjective theory, and critical contact theory. Objective theory maintains that candidates make decisions primarily on the basis of economic factors that are objective and measurable—factors such as pay, benefits, prospects for promotion, and other extrinsic rewards. In contrast, subjective theory posits that candidates choose the job that, in their estimation, holds the most promise for meeting their psychological needs. Applied to education, this theory suggests that teachers' job choices might be heavily influenced by "the fit between a person's psycho-social needs and the organizational climate of a school or district" (Pounder & Merrill, 2001, p. 289). Finally, as described by Pounder and Merrill (2001),

Critical contact theory proposes that the candidate is incapable of differentiating between firms on the basis of objective or subjective criteria because (a) the depth of contact with the firm is too limited, (b) recruiting firms tend to blur the differences between competing organizations, and (c) the candidate lacks experience to evaluate the information provided by the firm. (p. 32)

As a result, candidates use alternative criteria such as “the appearance and behavior of the recruiter, the nature of the physical facilities, and the efficiency of processing the paperwork associated with [their] application” (Behling et al., 1968, p. 17, as cited by Pounder & Merrill, 2001).

Several experimental studies by I. Phillip Young and associates have yielded findings that seem more consistent with subjective theory and critical contact theory than with objective theory. They have found that teachers find recruitment messages that emphasize the work environment and the work itself more appealing than those that stress financial incentives (Young et al., 1989). Young and colleagues have also found that characteristics of the organizational representatives who conduct hiring can also affect the perceptions of teacher candidates. Teachers are more likely to view a job as desirable when the interviewer for the position exudes warmth (Young & Heneman, 1986) or is racially similar to the candidate (Young, Place, Rinehart, Jury, & Baits, 1997).

Recent research has also suggested a relationship between the characteristics of the hiring process itself and teachers' perception of a job's desirability. In a survey of 152 new teachers in a large urban district, Winter et al. (2004) found that scores on a hiring process scale (which measured such process attributes as ease of application, length of the process, and timeliness of screening) were the most powerful predictor of attraction to a teaching job in that district. A high score on the hiring process scale was associated with a high rating of the attractiveness of the job.

Winter et al.'s study drew on recruitment-as-marketing theory from the private sector (Maurer, Howe, & Lee, 1992; Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993), which maintains that “to obtain applicant decisions . . . favorable to the hiring organization, the organization should present itself in the most favorable way possible and conduct its recruitment and selection procedures in a manner that is maximally attractive to job applicants” (Winter et al., 2004, p. 89). Although such an approach to the recruitment stage of the hiring process appears commonsensical, it may have certain disadvantages resulting from its narrow focus on candidates' preemployment decisions without much consideration for posthire consequences. Marketing messages that exclude some of the challenging aspects of a job or the difficult realities of a school workplace might actually hinder the ability of a school

and an individual to determine whether they would be a good match. A rosy marketing message may get a candidate to apply for and accept a position but might also lead to misjudgments of fit, inaccurate expectations, and later dissatisfaction with the job. Indeed, some researchers in management studies argue that instead of presenting applicants with messages that are entirely positive, recruiters ought to provide accurate and complete job descriptions.

Realistic Job Previews

Considerable research outside of education has focused on realistic job previews (RJPs), in which recruiters provide job applicants with accurate descriptions of the job—descriptions that include both positive and negative aspects of the job (Breugh, 1983; Breugh & Starke, 2000; Dugoni & Ilgen, 1981; Meglino, Ravlin, & DeNisi, 2000; Phillips, 1998; Premack & Wanous, 1985; Wanous, 1980; Wanous & Poland, 1992). In an early review of the RJP literature, Breugh (1983) identified four hypotheses that underpin much of the research on RJPs. The “met expectations” hypothesis posits that applicants’ initial job expectations tend to be unrealistically high. RJPs lower these expectations, thus making it more likely that the expectations are met when the new hire confronts the realities of the job. As a result, new employees are more likely to be satisfied with their jobs and less likely to quit voluntarily.

A second hypothesis is that RJPs influence satisfaction and retention by improving new employees’ ability to cope with the demands of the job. As posited by Dugoni and Ilgen (1981),

If employees are made aware of problems to be faced on the job, they cope with such problems better when they arise, either because they are less disturbed by the problems about which they have been forewarned or because they may pre-rehearse methods of handling these problems. (as cited in Breugh, 1998, p. 613)

A third hypothesis is that realistic job previews convey a diffuse, underlying message of honesty, care, and concern (Breugh, 1983; Hom, Griffith, Palich, & Bracker, 1998; Popvich & Wanous, 1982). This can lead to increased commitment and satisfaction on the part of new employees.

Finally, some researchers hypothesize that RJPs lead to self-selection on the part of applicants and that, with better information, applicants select jobs that better meet their needs. This is similar to the argument that the hiring process influences the fit between new teachers and their jobs and that this can, in turn, lead to greater job satisfaction.

Research testing each of these hypotheses in the private sector has provided some confirmation of the effects of realistic job previews on outcomes such as job satisfaction, commitment, and survival/attrition, although the findings are mixed (Breugh & Starke, 2000; Meglino et al., 2000; Phillips, 1998; Wanous & Poland, 1992). Much of the research has consisted of experiments in which researchers manipulate the information that job applicants receive. The research on RJPs is useful to consider for it points to the importance and potential benefits of conducting hiring in ways that provide teacher candidates, as well as those doing the hiring, with comprehensive and accurate information.

The Organization of Hiring: Information-Rich or Information-Poor?

The benefits of a realistic job preview were evident in a longitudinal qualitative study of the early career experiences of 50 new teachers in Massachusetts that we conducted with several colleagues between 1999 and 2004 (Johnson & The Project on the Next Generation of Teachers, 2004). Our interest in hiring did not emerge until the late stages of that study. However, we observed in our transcript data two qualitatively distinct hiring experiences that were notable.

One type of experience involved candidates being hired, often on the spot, after a single interview with the school principal or after a simple review of their paper credentials. This provided the candidate with very little information about the school on which to decide whether to accept or reject the job. We refer to this type of hiring process and experience as “information-poor,” because it appears to provide both the candidate and the organizational representatives responsible for hiring with few opportunities to exchange information about one another. Many new teachers who reported experiencing “information-poor” hiring also appeared to have accepted positions that were not a great match for them—for instance, they were teaching a grade level that they did not want or for which they were not prepared, or they disagreed with the pedagogical approach promoted by the administration.

On the other hand, there were a few new teachers who described participating in much more elaborate hiring processes. For instance, one new teacher described the hiring process for her position that involved meeting with the school hiring committee composed of administrators, teachers, and parents; having the principal of the school observe her teach; interviewing alone with the principal; attending an evening school fair; and herself observing classes at the school. This teacher felt that she entered her new position knowing what to expect, and she was very happy at the school. We have come to describe hiring experiences such as hers, which provide candidates and

school-based decision makers with multiple opportunities and vehicles to exchange information with one another, as information-rich.

We find it useful to consider school and district hiring practices along a continuum from information-poor to information-rich. Rather than focusing attention on a single hiring activity, the continuum focuses it on the entire hiring process. The hiring process for a particular position often involves a mix of activities that provide information and convey messages to both the applicant and the hiring decision makers. Our hypothesis is that information-rich hiring processes may be better at facilitating good matches between candidates and schools than information-poor processes. Although rich information exchange certainly does not guarantee wise decisions or good matches, it is, at least, a prerequisite for an informed decision.

How Districts and Schools Organize Hiring

How districts structure their hiring practices influences the opportunities schools and candidates have to exchange rich information about each other. Some districts rely on centralized processes, in which hiring occurs at the district level. Others rely on decentralized processes, whereby hiring happens at the schools. As Arthur Wise and colleagues observed, districts balance two competing needs: “the central authority’s need for efficiently managing school systems and effectively maintaining uniform district standards and . . . the local principals’ need for effectively selecting candidates who best fit their particular schools” (Wise, Darling-Hammond, & Berry, 1987, p. 54).

In centralized hiring, administrators at the district office carry out most of the hiring activities and have overall responsibility for assigning new teachers to positions in schools throughout the district. Centralized processes often reflect an underlying concern for control, uniformity, and efficiency. As a result, districts that centralize hiring typically rely on standardized procedures for processing large batches of applications, and they tend to use generic job descriptions, standardized interview protocols, and/or criteria for evaluating candidates (Shivers, 1989; Wise et al., 1987).

One of the consequences of adopting a centralized approach, however, is that it often does not take into account the specific characteristics of teaching vacancies and the particular needs of local contexts (e.g., the student population served and the professional culture of the school). District officials instead focus on candidates’ formal qualifications for certain job categories (e.g., elementary school teacher, reading specialist, high school math teacher). Indeed, in many cases, districts hire new teachers on the basis of their general qualifications and only later find a school for them (Neild, Useem, Travers, & Lesnick, 2003; Wise et al., 1987). Thus, centralized hiring pro-

vides candidates with little or no information about their specific teaching assignments. In accepting a job offer, candidates are agreeing to work for a district, not a particular school. They have no interaction with their future colleagues before they are offered and accept a job.

In decentralized hiring, individuals within schools carry out the screening activities and decide whom to hire. Thus, they can pay more attention, early in the process, to whether candidates fit the requirements of a specific position, address the school's particular needs, and fit the culture of the school. Principals and teachers (and sometimes students and parents) often devise their own criteria, activities, and interview questions for evaluating candidates (Wise et al., 1987). Because decentralized hiring places candidates in direct contact with their future colleagues and supervisors, it has the potential to provide teaching candidates and schools with more and better information about one another and thus facilitate better matches between them. Decentralized hiring can therefore be seen as an important prerequisite for an information-rich hiring process.

Most school districts 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, whereas others, such as the final decision about whom to hire for a specific position, are conducted by school-based administrators.

Although the literature on teacher hiring includes valuable case studies that help us understand the various trade-offs that districts make in organizing hiring, we know very little about the prevalence of different hiring practices and candidates' responses to them.

In this article, we thus address the following research questions:

1. How are new teachers being hired in California, Florida, Massachusetts, and Michigan? For instance, how centralized or decentralized is the process? How information-rich or information-poor is the hiring process?
2. Do new teachers report that the hiring process they experienced provided them with accurate previews of their jobs and schools?
3. 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?

RESEARCH DESIGN¹

We conducted this research in four states: California, Florida, Massachusetts, and Michigan. We chose these states because they share certain key

policy features and because they are diverse in size, population, and geographic location. All four states are experiencing some degree of teacher shortage; all have alternative routes to certification; all have charter school legislation; all have adopted standards in core subjects; all use criterion-referenced assessments aligned to standards; and all are collective bargaining states. Notably, there is variation across the four states in terms of geographic region, student population, school size, student achievement, teacher salaries, per pupil spending, teacher participation in alternative routes to teaching, number of charter schools, and percentage of graduates from accredited teacher education programs (see Appendix A).²

Sampling and Data Collection Procedures

Data for this study were collected between February and June 2002. The sample consists of 486 first-year and second-year K-12 public school teachers (excluding arts and physical education). See Appendix B for a summary of the sample. To draw the sample, we used two-stage stratified cluster sampling (Levy & Lemeshow, 1999; Light, Singer, & Willett, 1990; Rea & Parker, 1997). In stage 1 of our sampling process, we stratified schools by state, school level (elementary, middle, high), and school type (charter, noncharter) to ensure adequate representation along each stratum. Working from lists of schools from the U.S. Department of Education's *Common Core of Data*, we drew a total of 258 schools: 59 in California, 58 in Florida, 62 in Massachusetts, and 79 in Michigan.³ We oversampled in the smaller states and undersampled in the larger ones to enable us to conduct supplementary analyses within each state.⁴ We also oversampled charter schools to facilitate future subgroup analysis. In our analyses, we incorporated sampling weights to correct for the over- and undersampling.

To improve the ultimate precision of parameter estimates in our analyses, we drew the sample of schools in proportion to the number of students in each school, which served as a proxy for the number of new teachers, an unknown quantity (Levy & Lemeshow, 1999). We contacted principals in each of the schools, by phone and through the mail, and asked for the names and teaching assignments of all first-year and second-year teachers in their building. Seventy-two percent of the selected schools agreed to provide lists of teachers.⁵

All new teachers in each randomly selected school were included in the sample (stage 2 of our sampling process). We were given the names of 751 first- and second-year teachers. We mailed each new teacher an introductory letter, quickly followed by the questionnaire with an accompanying cover letter. As an incentive to participate, all respondents who returned completed

surveys were sent a \$15 gift certificate for an online bookstore. We sent a series of reminders to nonrespondents in the course of 2 months.⁶

We achieved a teacher response rate of 65% (486 teachers) using strategies devised in our pilot study (Dillman, 1991; Kardos, 2001; Keiley, 1996; Liu, 2002).⁷ Analysis of patterns of response and nonresponse suggests that we have a reasonably representative sample. To explore possible sources of selection bias, we used data from our survey and public sources to compare the group of responding schools to the group of nonresponding schools and the group of responding teachers to the group of nonresponding teachers.⁸

Chi-square analysis revealed no statistically significant differences between responding and nonresponding schools in terms of the following measures: average faculty size, average size of student population, percentage of students eligible for free or reduced-price lunch, eligibility for Title I funds, and percentage of African American and Hispanic students. This is true for both the full four-state sample and the individual state samples. At the level of the individual teacher, there are no (or very minor) differences between responding teachers and nonresponding teachers in terms of the following: gender, teaching experience (first year or second year), school type (charter school or conventional), grade level, primary teaching assignment, and school locale (urbanicity).

We did find three possible sources of bias. In California, the group of responding schools included a much lower proportion of middle schools than the group of nonresponding schools. In Florida, the responding schools included a higher proportion of elementary schools and a lower proportion of middle schools than the nonresponding schools.⁹ At the teacher level, nonrespondents in Michigan were more likely to teach in urban schools and schools with higher proportions of African American and Hispanic students than were respondents.

Measures

We measured new teachers' experiences of hiring using an 85-item survey instrument that we administered to the sample of teachers. We designed this instrument based on our prior qualitative study, a review of the hiring and questionnaire-design literatures (Rea & Parker, 1997; Sudman & Bradburn, 1982), and inspection of instruments from the NCES Schools and Staffing Survey (National Center for Education Statistics, 1999-2000). In developing the instrument, we used small focus groups of teachers to assess the clarity of questions and estimate the time required to complete the survey. For certain complex questions, we asked focus group participants to "think aloud" and

describe how they arrived at their answer. We then piloted the questionnaire by administering it to 110 first- and second-year teachers in New Jersey. This allowed us to try out our sampling strategy, further assess the clarity of our survey items, and examine the internal reliability of the composite variables that we planned to construct. As part of this pilot study, we asked respondents for permission to follow up with them by phone after data collection. We conducted 10 follow-up telephone interviews to dissect the survey instrument to modify the items, structure, and administration of the questionnaire for the subsequent four-state study. Afterward, we conducted two additional focus groups with teachers to improve the revised survey instrument.

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;
- 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);
- ask new teachers about the fit between their skills, interests, and expertise and the positions they ultimately obtained; and
- 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.

Using item analysis and principal components analysis (PCA), we developed a composite variable, *preview*, to measure the extent to which new teachers felt they formed an accurate picture of their individual schools from the hiring process (Cronbach's alpha reliability = .89).¹⁰ The composite was formed from the average of nine items that are each measured on a 7-point, Likert-type scale from 1 (*strong disagreement*) to 7 (*strong agreement*).

We developed two other composite variables to measure the reported fit between new teachers and their positions (fit with job) and between new teachers and their schools (fit with school). Fit with job was formed from five survey items, and fit with school was formed from six. Both measures have high levels of internal reliability—Cronbach's alpha is .73 for fit with job and .83 for fit with school—and their values range from 1 (*very poor match*) to 5 (*very good match*).

STATISTICAL ANALYSES

In all of our data analyses, we use estimation methods that are appropriate for the complex design of our survey sample, with suitable cluster, strata, and sample weight designations incorporated into the analyses.¹¹ These methods allow us to avoid biased point estimates and standard errors that might result from clustering and stratification effects. Treating schools as the principal sampling unit (PSU) in our analyses permits the residuals for teachers within a school to have a general error covariance structure, including the possibility that teachers within a school are not independent.¹²

Below, we summarize several measures of hiring, calculating descriptive statistics and displaying data in a series of tables for the combined four states and for each state individually. Because of its size, California dominates the four-state sample, and the responses of California teachers are weighted quite heavily in calculations of averages or proportions for the full four-state sample. In reporting findings below, we break out data by state and indicate when state-level differences are statistically and substantively important. With categorical data, we use contingency table analysis and the chi-square test for independence to examine whether new teachers' answers are associated with the state in which they teach. With continuous data, we use the *svytest* routine in the Stata software package to perform a Wald test of the hypothesis that the population means are simultaneously equivalent across the four states. This is equivalent to using one-way ANOVA with state as the independent variable, but it also allows us to take the complex design of our survey sample into account.¹³

STUDY LIMITATIONS

A number of limitations of our study design are worth noting. First, our study relies on self-reported data, and our survey instrument asks new teachers to comment retrospectively on their hiring experiences. We tried to minimize recall bias by asking new teachers only about their hiring experience for their current position, as we felt that this was the hiring experience that they would most likely remember with clarity.¹⁴ In our focus groups, we also probed new teachers' confidence in their ability to answer questions precisely, and we removed or rephrased some survey items in response to the feedback we received.

Another limitation springs from our administration of the survey in the spring. Some new teachers may have already left teaching by that time and were thus not represented in our sample. As a result, the sample may not fully

represent the experiences of new teachers who were the most dissatisfied or had the most difficulty with teaching and thus were not present in the sampling frame.

A third limitation is that in our analysis we do not distinguish between qualified and unqualified teachers but rather pool all of the teachers together regardless of certification status or level of preparation. Thus, our analysis may obscure important differences in the hiring experiences of these two different groups of teachers.

FINDINGS

How Teachers Are Being Hired: Decentralized but Information-Poor

Locus of control and activity. Decentralized hiring is prevalent in the four states studied. Table 1 presents a summary of new teachers' responses to a question regarding the extent to which the hiring process they experienced was decentralized. A little fewer than half of new teachers (45.9%) in the pooled group of four states 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 30.9% report experiencing a moderately decentralized hiring process (i.e., they were first screened by the district central office but were then interviewed and offered a position by a specific school). Finally, between one fifth and one quarter of new teachers (23.2%) in the four states experienced either a moderately or a highly centralized hiring process. They were offered a job by the district central office, although afterward some had to continue interviewing within the district to secure a specific teaching position, whereas others were assigned to a specific position by the central office.

This measure of hiring centralization presents a very general description of the types of hiring experienced by new teachers in the four states. The data seem to suggest that, on average, new teachers interact more with specific schools than with district central offices. More than three quarters of new teachers experience some form of decentralized hiring (76.8% of new teachers in the pooled group of four states and between 75.5% to 91.6% in the individual states). However, finer-grain data from other survey items complicate this picture.

Additional data suggest that most teachers, even those who report experiencing some form of decentralized hiring, have limited interactions with

TABLE 1
Hiring Centralization/Decentralization

	<i>Four States</i> (N = 486) ^a	<i>California</i> (n = 112)	<i>Florida</i> (n = 113)	<i>Massachusetts</i> (n = 144)	<i>Michigan</i> (n = 117)
Highly decentralized: Applied directly to a specific school and was offered a position by that school.	45.9% (6.9)	44.6% (7.8)	57.6% (7.1)	80.0% (6.2)	45.8% (7.2)
Moderately decentralized: Screened by district central office (with no guarantee of job), then interviewed with and offered a job by a specific school.	30.9% (5.4)	30.9% (6.1)	31.1% (5.7)	11.6% (3.7)	36.9% (5.3)
Moderately centralized: Offered a job by district office, then had to interview in the district to find a specific teaching position.	11.2% (4.3)	11.8% (4.8)	9.5% (3.4)	2.7% (1.7)	4.6% (2.8)
Highly centralized: Offered a job by district central office, then assigned to a specific school by district.	12.0% (5.8)	12.7% (6.6)	1.8% (1.7)	5.7% (3.2)	12.8% (3.7)

NOTE: Table shows new teachers' responses to the question "Which of the following best describes how you were hired for your current position?" (reported by total population of new teachers in the pooled group and by state). Standard errors are in parentheses. A Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical.

a. The sample and subsample sizes are consistent across all tables.

school-based personnel prior to accepting their positions. This points to an important distinction between the locus of hiring activities and the nature of these activities. Just because certain schools have control over hiring does not mean that they conduct hiring in ways that take advantage of this control. Decentralized hiring can still be information-poor.

Interviews. Interviews are one of the most interactive parts of the hiring process and a potentially rich source of information for schools, districts, and teaching candidates. The top row in Table 2a shows that the vast majority of new teachers in the four states (91%) participated in at least one interview for their current positions. This is not surprising. However, it is notable that, in Florida 1 in 5 new teachers report that they did not participate in any interviews as part of the hiring process. Table 2a also shows that teachers in the four states report participating in an average of 1.49 interviews for their current position. The state averages range from 1.21 (Florida) to 1.80 (Michigan), and the differences are statistically significant.

Particularly interesting is the range of individuals who interact with the prospective teachers during the interviewing process. Table 2b presents a list of school and district actors and the percentages of new teachers, in the four states as a whole and within each state, who interview with each. As the table demonstrates, the school principal dominates the interviewing process. Depending on the state, 74.9% to 96.2% of new teachers interview with the principal of the school that ends up hiring them. The percentage of new teachers who interview with any other school- or district-related individual drops considerably. Fewer than half of new teachers interview with current teachers at the school (i.e., their future colleagues), and only one third (33.2%) of new teachers interview with a school-based administrator other than the principal. The percentage of new teachers who interview with parents or students at the school is minuscule. Only about 1 in 10 new teachers in the four-state pool interviews with a parent, and fewer than 1% of them interview with a student.

Of the four states, Michigan stands out as having hiring processes that are organized so that new teachers interview with a fairly broad range of school people. New teachers in Michigan are somewhat more likely than new teachers in the other three states to interview with current teachers, students, district HR offices, department chairs, and other school-based administrators.

Overall, however, hiring continues to be dominated by administrators at both the district and school levels. Although teachers, parents, and students might have valuable insights in response to candidates and might also provide candidates with useful information about what a school is like, relatively

TABLE 2a
Interviews

	<i>Four States</i>	<i>California</i>	<i>Florida</i>	<i>Massachusetts</i>	<i>Michigan</i>
Percentage of new teachers who participate in at least one interview for their position	91.4%** (3.0)	91.7% (3.4)	80.0% (5.8)	98.7% (0.9)	96.8% (2.4)
Mean number of interviews per teacher for their position	1.49** (0.11)	1.49 (0.12)	1.21 (0.16)	1.59 (0.13)	1.80 (0.16)

NOTE: Selected weighted statistics regarding interviews for the position that new teachers ultimately obtain, reported by total population of new teachers in the pooled group, and by state (with standard errors in parentheses). For the categorical variable, a Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical. For the continuous variable, we tested the hypothesis that the state means were identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

TABLE 2b
The Individuals With Whom New Teachers Interview

	<i>Four States</i>	<i>California</i>	<i>Florida</i>	<i>Massachusetts</i>	<i>Michigan</i>
School principal	80.1%* (4.9)	79.4% (5.6)	74.9% (5.9)	96.2% (1.6)	93.6% (3.0)
Teacher(s) at the school	45.6%** (7.3)	46.0% (8.3)	25.4% (6.8)	52.6% (7.6)	59.9% (8.5)
District personnel/HR office	34.9%** (5.5)	36.1% (6.2)	13.9% (4.9)	13.3% (4.8)	45.1% (8.8)
Other school administrator(s)	33.2% (5.5)	33.3% (6.2)	28.3% (6.2)	28.8% (4.5)	38.6% (8.0)
Department chair at school	14.7%** (4.1)	14.1% (4.6)	9.6% (3.5)	15.5% (3.7)	31.5% (5.2)
Parent(s) at the school	9.0% (4.7)	9.5% (5.3)	0.0% (0.0)	18.4% (7.6)	7.5% (5.0)
Student(s) at the school	0.1%**** (0.1)	0.0% (0.0)	0.0% (0.0)	1.8% (1.4)	2.4% (1.5)

NOTE: Estimated percentages of new teachers (weighted) who interview with the following individuals as part of the hiring process, reported by total population of teachers in the pooled group, and by state (with standard errors in parentheses). A Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

few new teachers have opportunities to interact with them, at least in the interview part of the hiring process.

Submitted materials. Table 3 presents a list of application materials and the percentages of new teachers in the four states 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 in the four states.

The vast majority of new teachers in the four-state pool submit standard paper documents such as résumés, cover letters, academic transcripts, and references. In addition, a sizable percentage (40.5%) submit portfolios, which require more effort to prepare. New teachers in Michigan are the most likely to submit a portfolio; almost 60% do (59.1%). Still, it is notable that more than 1 in 4 new teachers in the pooled group do not submit an undergraduate transcript.

In the four-state pool, very few new teachers submit standardized test scores (27.8%), writing samples (24.4%), lesson plans (20.0%), or videotapes of sample lessons (0.4%) as part of the hiring process.

Observations. Although application materials mainly transmit information from the candidate to the school, observations can provide opportunities for both parties to collect information about one another. Data presented in Table 4, however, suggest that schools make very little use of observations, either observing candidates teach sample lessons or having new teachers observe the school in action.

Only 7.5% of the new teachers in the four-state pool are observed teaching a sample lesson as part of the hiring process. The individual state percentages range from 6.9% in California to 19.6% in Massachusetts, and the differences across states are significant at the .10 level. It is remarkable that so few new teachers are asked to provide an authentic demonstration of their teaching ability prior to being hired.¹⁵ Despite having considerable control over the hiring process, most schools seem to rely primarily on interviews and written application materials.

Schools also appear to provide few opportunities for candidates to observe the school in action. Depending on the state, only 8.7% to 37.1% of new teachers visit or observe classes while school is in session as part of the hiring process. Even fewer observe or sit in on a faculty or team meeting (5.2% to 13.8%). New teachers in California are most likely to observe the school in action, whereas new teachers in Michigan are least likely to do so.

That schools do not make greater use of observations becomes easier to understand when one considers the timing of hiring decisions.

TABLE 3
Application Materials (N = 486)

	<i>Four States</i>	<i>California</i>	<i>Florida</i>	<i>Massachusetts</i>	<i>Michigan</i>
Résumé	99.3%* (0.5)	99.5% (0.5)	96.2% (2.5)	97.8% (2.2)	99.2% (0.6)
References	92.3%*** (1.9)	93.4% (2.1)	82.4% (4.8)	85.2% (3.8)	84.3% (5.3)
Undergraduate transcript	72.3% (4.8)	72.3% (5.5)	73.1% (6.7)	76.0% (6.5)	71.2% (7.8)
Cover letter	67.7%* (5.4)	67.8% (6.2)	54.3% (7.1)	88.7% (4.0)	75.5% (5.8)
Graduate transcript	41.2%*** (5.4)	43.4% (6.0)	26.9% (9.0)	38.0% (6.3)	17.6% (4.5)
Portfolio	40.5%* (6.4)	38.9% (7.2)	51.1% (5.9)	41.8% (6.6)	59.1% (6.4)
Standardized test scores	27.8% (4.3)	26.5% (4.9)	41.0% (8.1)	33.2% (6.5)	34.6% (6.7)
Writing sample or essay	24.4% (5.3)	24.9% (6.0)	19.8% (6.4)	22.7% (9.5)	20.8% (9.4)
Lesson plan	20.0% (4.3)	19.3% (4.9)	22.0% (4.5)	27.3% (6.3)	29.5% (6.9)
Videotape of sample lesson	0.4%*** (0.2)	0.0% (0.0)	4.2% (2.5)	5.1% (3.1)	1.0% (1.0)

NOTE: Estimated percentages of new teachers (weighted) who submit the following materials as part of their application, reported by total population of new teachers in the pooled group, and by state (with standard errors in parentheses). A Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

TABLE 4
Sample Lessons and Classroom Observations

	Four States	California	Florida	Massachusetts	Michigan
Percentage of new teachers who are observed teaching a sample lesson as part of the hiring process	7.5%* (2.3)	6.5% (2.6)	14.0% (5.0)	19.6% (6.1)	14.6% (6.4)
Percentage of new teachers who visit or observe classes while school is in session	35.1%*** (5.6)	37.1% (6.3)	28.4% (6.1)	23.0% (7.0)	8.7% (3.2)

NOTE: Selected weighted statistics regarding observations of and by teaching candidates, reported by total population of new teachers in the pooled group, and by state (with standard errors in parentheses). A Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

Timing of Hiring Decisions: Late and Even Later

Many new teachers are hired quite late. Table 5 presents statistics summarizing the timing of hiring decisions, as reported by new teachers. In Florida, only 18.6% of new teachers are hired more than a month before the start of school. Assuming that most schools begin the academic year in early September, this would suggest that fewer than 1 in 5 new teachers in Florida is hired before August. For the other three states, the corresponding percentages are 35.8 in California, 51.1 in Massachusetts, and 58.0 in Michigan. The remaining new teachers—81.4% in Florida, 64.2% in California, 48.9% in Massachusetts, and 42.0% in Michigan—are hired either during the month before school starts or after school has already started.

The proportion of teachers hired after school has already started is particularly striking. In California and Florida, approximately 1 in 3 new teachers is hired after the start of the school year. In Massachusetts, the proportion is closer to 1 in 8, and in Michigan, the proportion is approximately 1 in 10. These state differences are statistically significant ($p < .01$).¹⁶

Another measure, the average number of days between when new teachers are hired and when their teaching responsibilities begin, paints a similar picture. New teachers in Michigan are hired the earliest (on average, 56.2 days before they start their jobs), whereas new teachers in Florida are hired the latest (on average, 22.5 days before they start their jobs).

Reported Accuracy of the School/Job Preview

On average, new teachers in the four states report that they form only moderately accurate pictures of their schools from the hiring process. The composite variable preview measures the extent to which new teachers feel they formed an accurate picture of their school and job from the hiring process. The composite is formed from the average of nine items, each measured on a 7-point, Likert-type scale from 1 (*strong disagreement*) to 7 (*strong agreement*). The items ask whether, from the hiring process, the new teachers received an accurate picture of

- what the teachers were like at the school and whether they might enjoy working with them,
- what the students were like at the school and whether they might enjoy teaching them,
- the principal's leadership style,
- the curriculum they would be teaching,
- what their teaching assignment would be (i.e., subjects, grade levels, number of classes, other duties),

TABLE 5
Timing of Hires

	<i>Four States</i>	<i>California</i>	<i>Florida</i>	<i>Massachusetts</i>	<i>Michigan</i>
Percentage of new teachers hired more than a month before school started	36.1%*** (4.8)	35.8% (5.4)	18.6% (5.8)	51.1% (7.8)	58.0% (7.1)
Percentage of new teachers hired the month before school started	30.8%*** (4.4)	29.7% (5.2)	46.1% (8.0)	35.3% (7.8)	32.5% (6.1)
Percentage of new teachers hired after the school year started	33.0%*** (6.0)	34.5% (6.7)	35.4% (7.1)	13.5% (4.4)	9.5% (4.0)
Average days between hiring date and start of job	41.3*** (8.1)	41.5 (9.2)	22.5 (2.9)	49.8 (8.4)	51.9 (6.2)

NOTE: Selected weighted statistics regarding when new teachers are hired, reported by total population of new teachers in the pooled group, and by state (with standard errors in parentheses). For categorical variables, a Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical. For the continuous variable, we tested the hypothesis that the state means were identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant.
* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

- the support that the school would provide to them as a new teacher,
- how much autonomy they would have as a teacher at the school,
- the opportunities they might have to help make important schoolwide decisions, and
- the school's educational philosophy.

Table 6 presents the mean preview scores in each state and in the four-state pool. The state means are between of 4.03 (CA) to 4.81 (MI), which correspond to responses between *neutral* and *somewhat agree*, with the general proposition that they formed an accurate picture of what their school was like from the hiring process. In California, Florida, and Massachusetts, fewer than half of new teachers could say that they at least *somewhat agree* that the hiring process gave them an accurate picture of their school/job. In Michigan, just more than half (51.5%) could say this.

Reported Fit Between New Teachers and Their Teaching Positions

Table 7 presents statistics describing the reported fit between new teachers and their jobs and between new teachers and their schools. The two measures are composite variables, and their values range from 1 (*very poor match*) to 5 (*very good match*). The items used to construct fit with job asked new teachers how closely their current job matched: their subject matter knowledge and expertise, their subject matter interests, other skills and talents that they might have, the grade level(s) they preferred to teach, and the type of student population they would prefer to teach. The items used to construct fit with school asked how closely their job matched: their own educational philosophy, the amount of autonomy they would like to have as a teacher, their views on student discipline, the amount of collaboration or teamwork they would like with colleagues, the amount of input or influence they would like to have on schoolwide decisions, and the amount of input or influence they would like to have on department or grade-level decisions.

Overall, new teachers in the pooled group of four states report a *good* fit with their job (mean = 4.04) and just a *moderate to good* fit with their school (mean = 3.50). A paired-samples *t* test reveals that the .54 difference between new teachers' mean fit with position and their mean fit with school is statistically significant ($t = 5.90$; $p < .001$).

Although the differences among states in mean fit with job are not statistically significant, the differences in mean fit with school are significant. New teachers in Michigan report a significantly higher level of fit with their schools than new teachers in the other three states. This is consistent with the state's higher scores on the job preview measure, preview. Thus, hiring

TABLE 6
Preview of the School Obtained From the Hiring Process

	<i>Four States</i>	<i>California</i>	<i>Florida</i>	<i>Massachusetts</i>	<i>Michigan</i>
Mean preview score	4.10*** (0.16)	4.03 (0.18)	4.47 (0.19)	4.56 (0.09)	4.81 (0.15)
Percentage of new teachers with a preview score of 5 (<i>somewhat agree</i>) or higher	29.0%** (4.5)	27.0% (5.0)	40.0% (8.1)	34.7% (6.6)	51.5% (7.6)
Percentage of new teachers with a preview score of 6 (<i>agree</i>) or 7 (<i>strongly agree</i>)	7.7% (3.1)	6.9% (3.5)	13.2% (4.1)	7.8% (2.4)	15.3 (3.1)

NOTE: Selected weighted statistics regarding the picture that new teachers get from the hiring process, reported by total population of new teachers in the pooled group, and by state (with standard errors in parentheses). 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 = .89) and is measured on a 7-point, Likert-type scale from 1 (*strong disagreement*) to 7 (*strong agreement*). For categorical variables, a Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical. For continuous variables, we tested the hypothesis that the state means were identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant. * $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

TABLE 7
Measures of Fit With Position and School (N = 486)

	<i>Four States</i>	<i>California</i>	<i>Florida</i>	<i>Massachusetts</i>	<i>Michigan</i>
Mean fit with job	4.04 (0.08)	4.04 (0.09)	3.98 (0.10)	3.96 (0.10)	4.12 (0.08)
Mean fit with school	3.50*** (0.11)	3.48 (0.12)	3.52 (0.16)	3.53 (0.09)	3.88 (0.08)

NOTE: Mean fit with position and school as reported by new teachers in the total population of the pooled group and by state (standard errors in parentheses). The scale for these measures ranges from 1 (*very poor match*) to 5 (*very good match*). We tested the hypothesis that the state means were identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant. * $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

practices in Michigan appear to provide new teachers with more accurate pictures of their future schools, which may be contributing to better matches between individuals and their schools. Another possible factor contributing to these higher levels of fit with schools may be Michigan schools' greater tendency to fill positions by hiring from among their student teachers.

Hiring Student Teachers and Aides

Overall, 1 in 10 new teachers did their student teaching at their current school prior to being hired for their position. This figure, however, hides some of the variation across the states. In Michigan, about 1 in 4 (27.2%) new teachers was a student teacher at the school that ended up hiring him or her (see Table 8). In the four-state pool, approximately 1 in 5 (19.4%) new teachers either student taught or worked as a paid aide/paraprofessional at their school prior to their current position.

It is likely that new teachers who serve as student teachers or aides experience the hiring process differently than new teachers who are complete outsiders to a school. Indeed, for this group, the hiring process may well be a less important source of information about the school than their daily work as student teachers or aides. The schools also have greater opportunities to evaluate these candidates' teaching abilities or potential.

DISCUSSION AND CONCLUSION

At a time when so much focus of school reform is on teacher quality, we know remarkably little about how new teachers are actually hired and matched with schools and districts. This lack of knowledge is problematic because experience and research point to the importance of the fit between individuals and the organizations in which they work. In the field of education, we have argued, this fit is particularly vital, for it may have consequences for new teachers' effectiveness and job satisfaction. Underlying this argument is an understanding of the importance of local context in shaping teachers' experiences and a hypothesis, based on our earlier qualitative research (Johnson & The Project on the Next Generation of Teachers, 2004), that information-rich hiring processes are better at facilitating good matches between candidates and schools than information-poor processes.

In this article, we have attempted to present a bird's-eye view of the full set of opportunities during the hiring process that candidates and school personnel have to learn about one another. We have found that three quarters of new

TABLE 8
Percentage of New Teachers Hired After Serving as Student Teachers or Aides

	<i>Four States</i>	<i>California</i>	<i>Florida</i>	<i>Massachusetts</i>	<i>Michigan</i>
Percentage of new teachers who student taught at their school prior to their current position	10.3%* (4.0)	9.2% (4.5)	13.9% (4.7)	6.5% (3.4)	27.2% (5.6)
Percentage of new teachers who student taught or worked as aides/paraprofessionals at their school prior to their current position	19.4% (5.2)	19.2% (5.9)	14.1% (4.7)	19.2% (4.6)	29.2% (5.4)

NOTE: Selected weighted statistics regarding prior work relationships that new teachers had with their schools, reported by total population of new teachers in the pooled group, and by state (with standard errors in parentheses). A Pearson chi-square statistic, corrected for the survey design, was calculated to test the null hypothesis that the responses by state are identical. An asterisk on the four-state statistic indicates that the responses are not independent of state, and thus some of the state-level differences are statistically significant.
 * $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

teachers in California, Florida, Massachusetts, and Michigan are hired through a decentralized process. Nevertheless, most new teachers report having limited interactions with school-based personnel as part of this process. Although the vast majority of new teachers interview with the school principal, remarkably few interview with current teachers, department chairs, students, or parents at the school—individuals who have important insights and expertise relevant to evaluating candidates and who could also give candidates multiple perspectives on their school. Data also suggest that the hiring process relies heavily on reviews of paper credentials and interviews and that schools and districts seldom observe candidates teaching. Overall, our 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 teaching candidates and those who do the hiring. In other words, the hiring process that many new teachers experience, although school-based, is still not information-rich.

Perhaps it should be no surprise that schools and districts make so little use of certain hiring practices, for some activities are much more labor-intensive than others. Collecting and reviewing résumés is a relatively simple matter. However, engaging a school-site hiring committee to interview the candidate or setting up teaching demonstrations takes considerable time and coordination. Quality information does not come without a cost.

From an organizational standpoint, arranging to observe a candidate teach is perhaps the most difficult practice, for it requires time, a scarce resource in most schools. Principals have to find time to conduct the observation. Teachers at the school, if they are to be involved, 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 to have the candidate teach a lesson with his or her students (or traveling to a candidate's current school to observe) all require considerable time and effort. Thus, although it is arguably the most informative part of a hiring process, it is not surprising that so few new teachers are observed teaching a sample lesson before they are hired.

Our analysis further suggests that the timing of the hiring process may be the most serious impediment to more interactive and information-rich hiring. Many new teachers are not hired until the summer, when school is not in session, few teachers are available to conduct interviews of prospective colleagues, and it is impossible for candidates to observe the school in action. Other new teachers (approximately one third in California and Florida) are hired after the school year has already started, when principals are in a rush to

fill a position, teachers are engaged in getting their classes going, and no one may find the time for a measured and interactive hiring process. It is noteworthy that in Michigan, the state with the lowest percentage of late hires, teachers report the most information-rich hiring (i.e., have the highest average preview score), whereas teachers in states with high percentages of late hires, California and Florida, report much less information-rich hiring.

Overall, new teachers in the four states form only a moderately accurate picture of their school prior to accepting their initial teaching positions. Many new teachers thus may be surprised by what they find in their schools and have professional expectations and needs that go unmet. Given that this likely contributes to new teachers' dissatisfaction, ineffectiveness, and turnover, it is cause for serious concern.

More research is needed to understand fully the implications of these findings for schools and the effects that different types of hiring practices have on new teachers' job satisfaction, effectiveness, and retention. In the next stage of our research, we are examining the relationship between information-rich hiring and new teachers' job satisfaction. At this point, however, our research allows us to offer several tentative recommendations for policy and practice.

Recommendations

To make effective use of information-rich hiring, schools and districts need to begin hiring earlier. The reasons for late hiring are not well documented or understood, although some recent research is beginning to shed light on the problem (Levin & Quinn, 2003). We surmise that late hiring occurs for several reasons. First, some districts have a difficult time predicting student enrollments, which determine appropriate staffing levels for each school. Second, many districts depend on budget decisions made by the state or municipality, which can be delayed because of political wrangling. Because the level of state funding fluctuates from year to year, districts may not be able to predict staffing levels with confidence before state budgets are set. Third, some districts and schools are constrained by collective bargaining agreements requiring that the transfer process for tenured teachers be completed before new teachers can be hired. Finally, district personnel offices and the systems they have in place are often poorly organized, inefficient, or dysfunctional.

Thus, if they are to implement more information-rich hiring, many districts and schools will need to increase the efficiency and effectiveness of their personnel systems. However, they will also need assistance from policy

makers and teachers unions. State policy makers can help districts by providing more timely and predictable budgets. This would help districts determine staffing levels earlier than they currently do. Unions can help by being willing to revisit contract provisions regarding the timing and process of transferring teachers.

The results of our research suggest that shifting hiring decisions to the school level is not enough to guarantee information-rich hiring. State and district policy makers must help schools take advantage of decentralized hiring by removing the impediments to early hiring, providing training and guidance to principals and school hiring committees, and providing the resources needed to carry out a more thorough hiring process. These changes are not easy to make, but they may be essential if schools are to attract and retain the new teachers that students deserve.

APPENDIX A

Summary of State-Level Characteristics of California, Florida, Massachusetts, and Michigan

	CA	FL	MA	MI
Number of public schools	8,757	3,231	1,898	3,743
Number of public school teachers	305,000	136,000	69,000	97,000
Number of public school students (pre-K-12)	6,248,000	2,500,000	980,000	1,734,000
Percentage minority students	62.6%	46.5%	24.2%	25.3%
Percentage children in poverty	22.8%	21.9%	14.3%	16.8%
Percentage students with disabilities	10.7%	15.0%	16.3%	13.4%
Percentage English-language learners	24.9%	9.9%	4.6%	2.6%
Percentage of students in elementary schools with 350 or fewer students (2001)	6%	3%	27%	28%
Percentage of students in high schools with 900 or fewer students (2001)	11%	6%	33%	37%
Percentage of eighth-graders scoring at or above proficient on NAEP math (2000)	18% ^a	NA	32% ^b	28% ^c
Statewide graduation rates	66%	55%	73%	NA
State average education spending per student (adjusted for regional cost differences)	\$8,479	\$8,429	\$6,161	\$6,512
Average teacher starting salaries adjusted for cost of living (2001)	\$27,177	\$27,387	\$27,198	\$30,188
Average teacher salaries adjusted for cost of living (2001)	\$43,061	\$40,604	\$41,773	\$51,868
Number of charter schools	452	232	47	186
Number of participants in state alternative route programs	7,098	180	200	NA
Percentage of graduates from NCATE-accredited teacher education programs (2001)	58%	79%	76%	69%

SOURCE: "Quality Counts 2003" (2003).

NOTE: NAEP = National Assessment of Education Progress; NA = not available; NCATE = National Council for Accreditation of Teacher Education.

a. This includes 27% White, 4% Black, and 7% Hispanic students.

b. This includes 37% White, 8% Black, and 14% Hispanic students.

c. This includes 35% White, 2% Black, and 9% Hispanic students.

APPENDIX B

Description of Full Sample (unweighted statistics) and of Sample by State

	Four States (N = 486)		California (n = 112)		Florida (n = 113)		Massachusetts (n = 144)		Michigan (n = 117)	
	n	%	n	%	n	%	n	%	n	%
Teaching experience										
First year	252	51.9	59	52.7	58	51.3	83	57.6	52	44.4
Second year	234	48.2	53	47.3	55	48.7	61	42.4	65	55.6
Gender										
Female	372	76.5	84	75.0	88	77.9	110	76.4	90	76.9
Male	114	23.5	28	25.0	25	22.1	34	23.6	27	23.1
Race										
American Indian/Alaskan	3	0.6	1	0.9	1	0.9	0	0.0	1	0.9
Asian or Pacific Islander	14	2.9	9	8.1	1	0.9	2	1.4	2	1.7
Black/African American	30	6.2	2	1.8	18	15.9	3	2.1	7	6.0
Hispanic/Latino	38	7.9	22	19.8	14	12.4	2	1.4	0	0.0
White	385	79.9	73	65.8	74	65.5	132	93.0	106	91.4
Biracial/multiracial	4	0.8	3	2.7	1	0.9	0	0.0	0	0.0
Other	8	1.7	1	0.9	4	3.5	3	2.1	0	0.0

(continued)

APPENDIX B (continued)

	<i>Four States</i> (N = 486)		<i>California</i> (n = 112)		<i>Florida</i> (n = 113)		<i>Massachusetts</i> (n = 144)		<i>Michigan</i> (n = 117)	
	n	%	n	%	n	%	n	%	n	%
Career stage										
First-career entrant	284	58.4	55	49.1	63	55.8	75	52.1	91	77.8
Mid-career entrant	202	41.6	57	50.9	50	44.2	69	47.9	26	22.2
Age										
21-29	310	63.8	61	54.5	67	59.3	91	63.2	91	77.8
30-39	95	19.6	28	25.0	26	23.0	26	18.1	15	12.8
40-49	58	11.9	17	15.2	14	12.4	19	13.2	8	6.8
50-57	23	4.7	6	5.4	6	5.3	8	5.6	3	2.6
Grade level										
Elementary	263	54.1	53	47.3	71	62.8	73	50.7	66	56.4
Middle school	94	19.3	11	9.8	25	22.1	33	22.9	25	21.4
High school	129	26.5	48	42.9	17	15.0	38	26.4	26	22.2
School type										
Conventional	370	76.1	94	83.9	83	73.5	111	77.1	82	70.1
Charter	116	23.9	18	16.1	30	26.6	33	22.9	35	29.9

NOTES

1. This study is part of a larger survey study designed by Edward Liu and Susan Kardos, who were, at the time, researchers at the Project on the Next Generation of Teachers. Collaboratively, they designed a survey that explored both new teachers' experiences of hiring and their experiences of professional culture (Kardos, 2001; Liu, 2002; Liu & Kardos, 2002).

2. The state-level data in Appendix A may understate the number of teachers who actually enter the profession through alternative certification programs or similar nontraditional routes into teaching. The *Education Week* data focus only on participation in state alternative certification programs, and it is unclear whether the figures also included teachers who participate in district-run programs or programs such as Teach for America.

3. Because we suspected that recently opened charter schools might not be reflected in the U.S. Department of Education's *Common Core of Data*, we also consulted state documents and Web sites when putting together our sampling frame.

4. We drew more schools in Michigan because Michigan was experiencing less of a teacher shortage than the other three states and had fewer new teachers per school.

5. The school response rates for each state were as follows: 64% in California, 71% in Florida, 82% in Massachusetts, and 71% in Michigan.

6. Our mailing and communications strategy was modeled on Keiley (1996), who achieved a 91% response rate in her dissertation study. The mailings were addressed to each individual teacher and sent to his or her school address.

7. Our individual response rates for this four-state study are as follows: 60% in California, 63% in Florida, 67% in Massachusetts, and 69% in Michigan.

8. School-level data were obtained from the U.S. Department of Education's *Common Core of Data* and from state departments of education. We consulted state databases to fill in gaps in the *Common Core of Data*.

9. In Massachusetts and Michigan, there are no significant group differences in school level.

10. Principal components analysis and reliability output is available on request.

11. Weights were used to account for three aspects of the sampling design: (a) schools entering the sample in proportion to size (i.e., based on their student enrollment), (b) oversampling of schools in the small states and undersampling of schools in the large states, and (c) oversampling of charter schools. More detailed information about the weights is available on request.

12. The variance estimators used in the *svy* commands in the Stata software package make minimal assumptions about the nature of the sample. They allow any amount of correlation among teachers within the primary sampling units (in our case, schools). Thus, teacher residuals within a school are not required to be independent.

13. The *svy* family of commands in Stata produces very conservative estimates of standard errors.

14. In other words, we did not ask about their experiences applying for other positions.

15. The picture is not quite so bleak because, as we see below, some new teachers are hired by the schools in which they did their student teaching. Schools that hired these teachers may have many opportunities to assess their teaching abilities.

16. Some care must be taken in interpreting these results, however. Because we surveyed new teachers in the spring, it is possible that some of these differences are the result of different rates of teacher attrition rather than differences in how hiring is organized. Some of the new teachers surveyed might have been hired late because they were replacements for teachers who were hired earlier but who left in the middle of the school year.

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Edward Liu is an assistant professor in the department of educational theory, policy, and administration at Rutgers University. His research interests include teacher hiring and retention, organizational change, leadership, and educational policy. His most recent publication is a 2004 article (with S. M. Johnson and H. G. Peske) titled "New Teachers and the Massachusetts Signing Bonus: The Limits of Inducements" in *Educational Evaluation and Policy Analysis*.

Susan Moore Johnson is director of the Project on the Next Generation of Teachers and the Pforzheimer Professor of Teaching and Learning at the Harvard Graduate School of Education. Her research interests include teachers' work, the school as organization and workplace, teacher unions and collective bargaining, leadership, and the superintendency. Her most recent book, which she coauthored with the Project on the Next Generation of Teachers, is titled *Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools* (2004, Jossey-Bass).