

DISTRICT TEACHER HIRING PRACTICES

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ABSTRACT

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Teacher hiring is central to issues of teacher quality, and yet little research to date has addressed the practices districts use to hire teachers. This study used statewide teacher data in Michigan and interview data collected in five school districts in a common labor market to investigate district teacher hiring practices. Teacher data covered the 12-year period from 2004 to 2015, a time of intense state and federal focus on school and district accountability as measured by student performance on statewide assessments of mathematics and reading, primarily in grades 3-8. In response to the accountability measures, districts were hypothesized to have increased the percentage of elementary teachers who were male, or teachers of color, or teachers assigned as mathematics or reading specialists, but the data soundly rejected the hypothesis. Interview data supported the concept of bounded rationality in district hiring decisions: scarcity of time, attention, information, and capacity, and ambiguity of organizational preferences led to satisficing and rule-following behavior on the part of administrators. Districts and decision makers employed various strategies to mitigate the forces of scarcity and ambiguity.

Note: This research project used data structured and maintained by the Michigan Department of Education (MDE) and/or Michigan's Center for Educational Performance and Information (CEPI). Results, information and opinions solely represent the analysis, information and opinions of the author(s) and are not endorsed by, or reflect the views or positions of, grantors, MDE and CEPI or any employee thereof.

Keywords: Teacher hiring; bounded rationality; decision making in organizations

This dissertation is dedicated to all my teachers, past and present, including my parents, my siblings, my classmates and colleagues, my family and friends, but most of all to my amazing and amazingly patient wife.

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CHAPTER 1

THE QUEST FOR TEACHER QUALITY

Long an important topic in education research and reform efforts, teacher quality has become the epicenter of efforts to improve public education in this country. As a topic, teacher quality is broad enough to support investigation and intervention along multiple avenues, from pre-service teacher recruitment, preparation, and certification, to in-service teacher development, retention, mobility, and attrition. Most recently, teacher evaluation has become an area of intense research and policy initiative, as researchers and policymakers alike struggle to define and assess teacher quality.

Largely overlooked as an aspect of teacher quality is the topic of teacher hiring, that process through which pre-service candidates become in-service employees of the state's and nation's public schools (Liu, 2005; Metz, 2012; etc.). There are at least three good reasons why teacher hiring is worthy of further research and attention: the different impacts teachers can have on student success, the fiscal and human costs of teacher turnover, and the apparent lack of impact that in-service professional development has on overall teacher quality.

First, teacher hiring is important because teacher quality is important. Teacher quality has been shown to influence student achievement (Hanushek, 2011), although the evidence substantiating the degree of influence is not uncontested (Hattie, 2003). Since the late 1990s, researchers have amassed increasing amounts of quantitative data supporting the claim that teachers can make a significant difference in student achievement (e.g., Hanushek, 2011; Sanders, et al., 1996). They have presented evidence that better teachers can raise student achievement by more than a grade level, and that the effect on student achievement of three or

more years of ineffective teachers can be long-term. Researchers (Rivkin, Hanushek, & Kain, 2005; Chetty, Friedman, & Rockoff, 2011) have demonstrated that effective teachers are not evenly distributed among districts and schools, with schools serving poor and minority students being staffed by less qualified and less experienced teachers. As economists have turned their attention to education, they have produced research suggesting that teachers may have a long-term economic impact on future student earnings and on the nation's economy. For example, Hanushek (2011) contended that a teacher who is one standard deviation above the mean effectiveness annually generates marginal gains of over \$400,000 in the present value of student future earnings with a class size of 20, and proportionately higher with larger class sizes. Alternatively, he asserted that replacing the bottom 5 to 8 percent of teachers with average teachers could move the US near the top of international math and science rankings, with a present value of \$100 trillion.

Second, teacher hiring is important because poor teacher hiring contributes to teacher turnover, and the costs of teacher turnover are a drain on school districts and the students they serve (Wise, et al., 1987). Teacher turnover wastes district resources (Odden, et al., 2015). The time, money, and effort that goes into recruiting, hiring, inducting, mentoring, and providing professional development to a new teacher is essentially lost to a district when that teacher leaves. Such loss makes it harder to accrue human resource capital, which is any school's or district's greatest asset. Moreover, teacher turnover is unevenly distributed; so-called "hard to staff" schools largely serve poor and minority student populations that face multiple challenges and resource issues (Sutcher, et al., 2016). The ability to attract, hire, and retain high quality teachers is yet another capacity issue that these schools must address (Hughes, 2014). Perhaps most importantly, inexperienced teachers are generally less effective than more experienced

teachers. The student experience of education is both immediate and cumulative: most students will experience third grade only once, and the cognitive and affective impacts that a good or bad year have on a student are hard to erase. A third-grade teacher gets to try again next year; his or her students typically do not, and should not have to.

It bears noting that the magnitude of the problem of teacher turnover has recently been challenged (Gray, et al., 2015), in research arguing that teacher effectiveness plateaus relatively early in a teacher's career. Hughes (2014) suggested that districts themselves do not appreciate the important role teacher hiring plays in accomplishing district goals. The same can be said for most administrator preparation programs, which tend to emphasize the legal aspects of hiring but not the improvement of instruction (Hess & Kelly, 2007).

A third reason why teacher hiring is important is because teacher professional development (PD) is questionable in its effectiveness (Hanushek, 2011) and costly (New Teachers Project, 2015). If this is true, teacher hiring represents a significant opportunity to improve teacher quality – possibly a better opportunity than the professional development of teachers after they are hired. The New Teachers Project (2015) “embarked on an ambitious effort to identify what works in fostering widespread teacher improvement....Instead, what we found challenged our assumptions” (p. 1). These researchers found that districts make substantial investments in teacher improvement, yet most teachers do not appear to improve substantially from year to year, even though many have not yet mastered critical skills. Other studies and critics argue variously that most professional development lacks intensity, consistency, coherence, or focus. Surveys of teachers indicate that most professional development is unsatisfying and irrelevant to their work. Older research points out how little districts spend on professional development; new research has challenged whether it is underfunded, arguing

instead that districts get too little for the significant resources committed to it (New Teachers Project, 2015). If PD is unreliable and not cost effective, then the upper level of the quality of instruction in a school or district might be largely established at the moment new teachers are selected, and teacher hiring may represent a better opportunity to improve the instructional quality of the school staff than any professional development that occurs later. A recent working paper from the Stanford Center for Education Policy Analysis found “evidence of strong positive spillover effects associated with the introduction of peers who are more effective than the incumbent teacher” when looking at teacher transfers over a 10-year period (Sun, Loeb, & Grissom, 2015).

Finally, teacher hiring is important as a research topic simply because advocates declare – or at least imply – that teacher hiring is important (Darling-Hammond & Snowden, 2005; NCTQ, 2004). Take, for example, the 2004 article “You’re Hired!” in *Principal Leadership*, put out by the National Association of Elementary School Principals (naesp.org). This article laid out a “deliberate, carefully developed process [to] maximize our chances of success in hiring the right teachers” (p. 47). In it, the authors argued that the right stuff was “character, desire, attitude, personal qualities, and potential” (p. 47), and that these qualities were “more important than more than a strong academic background and a firm grasp of subject matter.” There is a 10-step program “to identify and hire teachers who have the all-important right stuff” (p. 47). The 10 steps include setting goals and identifying needs, recruitment, establishing interview criteria, reading resumes, forming and training screening committees, interviewing processes, using rating scales, and considering demonstration lessons, decision making, and induction programs for those hired. Interestingly, the authors identified demonstration lessons as “the best hiring indicator” (p. 50), particularly for the opportunity to observe how the candidate interacts with

students. The authors concluded by saying that “hiring teachers is one of the most formidable and challenging tasks we face” (p. 52). For all of that, the process described recommends interviews of no more than 20 minutes.

The fact that in 2004 the editors of *Principal Leadership* chose to include an article on hiring suggests two things: first, that its readership would find information about hiring practices to be valuable; second, that a significant portion of school leaders, two years into the No Child Left Behind era, did not have in place hiring practices designed to find and hire teachers with the “right stuff.” Other publications described in the literature review below suggest that a decade later, at the end of the NCLB era, deliberate, carefully developed processes have yet to become the norm.

In advancing their own agendas, even competing factions in the education policy arena acknowledge or assert the importance of finding and having quality teachers as self-evident. Research substantiating the validity – and limits – of such claims should be an important contribution to the literature and to policy discussions.

The Policy Context of Teacher Hiring

Another reason to study teacher hiring is the remarkable policy context in which it takes place. Schools and districts have been buffeted by major changes in education policies over the past 20 years. Many of these school reform efforts have been accountability measures that define school success largely in terms of student achievement on statewide tests. It is an empirical question to ask whether districts have responded to pressures to improve student achievement by changing their teacher hiring priorities and practices.

At the same time, not all of these changes in education policy have been aimed (at least directly) at student achievement. Early retirement incentive programs, for instance, and changes

in funding for educator health and retirement benefits may have affected district hiring practices. School choice policies have injected a market dynamic into district operations that may have affected district hiring decisions.

These years coincide with the enactment of the reauthorization of the federal Elementary and Secondary School Act of 1965, known by its distinctive title, the No Child Left Behind Act of 2001 (NCLB). Other state and federal education policies and initiatives were also introduced and implemented over this time period. For example, the federal American Recovery and Reinvestment Act (ARRA) was passed in 2009 as a major economic stimulus package in response to the crisis in the housing and financial sectors during 2008. ARRA included a significant infusion of funds, \$100 billion, for the education sector, including \$4.1 billion for the U.S. Department of Education's Race to the Top (RT3) initiative. RT3 represented a new type of financial support for education initiatives – competitive funding as opposed to designated per pupil funding. (A second initiative, the Investing in Innovation Funding (i3), provided more than \$1 billion in additional competitive funding to local school districts and other non-profit organizations, although none of these funds have been awarded in Michigan.)

State government has provided its share of education initiatives. To improve its chances for funding through RT3, the Michigan legislature adopted new educator evaluation legislation that required the use of student scores on statewide tests as part of the measure of a teacher's effectiveness.

NCLB required states to institute yearly testing in mathematics and reading in grades 3-8. It then required states to set achievement goals for specific groups of students, including students with disabilities, students with limited English proficiency, students of color, and students from economically disadvantaged families. Known as Adequate Yearly Progress, these NCLB

achievement goals gave states, districts, and schools 12 years to make whatever improvements necessary so that all students would be performing at proficiency in both mathematics and reading by 2014. Adequate Yearly Progress goals essentially took the proportion of students not yet proficient in each subject in 2002, both overall and by student subgroup, and divided it by 12; the results were the annual increase in proficiency expected of all students in all student subgroups, including those traditionally “left behind” by the system. During the NCLB era, the state of Michigan created the Top to Bottom list of all public schools in the state as part of its application for waivers from the Adequate Yearly Progress requirements. This list ranked schools by combining overall achievement with the achievement gaps between the highest achieving 30 percent of students and the lowest achieving 30 percent of students.

Both the AYP rankings and the Top to Bottom rankings were ostensibly incentives to districts to improve student performance, particularly in students in the identified subgroups. Thus, hiring teachers with the potential to improve student test scores in mathematics and reading in elementary and middle school grades might have become a priority for school districts. Traditionally low-performing schools and districts were most likely to trigger sanctions for failing to reach AYP goals, because their overall proficiency gaps were greater than higher performing districts, meaning their AYP incremental gaps were larger than those of higher performing districts. Not only did low-performing schools and districts have farther to go to reach proficiency, their yearly steps were larger than those of more successful districts. Still, the prevailing wisdom during the NCLB era was that before it was over every school and district would fail to reach their AYP goals. The willingness of the U.S. Department of Education during the later years of NCLB to grant waivers to states serious about meeting the spirit of the

policy suggests an awareness on the part of federal officials of the challenges schools, districts, and states faced in meeting AYP goals.

How schools and districts went about improving student achievement was left to them. Hiring teachers with different or particular skills was only one option districts might have pursued. Building capacity within current staff was another. Recent research suggests that in-service professional development has fallen far short of its purpose (TNTP, 2015), but such research was not available during the early years of the accountability era, and the tenuous connection between research and practice suggested that districts may have made decisions about improving student performance based on factors other than research. Still, adjusting teacher hiring decisions in light of accountability pressures is a reasonable assumption from which to analyze teacher data.

The Design of the Study

To investigate the possible effects these multiple policy changes may have had on the teachers who appeared in classrooms across the state, this study took a two-fold approach. First, it examined trends in teacher characteristics over time, using personnel data made available by the Michigan Budget Office's Center for Educational Performance and Improvement (CEPI). This study investigated how various characteristics of the education work force changed – or stayed the same – over the past 12 years. It refined the analysis of these characteristics by looking both at the teaching force as a whole and at subgroups of educators working in districts serving different types of communities. Second, this study presents the results of interviews with district personnel responsible for the decision making processes used in five school districts. These interviews with district leaders provide insight into the factors that influenced their decisions.

To make sense of these cases, this study adopted three powerful concepts from organizational theory concerning decision making in organizations. One is the concept of limited or bounded rationality. Decision makers in organizations for the most part make rational choices (March, 1994), but this rationality is bounded by factors inherent to the organization itself, and to the environment in which it operates. These factors include scarcity and ambiguity (March, 1994) – scarcity of time, attention, information, and capacity, and ambiguity in organizational preferences, information, and the interpretation of the consequences of previous decisions.

In the face of these boundaries to rational choice, decision makers in organizations often resort to behaviors described in organizational theory as satisficing (Simon, 1958) and rule-following (March, 1994). Satisficing refers to the more or less serial consideration of choice alternatives until an option is identified that meets a threshold of acceptability – a good enough option – at which point the search for alternatives stops and a decision is made. Rule-following frames the decision process in terms of precedent – what has been done before – and justification – what can be defended by reference to protocols or policies. Rule-following essentially shifts some of the burden of judgment from the individual decision maker to the larger organization, as expressed explicitly through policies or implicitly through precedent.

These three concepts – bounded rationality, satisficing, and rule following – provide a framework that makes understandable both the constraints under which districts practice teacher hiring and the processes they use to make these decisions.

Summary of the Research Findings

The analysis of the teacher characteristics is informative both for what it found and what it did not find. Some of the demographic characteristics of teachers in Michigan and in the study districts changed, but many did not. The average age of teachers across Michigan decreased, as

did their experience levels. The percentage of non-white teachers declined, and the percentage of teachers assigned as mathematics or reading specialists fell substantially. There are variations across subgroups of districts that bear note. Urban districts overall had significantly higher percentages of teachers of color, but over the 12-year period the number of teachers in urban districts dropped by more than a third, and the percentage of teachers of color dropped even more. Thus, the state's teaching force became less diverse, even as the student population it serves became significantly more diverse.

Given the pressures on districts to improve the academic performance of students in specific subgroups in the subject areas of reading and mathematics, these results suggest that districts either chose not to prioritize these characteristics in teacher candidates, or are unable to find suitable candidates with these characteristics. The analysis of the interviews with district leaders provides insight into the decision-making process these districts used during recent hiring decisions. Districts made little direct connection between their specific accountability needs and the preferences they used in selecting new teachers. District leaders were also constrained by the calendar and by conflicting responsibilities from devoting time and attention to the search process. Variation in district hiring processes showed both that choice exists in how districts carry out this important function, and that hiring itself does not register as a core function of the organization throughout its members. In short, the accountability pressures intended by recent education policy changes have not been effective in changing practice at this fundamental level.

CHAPTER 2

LITERATURE REVIEW

This study drew upon three types of literature. The conceptual framework described in the next chapter came primarily from literature in the field of organizational theory. In particular, I applied theories and concepts related to decision making in organizations to the decision-making processes that public school districts use in hiring teachers to fill instructional openings. Many of these concepts apply to how districts fill non-instructional positions as well, but the focus of this study was on teacher hiring.

The second type of literature that informed this study is the empirical research on teacher hiring that has evolved over time. The evolution has been shaped in no small part by the growth of large databases and the technology that supports them. In the years before the internet and the microprocessor, large databases in the education sector were primarily the province of the federal government. These databases were, for the most part, discrete sets of information, either about students or about teachers, but rarely both at any meaningful level of disaggregation. With the advance and proliferation of technology at the federal, state, and district levels, the collective capacity of the education sector grew in ways that allowed more data to be collected and analyzed in increasingly sophisticated ways.

This is not to say that the empirical research into teacher hiring has been purely quantitative. As scholars concerned with teacher quality turned their attention to the topic of teacher hiring, they made use of multiple methods of inquiry. Quantitative research can identify what has happened, as the first part of my study did. Quantitative methods allow researchers to cast a wide net to discern patterns recognizable only in large sample sizes. However, when investigating why something happened, particularly when people are involved, researchers often

turn to qualitative methods, or to a combination of methods. Qualitative methods allow researchers to probe deeply into the reasons why the patterns may have emerged. I chose this mixed method approach for my study. The empirical studies described below represent some of the more illuminating work on teacher hiring done by scholars so far.

The third type of literature that informed this study is the textbook or trade book. This literature might be said to represent the secondary market for research. Text- and trade books are intended to inform and shape the practice of potential and practicing administrators. These texts attempt to translate the findings of primary research – or the particular experiences of the authors – into practical lessons that are meant to improve current practices in schools and districts. They are, essentially, interpretations and applications of the more precise knowledge produced by research or of the life lessons of the authors. These texts contributed to my study in two ways. The first was to substantiate the claim that teacher hiring has been an abiding concern in the quest to improve teacher quality. Second, they also helped illustrate the appropriateness of applying the concepts about decision-making drawn from the literature on organizational theory.

Organizational Theory and Decision Making in Organizations

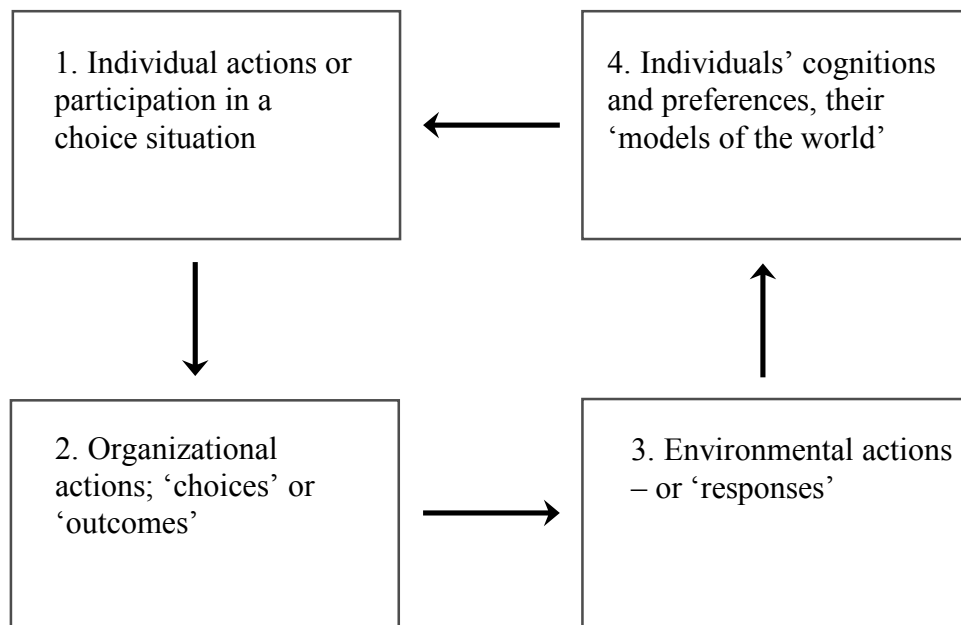
Organizations are groups of people whose roles and relationships enable the group to do more than the individuals can do themselves. What people do as a group defines an organization's purpose or goals. Reciprocally, an organization's purpose and goals help define what individuals do within the organization. March, for example, distinguished between an individual's personal identity and his/her organizational identity (1994). For example, a business is an organization with the purpose of providing goods or services for a fee. A government is an organization with the purpose of providing for the safety and well-being for its constituents. A school district is an organization with the purpose of providing educational services for students

in its community. The organizing principles of a group can be commercial, ideological, spiritual, or social. Traditionally, and in the main, organizations are characterized by hierarchy, differentiation, and communication. Hierarchy exists to facilitate coherent decision-making on behalf of the organization; the differentiation of roles allows for the development of specializations of knowledge or skills. Given the hierarchy of control over decisions and the differentiation of roles into specialties, organizations require communication between levels and across roles in order to coordinate the individual and collective actions of the members in the organization. In asserting the value of studying organizational theory, Herbert Simon argued that organizations are the defining characteristic of modern society (Simon, 1997).

Organizational theory attempts to explain and predict the behavior of organizations, and of people within organizations. In doing so, organizational theorists attempt to improve organizational performance through organizational learning, a goal organizational theorist James March referred to as decision engineering (March, 1994). The more efficient the organization, the more important the role of decision-making by those at higher levels of the organization – the owner, the director, the executives, the management. As Simon observed, “The task of ‘deciding’ pervades the entire administrative organization quite as much as does the task of ‘doing’ – indeed, it is integrally tied up with the latter” (Simon, 1997, p. 1).

Organizations act according to their principles; these actions are also influenced by the social, economic, and physical environments in which an organization operates. In administrative organizations, such as school districts, making decisions is a core function of the organization. Decisions are choices, and so March, Simon, and other organizational theorists have devoted significant attention to theories of choice. Figure 1 portrays how March (1988) portrayed the complete cycle of choice in an organization.

Figure 1: March's Cycle of Choice in Organizations



In this model, individuals within the organization (1) either make a choice on behalf of the organization or participate in a collective choice, what March calls a choice situation. For example, an HR director may select which applications for a teaching position to forward to principals to consider, or a team of reviewers may decide collectively which applications to pass along and which to pass over. (2) This decision influences an organizational action, perhaps contacting a candidate to arrange for an interview. (3) Actions on the part of the organization are not unilateral: candidates can decide whether to accept the invitation, in part based on the actions external to the district, such as offers from other districts. These environmental responses affect (4) the decision making of the individuals within the original organization. For example, if the response from the candidate indicates an imminent decision to accept a position elsewhere, this response may affect the understandings and subsequent actions of the original actor or actors. In

a related example, a district administrator or selection team may want additional information about a candidate. The administrator or team may decide to call the candidate's references. The response they get from those outside sources may change their understanding of the candidate, depending in part on their beliefs about the veracity of the references. This revised understanding will inform the choice/decision whether to pursue the candidate further. It may also influence a decision maker's view on the value of references, their model of the world, or their willingness to participate in future decisions. (March also considered situations in which the choice cycle is interrupted, but these considerations were tangential to this discussion.)

The most basic of choice theories is that of rational choice, which grew out of the theories of Taylor (1917) and Weber (1947), and which March (1988) described as "the received doctrine about decision-making by 1950" (p.1). March argued that decisions about choice are really decisions about search. Presented with a decision to be made, rational choice theory posits that actors search for and identify all possible options and determine every possible consequence of those options. A decision maker under conditions of rational choice then applies an organization's predetermined preferences, such as its goals and objectives, to select the option most likely to achieve the organization's goals. The task of the actor is to choose the option that *maximizes* the alignment between an option and its consequences and the organization's preferences.

The problem with rational choice as a theory, noted March, is that "pure rationality strains credulity as a description of how decisions actually happen" (March, 1994, p. 5). Among the problems with rational choice as a theory is that decision makers face a multitude of constraints on their ability to maximize the results of their choice. These constraints are elaborated in the chapter on my conceptual framework but, in short, it is often impossible for

decision makers to identify correctly and accurately all appropriate options or to evaluate all of the possible consequences of those options. Decision makers also struggle to apply the correct organizational preferences, which may be vague, internally inconsistent, or constantly changing or evolving.

An alternative to rational choice championed by March and Simon is now known in the literature as bounded or limited rationality (Barros, 2010; March, 1994; Simon, 1997). Bounded rationality takes as its premise that decision makers are intendedly rational. As March put it, “The core notion of limited rationality is that individuals are *intendedly* rational. Although decision makers try to be rational, they are constrained by limited cognitive capacities and incomplete information, and thus their actions may be less than completely rational in spite of their best intentions and efforts” (March, 1994, p. 9).

March, in *A Primer on Decision Making: How Decisions Happen* (1994), and Simon, in *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations* (1997), laid out the nature of the constraints facing decision makers, and the ramifications those constraints can have on the processes used to make decisions and on the results of those processes. March’s *Primer* focused on one of the main responses to bounded rationality: rule following and the fulfillment of identity. According to March, individuals within an organization adopt identities that are more or less shaped by their organizational roles. In these roles, “They follow rules or procedures they see as appropriate to the situation in which they find themselves” (March, 1994, p. 57). Simon’s *Administrative Behavior* described a second response to the constraints on rational choice: satisficing behavior. As opposed to maximizing behavior – the attempt to identify and choose the best alternative – satisficing (a neologism coined by Simon (1956) as a combination of satisfying and sufficing) sets a lower threshold of

success: not the best choice, but one that is merely good enough. The implications of bounded rationality and the responses of satisficing and rule-following provided the central part of the conceptual framework that guided my research. These implications are explained in the next chapter.

Empirical Research on Teacher Hiring

Compared to other aspects of the teacher quality issue, the empirical research on teacher hiring is relatively sparse (Balter & Duscombe, 2006; Harris, et al., 2006; Liu, 2006; Meertz, 2001). The seminal study of teacher hiring was the 1987 RAND study, sponsored by the National Institute of Education and authored by several respected researchers led by Arthur Wise and Linda Darling-Hammond. Its stated purpose was “to [explore] key elements in the selection process that may be changed to enhance the prospects for improving teacher supply, quality and retention” (Wise, 1987, p. 1). The study was designed “to assess teacher selection practices with a view to analyzing how teacher selection can be used to improve the quality of the teaching force” (p.12). To accomplish this goal, six districts were selected for their reputations as districts that paid careful attention to their selection of teachers, or that had highly developed selection practices. The authors chose districts that were exemplars, in order to develop recommendations about how other districts should be and act if they were to improve teacher quality through the hiring process. This ultimate goal of the study was emphasized in the authors’ exhortation that “school district personnel must understand the educational and organizational implications of the teacher selection system they adopt” (p. 1).

Implicit in this observation and its use of the imperative “must understand,” instead of the declarative “do understand,” was the sobering possibility that some – or most – district personnel do not appreciate the implications of their current teacher selection system, or that they approach

selection from their own perspectives – perspectives that policy makers “must understand” if they are to craft sound policy. Three decades later, these possible issues are ones upon which my study was meant to shed some light.

Also implicit in this observation was an assumption that school district personnel “adopt” a particular teacher selection system – that is, that they consciously choose to use a particular selection system, perhaps even that they deliberately choose one system from or over an array of alternative selection systems. One issue my study attempted to illuminate was whether the case study districts adopted their current system, whether they inherited it, or whether their current system essentially adopted them.

Finally, this RAND study observation that school district personnel must understand the implications of their selection system implied that district personnel are essentially homogeneous, that – however differentiated their roles – they share (or should share) a common understanding about the working and consequences of their district’s teacher selection process. To be fair to the RAND study authors, they found and reported that, even in their carefully chosen sample of districts, district personnel could and did have different understandings of the implications of their selection practices.

For all of its strengths, the 1987 RAND study is limited in its value for districts and policy makers today. The context of district teacher selection practices has changed dramatically since the mid-1980s. My research started with two of the same presumptions that drove the RAND study: that teacher selection is an essential determinant of district and school teacher quality, and that policy makers at every level, including the district, would benefit from a better understanding of its practices and the factors that affect those practices.

The context of my research, however, differed significantly from that of the RAND work. The most important difference was the situation in which the districts and district staffs found themselves at their respective points of time. The RAND study essentially had to rely upon its audience's intrinsic motivation to improve teacher quality, because districts were largely autonomous organizations with significant control over their own finances and operations. In 2004 and 2015, by contrast, districts faced strong extrinsic motivation to improve teacher quality – or else. The reauthorization of the Elementary and Secondary Education Act in 2001 in the form of No Child Left Behind included significant sanctions for schools and districts that failed to meet new standards for teacher quality and student achievement (Rutledge, Harris & Ingle, 2010).

The RAND study shows that, as far back as 1987, teacher hiring was deemed important enough – and problematic enough – that the National Institute of Education (precursor to the Office of Educational Research and Improvement in the U.S. Department of Education) would sponsor such a major undertaking, with support from four foundations. The report cited both an imminent demand for significantly more teachers and a fundamental lack of capacity on the part of districts to identify and hire high quality candidates to fill those positions.

The RAND study was prescriptive in its intent. Most studies of teacher hiring have been descriptive in their approaches, but how researchers have approached the topic of teacher hiring and its relationship to teacher quality has changed over time. Some research has attempted to determine whether districts hire the best candidates. Ballou (1996) used Survey of Recent College Graduates (SRCG) and School and Staffing Survey (SASS) data to argue that better candidates were actually at a disadvantage in the hiring process. Ballou used graduation from a selective college or university as an indicator of candidate quality. He also showed that teachers

from selective institutions left teaching at a higher rate than graduates from less selective institutions. The strength of Ballou's study was its use of large quantitative data sets to attempt to answer an important question about the quality of teachers in the nation's schools. However, Ballou's analysis relied upon institutional reputation as a proxy for the individual merits of candidates. My investigation of district hiring practices refined the connection between what districts need and who they hire by comparing specific characteristics of individual teachers, not just their institutional affiliations, to the apparent instructional needs of student subgroups within districts. For example, were districts with low student scores in mathematics in the elementary grades more likely to hire elementary teachers with backgrounds and expertise in mathematics?

Other researchers seemed to accept the premise that districts do not hire the best candidates, and so focused on why districts do not do so. This line of research investigated the role of the district – particularly the role of urban districts – and the role of the principal as a key player in the decision process. Liu and Johnson (2006) identified the centralized and bureaucratic nature of large districts as barriers that prevented them from hiring higher quality candidates. Liu and Johnson found that high quality teachers did in fact apply to urban districts, but that lack of communications and delays in the hiring process often forced these good candidates to take other offers from more nimble districts. This study and others identified timing as an important factor in teacher hiring, something my study corroborated in its case studies. Liu and Johnson also argued that poor practices on the part of districts – hiring late in the hiring season, rushing the offer and acceptance phase, and providing for a limited exchange of information from candidates to districts and from districts to candidates – leads to poorly matched teacher assignments that result in higher rates of teacher mobility, another problem in building instructional capacity in schools and districts. Bureaucracy and centralization can hamper effective teacher hiring.

On the other hand, DeArmond and colleagues (2008) studied what happens when a district decentralizes its hiring process. They found that liberating school principals to make these decisions played out very differently among schools even within the same district. Some of the principals took advantage of the opportunity to act and had the leadership capacity to work the hiring process to their benefit. Other principals lacked the skills and initiative to do so and wound up with lesser candidates. DeArmond concluded that decentralization by itself does not necessarily lead to better hiring practices. Their study highlighted the importance of principal capacity in teacher hiring decisions. My study further examined principal capacity and emphasized the organizational context in which that capacity needs to operate.

Maier and Grogan (2011) used statewide data from Michigan's Registry of Educational Personnel (the same data set from which this study drew teacher characteristics) to probe the issue of timing and its effect on teacher hiring. They found that hiring later in the season is surprisingly – even distressingly – common among districts, and that later hires have higher rates of mobility, reinforcing the findings of Liu and Johnson (2006). The data source Maier and Grogan used did not allow them to delve into why hiring took place late; their findings suggest that some combination of district issues, such as late identification of openings and principal capacity, can lead to problems placing and retaining teachers in schools. The case study portion of my research shed more light on the issue of timing and principal capacity.

Another approach to investigating the connection between teacher hiring and teacher quality is to open the black box of district practices and ask, how do districts select candidates, and what factors influence these decisions? This approach resists quantitative analysis. Large data sets contain increasing amounts of information about teacher characteristics, but the connections between these characteristics and teacher quality continue to be ambiguous. Instead,

several studies along this line of inquiry built upon research on hiring from other occupational sectors. Some of these studies attempted to make sense of teacher hiring in terms of person-environment (P-E) fit, which focuses on the degree to which a candidate appears to be a person-job, person-group, or person-organization fit. Other studies have focused on the role of the principal in negotiating the competing demands of organizational preferences, on the one hand, with his or her individual preferences (based on professional expertise and closer knowledge of the needs of the school) on the other.

The works of Harris, Rutledge, Ingle, Thompson, and Bishop have explored teacher hiring along these dimensions, largely within the context of one or more Florida school districts. Harris, Rutledge, Ingle, and Thompson (2006) proposed that principals practice person-group fit in the way they attempt to mix the professional preparation and instructional approaches of new staff members with those of existing staff. At the same time, Harris and colleagues argued, principals look for candidates who appear to match the work ethic of the existing staff, including their commitment to teaching disadvantaged students, for example. Rutledge, Harris, and Ingle (2010) used a different metaphor – not mixing and matching, but bridging and buffering – to describe the role principals play in mediating the preferences imbued in various – and sometimes competing – federal, state, and district policies. Rutledge and colleagues found that principals bridge the gap between policy and practice by translating larger policy directives into simpler, more immediate actions at the school level. On the other hand, principals also buffer what happens in their schools from higher level policies that they feel threaten the best interests of their schools and the students in their care. In the ‘bridge or buffer’ study, Rutledge called attention to the environment in which teacher hiring decisions are made, and how exogenous factors potentially limit principals from exercising rational choice in their hiring practices.

Rutledge also highlighted the ambiguous nature of the organizational preferences decision makers must apply in aligning alternatives with preferences. Principals as decision makers at times act on organizational priorities and preferences, and yet personal preferences present boundaries to rational choice.

In “Certify, Blink, Hire: An Examination of the Process and Tools of Teacher Selection” (2007), Rutledge, Harris, Thompson, and Ingle investigated how hiring is organized in a district, and the implications of organization for who gets hired. They reviewed the research on hiring from the field of occupational research, which points out, among other things, that screening and selection have multiple, potentially competing goals: finding the strongest and most appropriate employees, on the one hand, while using methods that are economical and cost-and-time effective, on the other. Thus, occupational research aligns with the framework of bounded rationality. For example, the screening process serves not only to sort applicants by an initial set of criteria, such as minimum requirements; the screening process also reduces costs by shrinking the number of candidates receiving further consideration. Thus, screening is a type of satisficing behavior.

Rutledge and colleagues enumerated the different tools districts have used in the hiring process, including applicant-generated information, third-party information such as references, and instruments districts can use, such as the Teacher Perceiver Instrument, to gauge a candidate’s aptitude for teaching. The researchers designed a case study to plumb the hiring process and tools used by 39 principals in a mid-sized district in Florida. They traced hiring decisions from the principal’s request for a posting through the offer and acceptance of a new hire. They documented how, along the way, district policies regarding internal and external posting affect the candidate pools principals can consider, as does the district’s participation in a

job fair. District policy gave the district's Title I schools priority in hiring, putting non-Title I schools at a potential disadvantage in terms of candidates. Some principals of non-Title I schools responded to this constraint by working around it. Some teacher candidates figured out how to work around these constraints as well, delaying the submission of their applications until the Title I teaching slots were filled. The case study portion of "Certify, Blink, Hire" closely resembles the design of the qualitative portion of my study; my investigation across several districts identified a range of practices districts use in their hiring processes and what other factors besides district policies influence decisions on hiring.

Textbooks and Trade Books

The empirical research on teacher hiring is joined in the literature on teacher hiring by textbooks and trade books that offer practical guidance to districts in matters of personnel. Some of these focus directly on teacher hiring. This type starts from the premise that better hiring will lead to better student outcomes. *Effective Teacher Hiring: A Guide to Getting the Best* was written by Kenneth D. Peterson and published in 2002 by ASCD, a national association of district administrators, and a mainline source of professional development materials. Peterson asserted that "no single school-district activity beyond the moment-to-moment care of young people is more important than the hiring of talented, accomplished, and effective teachers" (vi), and that "established teacher-selection procedures that might serve as models to other schools and districts are scarce as well." Such a claim at once validates the value of the 1987 RAND study, even as it seemingly overlooks it.

Peterson went on to add that "the procedures outlined in this book, if properly implemented, will ensure a superior selection process regardless of a district's location or budget" (p. vii). This bold claim, transcending concerns about context and district capacity,

exemplifies approaches grounded in classic rational choice theory. Peterson then laid out six principles of good teacher hiring, beginning with the assertion that “It’s worth the effort to hire the best” (p. vii). While this principle may seem obvious, it challenges a line of reasoning that has appeared throughout the history of American education. Let’s take the principle apart in its concepts. Asserting the existence of best candidates acknowledges the potential of a spectrum of quality in teacher preparation, surely an issue of interest by many today. The National Council of Teacher Quality has developed arguments and research about the prevalence of ineffective teacher preparation institutions (NCTQ, 2014). This assertion also raises the issue of the uneven distribution of teacher quality, an argument well represented in the research literature. The original mission of the alternative teacher source Teach for America was to ameliorate the inequities in teacher distribution. It also reinvigorated long-standing disputes over definitions of teacher quality by focusing its recruitment efforts on the campuses of highly selective colleges and universities. TFA has never argued that its member teachers are superior to teachers trained by traditional teacher preparation programs; the inference instead has been that, lacking the depth and breadth of preparation provided by those programs, graduates from highly selective institutions have the raw talent to contribute value to schools that otherwise cannot attract quality teachers for their students. Implicit in TFA’s model is a perspective on traditionally underserved students and hard-to-staff schools that echoes Christensen’s disruptive technology theory (Christensen, Horn & Johnson, 2008) that “better than nothing” is a reasonable standard for a technology – in this case, teacher placement – that attempts to meet unmet demand in a sector – in this case, K-12 education – in which the established providers cannot or choose not to satisfy the demand because they lack the technology or the will.

The other part of the assertion that it is worth the effort to hire the best is the assertion that the exertion of effort to hire the best possible candidate represents a worthwhile investment. Peterson asserted that good teacher hiring “makes a long-term difference to school-district quality,” and that good teachers “often help improve their fellow teachers as well” (p. vii). Peterson went so far as to assert that “good hiring requires a complicated selection system.”

In spite of Peterson’s initial rational choice promise that adopting his system will produce superior results regardless of a district’s context, embodied in the first of his principles that “teacher hiring works best when it is approached in a rational, organized manner” (p. viii), several of Peterson’s other principles are consonant with the basic concepts of bounded rationality and organizational responses to it demonstrated by the case study districts in my research. For example, the principle that “some people hire better than others” points out the limits of individual capacity. The degree to which those with greater talent can be the decision makers will improve the chances of better hiring. When such specialization is not possible or in practice in a district, providing a set of rules for decision makers to follow can help mitigate the lack of capacity. The principle that “a fair and lawful selection system is vital” also points to the need for rules to prevent lack of capacity (whether intellectual or moral) from resulting in poor decisions. The principle that “teacher hiring must be tied in with school district planning – the vision for teacher hiring should extend beyond the immediate vacancy” speaks to the tendency of decision makers to satisfice in the face of limits on time and attention. Peterson’s principle that “teacher selectors must sell their districts or schools” suggests that bounded rationality can apply to candidates as well as organizations. Candidates, too, can be constrained by limited attention and lack of information (Liu & Johnson, 2006) in making their own decisions about where to apply and which offers to accept.

Also focused directly on teacher hiring is *Hire Better Teachers Now: Using the Science of Selection to Find the Best Teachers for Your School*, written by Dale S. Rose, Andrew English, and Treena Gillespie Finney, and published in 2014 by Harvard Education Press. The authors applied their training in organizational psychology and human resource management to teacher hiring. Much of their advice is based in the person-job, person-group, and person-organization fit concepts that educational researchers have increasingly brought to investigations of teacher hiring. Rose, English, and Finney asserted that teacher hiring is – and should be – a complicated process. It is complicated because of the realities of teachers leaving the district, other teachers wanting to change positions within the district, assessing the changing needs of both schools and the district, identifying potential replacements or additional hires, coordinating the schedules and attention of various people whose input could improve the quality of the decision-making, accumulating the kinds and amounts of information about candidates that are better predictors of successful performance on the job, and so on.

It is worth noting that Rose and colleagues acknowledged the bounded rationality facing district decision makers. They proposed a system of practices districts can implement that enhances the *prospect* of selecting the best candidate from the *available* pool of candidates. This system of practices implicitly confirms the value to districts of rule following in the face of limited resources and ambiguity. Rules essentially lessen the decision-making burden of district decision makers.

A second type of trade book acknowledges the place of teacher hiring within the larger context of teacher quality and school improvement. An example of this type of guide for practitioners is New Leaders's *Breakthrough Principals: A Step-by-Step Guide to Building Stronger Schools*, written by Jean Desravines, Jaime Aquino, and Benjamin Fenton, and

published in 2016 by Jossey Bass. Established in 2000, New Leaders describes itself as a national nonprofit that develops transformational school leaders. *Breakthrough Principals* presents a transformational leadership framework for principals that New Leaders derived from its analysis of the best practices of more than 100 principals in schools that had gained rapid improvement in student achievement. This framework identifies five components that effective principals focus on to achieve school improvement: learning and teaching, school culture, talent management, planning and operations, and personal leadership. In each of these categories, New Leaders identified three or four areas of effort, or levers, that principals can use to identify specific actions on the part of the principal or others in the school to produce improvement in that area. One of the levers in the talent management component is recruitment and onboarding, and one of the four actions for this lever is the selection and hiring of personnel.

By contextualizing teacher hiring as part of a larger set of responsibilities around talent management, including the proper induction of new teachers, the formation of instructional leadership teams, actions around performance monitoring and evaluation of all staff members, the creation and nurturing of professional learning and collaboration, and identifying talent management as one of five components in a larger strategy for school improvement, *Breakthrough Principals* effectively describes the challenges principals face that help explain why bounded rationality and not classical choice theory govern their actions. The authors noted that 75 percent of the principals responding to the 2013 MetLife Survey of the American Teacher reported that “the job has become too complex” (p. 147), which can be read as a response to Peterson’s insistence that hiring needs to be a complicated process. Desravines and colleagues therefore argued for “thriving leadership teams to effectively manage vastly expanded school leadership responsibilities” (147). Such sharing of leadership responsibilities necessarily includes

the sharing of decision making, which likely includes decisions about how decisions will be made. Small wonder, then, that March and Simon focused on rule-following as a response to situations of bounded rationality. In fact, *Breakthrough Principals* itself can be read as a framework of rule-following that attempts to meet the bounded rationality described in organizational theory.

A third type of guide, aimed both at practitioners and policy makers, is the textbook-like *The Strategic Management of Human Capital* (2015), written in part and edited by the academic Alan Odden. Odden also placed the topic of effective teacher hiring in the larger context of how districts manage their primary asset (and expense) – the people who work in schools – toward strategic ends. Unlike *Breakthrough Principals*, however, Odden focused not on the school principal but on the district as the locus of decision making. Such a stance implies that districts are the operative agents in instructional improvement and student learning, which aligns with the conceptual framework used in my study. Odden also asserted that improving instructional practice and student learning requires districts to have a strategic plan for the management of personnel toward those ends.

The strategic framework laid out in this guide includes staffing and recruiting top talent, performance management, performance evaluation, induction and professional development, and compensation. In other words, teacher hiring is a core component of the strategic management of human capital. This text also makes recommendations concerning policy changes in the larger education system regarding licensure, tenure, evaluation, and dismissal.

Odden placed his approach in a historical context. He argued that for decades the United States has been wrestling with the issue of teacher and principal quality. “In 2010, this quest became a central element of the education initiatives of President Barack Obama and of

Secretary of Education Arne Duncan, and was the reform category under the label of teacher and principal effectiveness that earned the most points for Race to the Top proposals.” Odden and colleagues drew on concepts, ideas, and practices from the broader management literature that “has developed more strategic approaches to human resource management,” as well as on the most promising strategic practices in school districts and states around the country. These authors advocated conducting HR alignment analyses to determine the degree to which all major programs of the HR system broadly conceived (i.e., not just the HR office) – recruitment, selection/distribution, induction, mentoring, professional development, evaluation/ performance management, and compensation – are anchored in and reinforce the instructional vision and student performance goals.

As if to emphasize the crowded decision-making landscape in which teacher hiring exists in the larger context of strategic management of human capital, only one chapter of the 12-chapter book discussed the kinds of key staff – mainly teachers and principals – schools need to implement an effective education improvement strategy. In fact, most of the book is about teachers and how to manage their talent – the human capital and primary asset of a school district. Teacher hiring, it seems, is only the beginning – and not even the beginning. The chapter discussed how district and school leaders can conduct talent audits as a prelude to recruitment – drawing from the knowledge of “how many of what kind” of staff are needed. Talent audits would include assessing the effectiveness of current teachers, teacher leaders, and administrators. The chapter even suggests formulas for specific numbers of staff in schools. The authors argued that high performance systems must identify their key staff, and then focus attention on them in order to manage key talent strategically.

Odden and his colleagues proposed a shift in how districts think about human resource management that they themselves compared to paradigm shifts in education, including the rise of unions in the 1970s, the drive for equity and inclusion in the 1980s and 1990s, and the evolution in teacher recruitment in the form of Teach For America and TNTP most recently. By adapting human resource management from the business sector, Odden, et al. described an ambitious upgrade in the capacity of districts to diagnose their current talent in light of the current and future needs of their students. Their framework for the strategic management of human capital “derives directly from the overall education improvement strategy” that districts must have for boosting student achievement. Regardless of the particular education improvement strategy chosen, Odden and colleagues pointed out that the organization’s human resource management strategy must align with it for it to succeed.

Such textbooks and trade books are predicated on the assumption that district leaders can and should improve their teacher hiring practices, and that doing so will lead to improved student achievement. *Effective Teacher Hiring* and *Hire Better Teachers* focused specifically on the hiring process. *Breakthrough Principals* puts teacher hiring into a context of the core components of effective school leadership. All three of the guides summarized here were written expressly for practitioners. Odden’s textbook expanded the context to the district, in part because this is the organizational level at which schools are held accountable.

These research studies and practitioner guides hint at or discuss the role of the district, and they bring useful frames of reference to our understanding. My study built upon the insights of person-group fit and the tools used by district decision makers. At the same time, my study situated the role of the principal more firmly in the context of the district and identified the organizational forces that shape teacher hiring decisions.

CHAPTER 3

CONCEPTUAL FRAMEWORK

According to Maxwell (2005), a conceptual framework is “a system of concepts, assumptions, expectations, beliefs, and theories that supports and informs” research (p. 39). For this study, I selected the conceptual framework of organizational theory – specifically, the concepts of James March and Herbert Simon related to decision making in organizations. Their theories on the factors that influence how decisions are made in organizations are both explanatory and predictive.

Two powerful concepts from the works of March and Simon concern how theories and assumptions of rational choice in decision making are bounded by limitations inherent to individuals and the organizations that employ them, and how these individuals and their organizations respond to those limitations. Bounded rationality refers to the limits to rational choice faced by decision makers. As explained below, March identified two fundamental limits to rational choice: scarcity and ambiguity.

According to March, the organizational response to scarcity is satisficing, the willingness to accept “good enough” (March, 1994, p. 19). According to Simon, the organizational response to ambiguity is rule-following and the evocation of identity. Others (Hoy & Tate, 1995; Hoy & Miskel, 1991) have expanded the administrative responses to bounded rationality to include muddling through, and delaying or refusing to make decisions. When it comes to teacher hiring, muddling through is a viable alternative for decision makers to choose, but delaying and refusing to make a decision are typically not adequate responses. Muddling through can be considered a form of satisficing, of accepting a safe solution in order to avoid a disastrous one. Moreover,

muddling through has high organizational costs, including decisions that result in teacher turnover or, worse yet, low teacher effectiveness for students.

The choice of organizational theory as a conceptual framework for this study began with the simple fact that districts are the legal entities charged with educating students. Districts as organizations raise and receive revenues for this purpose and contract with people and other legal entities to provide services associated with schooling. Thus, teachers are hired by districts. Districts post notices of openings; candidates apply to district central offices, often to the attention of someone acting in an official capacity on behalf of the districts. Typically, several other district representatives assemble and screen application packets, select candidates to pursue, interview them, check their references, and eventually choose a single candidate for the open position. These several steps are performed serially, often by different people. If the chosen candidate accepts the offer, he or she enters into a contract of employment with the district. While the extent of involvement of particular individuals varies by the roles they play in the district, teacher hiring is an organizational decision. For this reason, it makes sense to apply concepts of organizational theory to the study of teacher hiring practices.

As previously mentioned, the framework of this study is based heavily upon the works of James March and Herbert Simon, two of the leading scholars in the field. Both individually and together, March and Simon have published extensively on organizations as a whole, and on different aspects of organizational theory, including how decisions happen in them. Three works in particular informed the conceptual framework of this study: March's *A Primer on Decision Making: How Decisions Happen* (1994) and *Decisions and Organizations* (1988), and Simon's *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations* (1997).

Organizations are groups of people that together accomplish goals that are otherwise beyond the means of individuals (Harford, 2005). Organizations are structured and function through the use of hierarchy, departmentalization, and communication (Simon, 1997). All three features tend to enhance organizational efficiency. Hierarchy shifts decision making to a few individuals, relieving others of that burden, reducing conflict, and increasing consistency across organizational units (March, 1988). Departmentalization allows individuals to focus their energies and abilities on fewer tasks, in turn enabling them to sharpen their skills through focused experience (March 1994). Communication provides input from specialists to managers and disseminates decisions from managers to members of the organization (March 1988). Members of an organization by and large accept its structure, ceding power/authority and embracing a set of values in return for a definable place within the organization. Thus, individuals assume organizational identities often distinct from their personal identities (Simon, 1997). These distinct identities can sometimes conflict, compromising organizational decisions.

One important line of theory and research in the study of organizations concerns how decisions are made and implemented in organizations. Early in the study of organizations, decision making was conceptualized as a choice function governed by rational choice (Harford, 2005). In a system of rational choice, a problem is identified and alternative solutions are sought. The consequences of each alternative solution are determined, and then these alternatives are compared to a set of defined organizational preferences for outcomes. The alternative with the best match becomes the choice.

Organizational theorists such as March and Simon realized that rational choice was an ideal not often encountered in the real world. March introduced his work on decision making as “how decisions actually happen rather than how they ought to happen” (March, 1994, p. vii).

Problems may be imperfectly identified or have multiple dimensions. The search for alternative solutions is often limited in many ways – by time, by lack of information or other resources, or by the finite capacity of the decision maker to recognize or seek out all or even the best alternatives. The consequences of any one alternative can only be approximated or even guessed. Finally, the preferences to which any alternative is compared may be imperfectly or incompletely formulated, or imperfectly understood, by the decision maker.

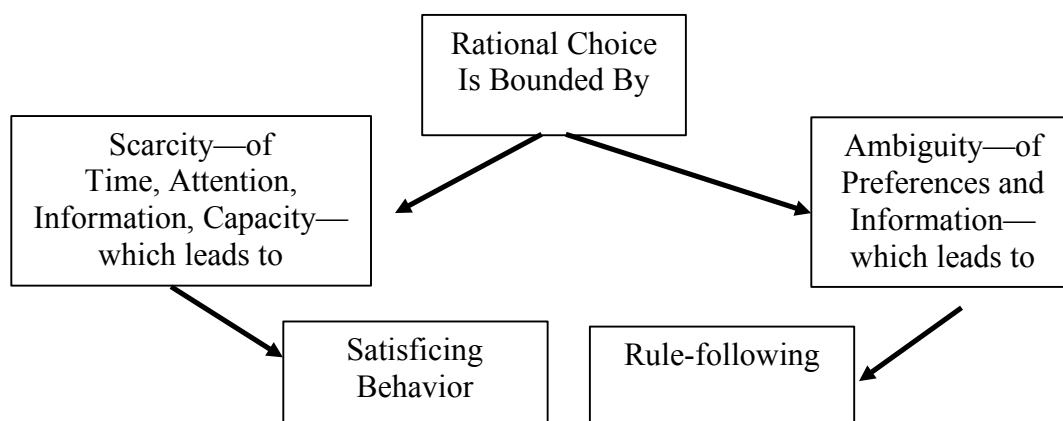
These problems with the practice of rational choice led theorists to the concept of limited or bounded rationality. Bounded rationality allows organizational theorists to identify the constraints or boundaries that face decision makers and limit their pursuit of rational choice.

March observed that

the core notion of limited rationality is that individuals are *intendedly* rational. Although decision makers try to be rational, they are constrained by limited cognitive capabilities and incomplete information, and thus their actions may be less than completely rational in spite of their best intentions and efforts.
(March, 1994, p. 9)

My study further argues that limits to cognitive capacity may include failure of imagination of other ways to operate, behave, or otherwise prioritize choices. Figure 2 presents a conceptual map of bounded rationality as presented in this study.

Figure 2: The Components of Bounded Rationality



Scarcity

One primary constraint to rational choice is scarcity. Scarcity refers to the lack of resources and to lack of capacity. Resources include time, attention, and information. Decisions often include deadlines that limit the amount of time available to identify and investigate alternative choices. Within these limited time frames, decisions compete with each other and with other activities for the attention of those responsible for making the decisions. Decisions are often joint efforts and responsibilities, and coordinating the attention of multiple actors itself splits the attention available for decision making. Information as a resource includes the identification of potential alternatives, relevant data about each alternative, and direction from the organization about which preferences to apply when choosing among alternatives. Each type of information is available to decision makers, but often imperfectly: the list of alternatives may be partial, the relevant data about each alternative may be incomplete and obscured by other data irrelevant to the decision, and the organizational preferences may be assumed rather than explicit, or bundled with other preferences that allow for multiple interpretations.

If lack of resources is the first type of scarcity, the second type of scarcity is lack of capacity. Capacity includes both attention and ability. Individuals cannot pay attention to everything at once, and so must allocate attention, effectively limiting the amount of attention a decision receives. Even when attending to a decision, individuals bring different levels of ability to the task of deciding. Training and experience can increase the ability to recognize and evaluate the value of information about alternative choices, but does not necessarily do so. Simon pointed out that repetition can increase performance; it can also calcify thinking by encouraging rule-following, as will be elaborated below.

Decision makers in organizations often respond to scarcity through a behavior called satisficing. Satisficing can be thought of as a combination of two ideas, satisfying and sufficing. March pointed out that decisions are choices, and a major component of choice is the search for alternatives. Satisficing behavior involves the serial consideration of alternatives until some threshold of acceptability is reached, after which the search process is suspended. March described it this way: “Instead of having to worry about an infinite number of gradations in the environment, individuals simplify the world into two parts – good enough and not good enough” (March, 1994, p. 21). Satisficing is the triumph of the acceptable over the ideal. Satisficing helps solve the problems of scarcity, lack of resources, and lack of capacity.

Decision Making in Districts

How does the concept of scarcity apply to district teacher hiring? Decision making begins with the identification of a problem. In the case of teacher hiring, the problem is typically the need for a teacher to lead a classroom of students. It is possible that this problem has been misidentified, in that other district priorities and decisions, such as increasing enrollment through schools of choice or keeping school buildings open in the face of declining enrollment, have precluded alternative solutions to staffing this classroom, but my study of teacher hiring practices assumed that the problem is straight-forward in this regard; the district has decided it needs to hire a teacher.

Scarcity in this instance refers to lack of resources necessary to identify the ideal (rational) choice of a solution. One resource is time. There is a practical deadline by which a hiring decision must be made, and there is not always a known start date for the search process. Districts can and do encourage staff to declare intentions to retire or resign by a date early enough to allow districts to begin the search process sooner rather than later, but note that the

decision in these cases belongs to the teacher, not the district. Even incentives may not outweigh other factors, such as income security, that otherwise persuade teachers to put their own interests ahead of those of the district. Also, happenstance can affect the timing of position openings: health or other family considerations can prompt unexpected departures or openings. Starting the school year without completing the hiring process is, surprisingly and alarmingly enough, not an uncommon occurrence (Jones, Maier, & Grogan, 2010), although common sense and research (Engel, 2012; Papay & Kraft, 2015) argue against this delay whenever possible. Thus, the teacher hiring decision making process may, as Liu and Johnson argued, be “late, rushed and information-poor” (Liu & Johnson, 1996). Even when the position is identified in response to growth in student enrollments, such enrollment information depends upon parents, some of whom do not or cannot make enrollment decisions far in advance.

A second scarcity of resources is that of information. Rational choice theory would have decision makers consider all possible alternatives. What constitutes all? Few districts have or allocate resources to post job openings nationally, and even these postings typically are not for particular openings. Rather, these districts have chronic needs for candidates with particular qualifications. Moreover, universal postings do not guarantee that all candidates will see or respond to the postings. This can be thought of as the scarcity of self-selection. Districts literally cannot identify all candidates, and could not meaningfully process those choices if they could. Instead, decision makers may satisfice by amassing a pool of an arbitrary number of applications.

Another type of scarcity in the decision making process is lack of attention. Those responsible for making teacher hiring decisions also have other responsibilities and other decisions competing for their attention. From urgent but unimportant decisions, such as how to cover the lunch room duty of an absent faculty member, to major decisions about teacher

evaluations, textbook adoption, parental complaints, or improving school culture, district leaders have multiple decisions facing them at any one time. Openings identified before the end of the school year compete for attention with end of school activities and routines. Openings identified after the end of the school year compete for attention with vacations and professional development activities.

Beyond scarcity of resources is the scarcity of capacity. Scarcity of capacity can refer to lack of experience or expertise. Hiring an employee is a discrete skill. District leaders who come from the classroom typically are trained in content and pedagogy, not human resources. Most district leaders have graduate training in school administration, but the nuances of the teacher hiring process is not a central focus of most graduate work (Hess & Kelly, 2007). HR training aside, district leaders charged with hiring decisions will be more or less familiar with the grade level or subject matter of the open position.

March (1994) argued that expertise can be a function of experience. At the school level, teacher hiring is an episodic event. Some schools may not hire a new teacher in a given year, and even if hiring is a yearly activity, it is an episodic event compared to the daily responsibilities of school administrators. School and district leaders may also have more or less expertise in evaluating the evidence of potential suitability presented in teacher applications. Hughes (2014) and Rose, English, and Finney (2015) argued that principals and administrators typically overestimate their ability to select good candidates. Ingle and colleagues reported comments from principals who stated that they can size up a candidate in moments (Ingle, Rutledge, & Bishop, 2011).

Ambiguity

The second constraint to rational choice is ambiguity. Sometimes the nature of the problem is ambiguous, at least in the sense that it is multi-dimensional. A school may need a teacher to fill a classroom, but it may also need to raise achievement scores in a particular subject area or increase the diversity of the teaching staff, or address particular affective needs of all or some of the student population. Harris et al. (2006) described how district leaders – in their study, school principals in a midsized Florida district – strove to “mix and match” new hires with existing staffs. These principals intentionally tried to balance innovation on the part of new hires with common culture in terms of work ethic and commitment to their schools and students. This ambiguity of preferences makes it difficult for a decision maker to find an ideal candidate from an already constrained set of alternatives. This ambiguity is further complicated by the admixture of organizational preferences and the personal preferences of the decision maker. Studies indicate that academic preparation is not a priority for many district decision makers, although principals who graduated from more selective universities tend to favor candidates from similar institutions. March (1994) and Simon (1958) both explained the complicated role that individual preferences play in organizational decision making. One dimension of ambiguity is interpretation. Organizations depend upon individuals to embrace and enact organizational preferences, and yet it is common if not inevitable that individuals bring both their organizational and personal identities to their roles and decisions.

Another aspect of ambiguity in teacher hiring is the ambiguous nature of the information gathered from teacher applicants. In the section on scarcity, it was noted that the number of candidates was only a subset of all possible candidates. For those candidates who do apply, the materials requested and received from candidates may not provide the information decision

makers need to make the best choice. The information candidates do supply – in fact, the information candidates are asked to supply – can be both ambiguous in its content and ambiguous in its relevance. Grade point averages across institutions are hard to compare meaningfully, and the relationship between college grades and teacher effectiveness are muddled at best. Scores on teacher certification exams have the advantage of a consistency of scale across applicants, but their value in predicting successful practice has not been established and is not widely accepted. References depend as much on the professional expertise and the reputation of the writer as on the applicant, even when such references are submitted confidentially. Studies of what sources of information district leaders use in teacher hiring decisions show that many administrators discount or ignore some of this data (Harris, et al., 2010).

Perhaps the most important way that ambiguity complicates the information gathered about teacher applicants is the role of the interview. Interviews are typically central if not critical to teacher hiring decisions, and yet research continues to point out the limited value interviews have in predicting future teacher performance (Rose, English, & Finney, 2014).

A different kind of ambiguity advanced by March involves the history of the organization. The relative success of previous hires, either by the district or by the individual decision maker in another district, becomes part of the organizational history of the district's hiring process. Except at the extremes, different actors may interpret both the relative success of an earlier decision and the factors that contributed to that success or failure.

Satisficing and Rule-Following

The response in organizational decision making to ambiguity and scarcity of resources and capacity is often satisficing and rule following. Lack of time and attention leads to a constrained search for alternatives, in this case teacher candidates. Job openings are posted after

a need has been identified, from a few to several weeks before the school year begins. The search is time-bound, both by when the opening develops and by how long the window for submitting applications is open. This latter is often a matter of rules established before an opening appears by labor contracts or precedent. The district then begins an examination of these identified alternatives; the search ends and a decision can be made once a threshold of acceptability is reached. It should be recognized that choosing the best candidate usually means choosing the best available candidate from a limited and time-bound pool of candidates. Thus, “best” is a relative term, not an absolute one. The quest for the best possible candidate devolves into a search for a candidate who is good enough, the best available candidate. Review committees are convened based on satisficing behavior – who is available, often an issue during the summer, and who is willing to serve. Selection teams are often selected themselves through rule-following to establish representativeness, not based on hiring skill or experience.

School districts rarely have organizational slack, meaning district leaders add the review process to an existing set of responsibilities, both for themselves and for others enlisted for the task; attention has competing demands. District hiring typically falls to decision makers by role. The principal of the building with the teacher opening usually plays a central role in the process, regardless of his or her experience or expertise in these kinds of decisions. The superintendent may have been a teacher and an instructional leader – or an athletic coach, athletic director, or a budget director.

Rule-following is an attempt to solve problems of ambiguity. In situations of bounded rationality, the consequences of any particular decision can only be determined in the future. Faced with such prospects of uncertain outcomes, rule following provides aspects of accountability, and provides answers to questions about why actions were taken or decisions

made. Rule-following can relieve actors of some of the scarcity and capacity limits in the decisions process – when and where to search for alternatives and for how long, what information to gather and consider, and whom to include in the decision process. Rules can be explicit and codified in organizational policies, or they can be the implicit embodiment of organizational culture, of “how we do things here” or “how we’ve always done things.” Whether explicit or implicit, rule following provides consistency over time and space. This can be important, because similar decisions can arise periodically and in different units of an organization. Rule-following streamlines the process for making future decisions, and can counteract limits to individual capacity. Thus, simplification and consistency can result from rule-following.

How do these concepts from organizational theory apply to the district teacher hiring process? How will they allow us to make sense of trends in the characteristics of teachers hired during the time period in question? Several of the research studies, practitioner guides, and education reform advocacy documents cited here suggest that teacher hiring is one of the most important tasks or decisions that districts have. And yet scarcity of time creates an important barrier to accomplishing that task with best efforts and results. Districts typically have a limited window of time in which to complete a search and selection process, often during a time when district attention assets are compromised. The information districts traditionally gather during the search phase of the process provides limited actionable knowledge. March (1994) even suggested that much information gathering is more rule-following and symbolic than instrumental. The interview phase is arguably the key part of the process in most districts, yet a wide body of research suggests that interviews are poor indicators of future performance, and that most decision makers lack training in interviewing skills. Indeed, studies by Hess and Kelly

(2007) and Hughes (2014) maintained that administrator preparation programs provide too little training in personnel matters such as hiring and evaluating teacher performance. Organizational theory predicts that districts will exhibit satisficing behavior in many aspects of their decision making.

Organizations, including school districts, often operate in an environment of multiple, overlapping and at times conflicting preferences. What parents want from a school for their children, whether in kind or in degree, may differ from one family to the next. Community members, employers, institutions of higher education, special interest organizations, and state policy makers have overlapping priorities that can change over time. These priorities can be expressed in public opinion, in policies, and in the allocation and reallocation of resources. Often these preferences are expressed in abstract terms, leaving districts to interpret which ones to implement and how to go about it.

Districts can mirror these multiple preferences of their environments in their actions and decisions. In pursuing academic excellence, equity in attending to non-mainstream students and to the social and emotional needs of all students, community pride in extracurricular achievements or in attaining state accountability goals, and parsimony in the use of public funds, districts can present more or less coherent preferences to the decision makers in their organization. The absence of unambiguous organizational preferences may require decision makers to interpret which preference(s) to apply in making a decision; thus, professed or intended organizational preferences may differ from enacted preferences. Ambiguity of organizational preferences can provide opportunities for decision makers to exercise their own preferences. Indeed, such autonomy in decision making may be an implicit organizational preference.

Beyond the ambiguity of preferences, district decision makers face ambiguity in the information upon which they attempt to choose among alternatives. Districts typically request a cover letter, resume, and college transcript from applicants; some districts request a portfolio or a sample lesson from candidates as well. Virtually all candidates who pass the initial screening of qualifications are interviewed by the decision maker, often assisted by a team of other district representatives. None of this information can indicate with clarity and certainty that a candidate will perform as desired and expected if given the opportunity. Decision makers need to interpret all this information in order to estimate the likelihood of a candidate's future success.

CHAPTER 4

RESEARCH METHODS

To investigate whether district teacher hiring decisions changed over time, I began by analyzing the results of those hiring decisions over time. Did the personal and professional characteristics of newly hired teachers change between 2004 and 2015? The initial year of 2004 was chosen to take advantage of interview data I collected in late 2004 and early 2005; 2004 also represents the early implementation phase of the accountability provisions of the federal No Child Left Behind Act of 2001 (NCLB), which was signed into law in January 2002. The year 2015 was the most recent year for which data were available. Coincidentally, it was also the year that NCLB was replaced as federal education policy by the Every Student Succeeds Act (ESSA).

The demographic characteristics of teachers and their relevance to instructional effectiveness have long been promoted (Dilworth & Coleman, 2014; Villegas & Irvine, 2010). Proponents argue that students perform better when taught by teachers who look more like they do and understand their cultural backgrounds. Diversity in teaching includes the presence of women teachers to support the achievement of female students, particularly in the subject areas of science, technology, engineering, and mathematics (STEM) in secondary grades. Similarly, some argue that the absence of male teachers at the elementary level generally, and of male teachers of color in particular, represents a barrier to the academic achievement of male students of color (Dee, 2001). These arguments advance affective as well as academic reasons for why schools and districts should increase the diversity of their instructional staffs.

Quantitative Data Collection

Both publicly available and restricted level data on teacher characteristics were collected and used in this analysis. An extensive array of public data is now available through the state's

website, www.mischooldata.org. Much of the public data on both students and education personnel is presented in summary form, disaggregated to the district and sometimes even the school level. Additionally, I requested and was given access to individual teacher-level data reported to two state agencies by all public school districts and all public school teachers in the state of Michigan for the years 2004-2015. The State Budget Office's Center for Educational Performance and Improvement (CEPI) maintains the state's Registry of Educational Personnel (REP), which collects demographic and employment information on every school employee each June and again each December. Districts are required by state law to submit this information. Separately, the Michigan Department of Education (MDE) maintains records of the professional qualifications of licensed educators through its Michigan Online Educator Certification System (MOECS); this data is submitted in part by teachers themselves and in part by institutions of higher education and their teacher preparation programs.

In a fundamental way, the teachers actually employed by districts represent the results of the decision-making processes used by districts. The data I obtained allowed me to answer my first research question, "Have the demographic, professional preparation, and teaching assignment characteristics of teachers in Michigan's public schools changed over time?" This analysis shed light on whom districts decided to hire to meet student needs and district goals.

I began by using publicly accessible teacher data for the entire state, meaning all the public school districts in Michigan, and I examined how these data trended over the time period in question. In this first analysis, all full-time and part-time teachers were included. With these data as context, I then turned to the restricted teacher-level data to sort out new hires – those teachers who appear in a district's REP data for the first time in a district's June REP submission – and I examined trends in the demographic, preparation, and assignment data for this group of

new teachers. For reasons explained below, I used a subset of the restricted teacher data that focused on those teachers most likely to influence student achievement generally, and achievement in mathematics and reading in grades 3-8 in particular.

Having established the statewide context for teacher hiring, both the main population of public school teachers and the characteristics of the hires made from 2004-2015, I then sorted and analyzed the data by grouping these teachers by district locale code. Acknowledging that every district is unique, many districts are more like some districts than they are like other districts. For the purposes of my analysis, I used the locale codes developed by the U.S. Census and assigned to districts by the state in its Educational Entity Master (MDE, n.d.). These locale codes categorize schools and districts as city, suburban, town, or rural. The locale codes are actually more specific, with three distinctions within each primary locale code – large, midsize, and small for city and suburban schools and districts, and fringe, distant, and remote for town and rural schools and districts. Sorting by locale code allowed me to determine whether patterns in staffing characteristics differed by school and district types. For the purposes of statewide analysis, I used the four major categories.

Finally, I analyzed the overall teacher and new hire characteristics of the teachers and specialists in the five districts included in the case study component of my research project. For this analysis, I included a “mixed” category of districts with schools in different category types. For example, a district may have several schools that are categorized as suburban, but also one or more schools identified as rural. For these five districts I included the locale code subcategories in their descriptions to emphasize their similarities and differences. Of the five districts in which I conducted interviews, one is a midsize city district, one a small city district, two are large suburban districts, and one is a mixed district, meaning its schools cross locale codes. I also

compared teachers in the individual district subcategories to statewide aggregations of those subcategories to provide some further context for the teacher characteristics in the case study districts. Looking at teacher characteristics within district types provided a perspective on how a particular type of district compares to districts across the state; analyzing the characteristics in the individual districts in the case studies enabled me to point out similarities with and differences from the other districts in the cases and to other districts with the same locale code subcategory.

Table 1: Characteristics of Five Districts Participating in Interviews

District	District Type	Economically Disadvantaged	Non-white Student Ratio	2011-2012 AYP Status Made
District A	Midsize City	Mid-High	Mid-High	No
District B	Small City	Mid-Low	Mid	No
District C	Large Suburban	Mid-Low	Mid-Low	No
District D	Large Suburban	Low	Low	Yes
District E	Large Suburban	Low	Low	Yes
District F*	Rural Fringe	Mid	Low	No

Note: District F did not participate in the 2016 interview data collection.

Besides teachers, there are many other classifications for personnel who work in the state's public schools. Table 2 shows the numbers and percentages of different categories of personnel employed by public school districts. Teachers made up 31.2 percent of all school employees in 2014-2015, and 49.8 percent of full-time equivalent (FTE) employees. Non-instructional personnel include those who transport and feed students as well as those who maintain the physical plant related to schools. Clerical staff are also non-instructional personnel, as are central office staff. In all, 34.2 percent of the personnel in Michigan's public schools support but do not provide the instruction that is the core function of a school district. Bus drivers, playground attendants, and secretaries can all contribute to a student's experience and

success in schools. Still, my study focused on classroom teachers, particularly those upon whom districts counted to improve student mathematics and reading scores in grades K-8.

Table 2: Statewide School Staffing by Headcount, 2014-2015

Staffing Group	Headcount	Percent of Total
All Staff	323,318	100.0%
Administrators	12,383	3.8%
Teachers	101,025	31.2%
Day-to-Day Substitute Teachers	53,806	16.6%
Paraprofessionals/Aides	31,335	9.7%
Non-Instructional	110,660	34.2%

Note: Some percentages may not add to 100% due to rounding.

Source: MI School Data

Aside from issues related to personal demographics, which are focused primarily on the affective needs of students, districts have their own needs that admittedly overlap with the needs of students. During the time period in question, districts faced significant potential sanctions if they failed to meet key accountability goals. Specifically, districts were being held accountable for student test scores in mathematics and reading in grades 3-8, and for high school graduation rates. Moreover, student test scores were disaggregated by student subgroups to ensure that students with disabilities, English language learners, black males, and children of poverty would not continue to be “left behind.”

Raising the test scores of students in these subgroups had defied previous attempts. The obvious if unproven answers to improved student scores included both affective areas – presenting a teaching staff that more closely resembled the students served – and cognitive areas – increasing teacher capacities in mathematics, reading, and how to teach students with disabilities, with English language barriers, or of poverty. Raising teacher capacity is far from straightforward. Among the possible options were to provide targeted professional development

to existing staff, or to hire new staff members with stronger skills in these areas. The hard fact is that dismissing ineffective teachers was not a viable option for most districts during this time period, although in the past few years new legislation has provided districts with a powerful new tool: the right to determine teacher assignments independent of a teacher's preferences.

Analyzing the demographic and professional characteristics of Michigan's educational personnel allowed me to determine the degree to which they had changed over the 12-year period of my study. These were the de facto results of the teacher hiring practices. To begin to understand why these trends persisted, I asked district leaders in the five districts in which I had conducted interviews about teacher hiring in 2004-2005. I was interested in the decision-making processes districts used, so I selected districts in close proximity to each other, and I focused the interviews on elementary teacher openings. Both choices were meant to minimize the effect of labor supply on the decision-making process. Boyd, Lankford, Loeb, and Wyckoff (2009) concluded that teacher hiring is a local phenomenon. By selecting these five districts, I assumed that the districts in the case studies had access to approximately the same teacher candidates. In my interviews, I focused the attention of district leaders on general education elementary teachers. There were several reasons for this. For one, I wanted to remove as much as possible the supply of candidates as a mitigating factor in districts decision making. If districts exhibited satisficing behavior, I wanted it to be for reasons other than scarcity of qualified candidates. Also, elementary teachers represent approximately 40 percent of the teachers employed in Michigan's public schools. Asking district leaders about an elementary line made for more comparable results across districts.

Additionally, assumptions about labor supply need to acknowledge that both districts and teachers are autonomous agents: teachers can choose where to apply for employment, and

districts can choose which candidates to screen out of or into the selection process. It might be instructive to know more about how this mutual selection process operates, by investigating which teachers apply to which districts, and which districts screen in or out which candidates. However, those research questions were beyond the scope of the available data. Interestingly, over the course of the time period in question, many of the districts in the geographic area under examination decided to join a consortium through their regional educational service providers to use AppliTrack, a common online application system. Rather than applying to individual districts, teacher candidates could submit a single application to AppliTrack that was made available to several districts at once – an actual common labor pool. However, not every district in the geographic region chose to participate in this common application process, and not all districts used the information in AppliTrack in the same ways.

Although my teacher data come from separate data bases maintained by different agencies within state government, teachers are assigned a Personal Identification Code (PIC) that links their data between data bases. Although cumbersome, this common link made it possible to connect a teacher's professional preparation information to his or her employment information.

Qualitative Data Collection

In 2004, approximately 15 districts in a common geographic area in Michigan were invited to participate in a study on district teacher hiring practices. The intent of the common geographic area was to approximate a single pool of potential candidates for districts to consider. Centered around a major metropolitan area, the geographic area included more than 24 school districts serving nearly 500,000 residents. The area included a large teacher preparation program, and several other preparation programs were within an hour's drive. Boyd and colleagues have suggested that teacher labor markets are quite local (Boyd, Lankford, Loeb, & Wyckoff, 2005),

with teachers working in schools close to where they grew up or where they attended college. The 15 districts invited to participate are all within a 20-mile radius of a central location.

Of these districts, six responded positively. The six constituted a good mix, in that they provided elements of both consistency and some promising variety. For example, each district was contiguous with at least one other participating district, avoiding the complications of potential outlier status. Five of the six districts were similar enough in their suburban natures that candidates were likely to apply to any or all of them; the sixth district was an urban exception that might draw different candidates, but 2004 was a lean time for schools in Michigan generally, and teaching jobs were not so plentiful that candidates could count on employment somewhere else. In 2016 I approached all six districts about participating in a second round of data collection. One district declined to participate, so the data presented below comes from the five districts that did agree to participate.

For all their basic similarities, these five districts provide a spectrum of enrollment size and types of communities served. District A is the largest district in the case studies, classified as a midsize city district by its U.S. Census locale code system. District E, on the other hand, was a suburban district with less than a fourth of the student enrollment of District A and the smallest district included in the study. The other districts included a small city district (District B) and two suburban districts of differing sizes districts C and D). Table 3 provides an approximate sense of enrollments and number of teachers employed in each district. These numbers are modified to preserve the anonymity of the districts, but their relative sizes are reflected.

Most important at the time, each district was large enough that it hired at least one elementary teacher in 2004, so that district leaders could discuss a comparable hiring event. An open general education elementary teaching position was selected to ensure that the districts

could discuss the same type of opening. General education elementary teachers comprise about 40 percent of a district's instructional staff, making it the most common potential opening for districts to fill.

Table 3: Interview District Sizes, 2004-2005, by Enrollment and Teacher Headcount Ranges

District	Student Enrollment Range	Teacher Headcount Range
A	<20,000	>750
B	<6,000	>250
C	<4,000	>250
D	<4,000	>250
E	<3,000	<200

Source: Michigan Department of Education Entity Master

The districts also ranged in their accountability status, and therefore the degree to which accountability demands might factor into hiring decisions. Table 4 indicates the AYP status of each district for the years 2004-2012.

Table 4: District Adequate Yearly Progress Performance, 2004-2012

District	2003-04	2006-07	2007-08	2009-10	2011-12	2014
	ELA-M*	ELA-M	E-M-H	E-M-H	ELA-M	
A	N-N**	Y-Y	N-N-N	N-Y-N	N-N	Public
B	Y-Y	Y-Y	Y-Y-N	Y-Y-Y	N-N	data not
C	Y-Y	Y-Y	Y-Y-N	Y-Y-N	N-N	yet
D	Y-Y	Y-Y	Y-Y-Y	N-Y-Y	Y-Y	available
E	Y-Y	Y-Y	Y-Y-Y	Y-Y-Y	Y-Y	

Note: * ELA and M refer to subject areas (English Language Arts, Mathematics); E-M-H refers to school levels (Elementary, Middle and High). How the state reported AYP differed in some years during this period. **Y means a district met its AYP goal at that school level or in that subject area; N means it did not.

Note that, with one exception, each district failed to make AYP in at least one subject area for at least one of the years, although clearly some of the districts fared better than others. Even traditionally successful districts struggled with disparities between high achieving students and low achieving students. The subgroups specified by No Child Left Behind AYP provisions meant that districts had to pay attention to the academic success of all students.

As AYP targets inexorably rose with each passing year, the U.S. Department of Education invited states to develop alternative strategies to hold themselves accountable for school and student improvement. In 2010, the state of Michigan developed a Top to Bottom list of every public school in the state as part of its application for waivers from AYP requirements. Schools on the list were ranked by percentile, allowing easy comparison of each school's relative position on the list. Not every school was on the list: those with fewer than 30 students or fewer than three years of test data were not included on the list, meaning newly opened or recently reconstituted schools did not appear. The formula used by the state to calculate a school's relative ranking was complex, comprehensive, and irrelevant to this discussion: whatever its merits, the state ranking of schools was the basis for district accountability, from the state's perspective.

State officials also developed an indicator for within-school disparities of student achievement, by comparing the student scores of the top 30 percent of students in a grade level to the bottom 30 percent of students in the same grade in that school. A large achievement gap did not directly affect a school's ranking, but the 10 percent of all listed schools with the largest achievement gaps were designated Focus Schools. Designated schools were included in a three-year cohort and were required to take a series of actions meant to help remediate student achievement disparities. Approximately 300 schools were identified as Focus schools in 2015 (MDE, n.d.)

To provide a sense of the accountability pressures on each of the case study districts, Table 5 shows the relative rankings on the 2014 Top to Bottom list of the top two and bottom two schools in the five districts. (The state suspended its top to bottom rankings in 2015 pending

a realignment of statewide testing.) The table includes a quartile ranking for each school, and notes which schools were Focus schools in 2014 or one of the previous two years.

As the data suggest, the schools in these districts are not representative of all schools in the state. Schools in the top quartile are over-represented (9 of the 20 schools, or 45 percent) and schools in the second and third quartiles are under-represented (15 percent each), in part because the sixth district in the 2004 data collection dropped out of the 2016 phase of the study; its two top and two bottom schools were all ranked in the second and third quartiles. Moreover, the table shows the ranking of only the top two and bottom two schools in each district, similar to the whiskers in a box-and-whisker plot. In the four non-urban districts, 70 percent of the schools were ranked in the first two quartiles, while only one of the urban district's schools is in the upper half of schools on the Top to Bottom list.

Table 5: 2014 Quartile Rank of Top Two and Bottom Two Schools in Interview Districts

District	School 1	School 2	School 3	School 4
A	Quartile 2	Quartile 3	Quartile 4	Quartile 4
B	Quartile 1 (Focus)	Quartile 1 (Focus)	Quartile 3 (Focus)	Quartile 4 (Focus)
C	Quartile 1	Quartile 2 (Focus)	Quartile 4 (Focus)	Quartile 4 (Focus)
D	Quartile 1	Quartile 1 (Focus)	Quartile 1 (Focus)	Quartile 1 (Focus)
E	Quartile 1 (Focus)	Quartile 1	Quartile 2	Quartile 3

Note: Schools in Quartile 1 were ranked higher than 75% of all schools ranked in the state's Top to Bottom list in 2014. Schools in Quartile 2 were ranked higher than 50% of all schools on the list, but not in the top 25%. Schools in Quartile 3 were ranked higher than 25% of all the schools on the list, but not in the top half. Schools in Quartile 4 were in the bottom 25% of all schools on the list. Focus schools were among the 10% of schools statewide with the largest achievement gaps between high-performing students and low-performing students in the same school.

On the other hand, nearly three-quarters of the schools in the non-urban districts (11 of 16 schools) were included in one of the Focus school cohorts during 2012-2014. This suggests that all of the case study districts faced some accountability pressure to improve instruction in their schools. Each district had the opportunity to do so by including accountability factors in their

teacher hiring decisions. The urban district in the study employs more than 500 teachers; three of the non-urban districts employ more than 200 teachers; the fifth district employs well over 100 teachers. Across the state, about 10 percent of all teachers are new each year. This would suggest that the districts in the case studies would have hired between 10 and 50 teachers each year, but the correlation between new hires and district size is weak: some districts are shrinking as their student enrollments decline; other districts are growing and adding staff. Districts also vary in their turnover rates.

Table 6 shows the number and percentage of new core teacher hires in Michigan between 2004-2015 and the number and percentage of new core hires in each of the five case study districts.

Table 6: Percentage of Teachers Who Were New Hires in Michigan, 2004-2015

District	2004	2006	2008	2010	2012	2014	2015
A	7.3%	18.9%	16.5%	13.8%	9.1%	4.7%	5.3%
B	8.2%	6.0%	7.8%	5.0%	10.5%	13.2%	12.3%
C	9.6%	9.9%	11.3%	6.4%	4.1%	15.5%	16.8%
D	11.1%	10.5%	14.3%	9.6%	8.2%	9.2%	8.9%
E	0.0%	13.0%	6.3%	1.2%	1.3%	5.6%	8.4%
Statewide	8.4%	12.6%	11.0%	8.1%	8.6%	10.0%	10.7%

Source: CEPI data

The number of new hires is affected by several factors, such as changes in student enrollment, teachers leaving a district due to retirement, and teacher attrition.

Districts self-selected into the case studies. The quality of the information gathered through interviews depended heavily upon the willingness of key administrators to participate. In fact, one of the fundamental limits to rational choice posited by my conceptual framework, the limited allocation of attention, became a primary constraint on the gathering of interview data. The administrators I interviewed all seemed willing to and interested in sharing their insights on teacher hiring. Finding time to talk was the challenge.

The districts participating in the 2004 interviews informed the selection of districts to invite to participate in the 2016 case studies. This allowed me to compare the responses of district decision makers in 2004, at the start of AYP, to those of their counterparts in 2016. With two exceptions, the individuals in those decision-making positions had changed during the interval. All of the six original districts eventually responded to requests to participate; District 6 became non-responsive to attempts to schedule interviews and did not contribute to the 2016 data.

All of the participants received an interview protocol and interview consent form prior to our meetings. I collected the completed and signed consent forms before beginning each interview. Sessions lasted approximately one hour; a few went a little longer, but effort was made to respect the time and schedules of the respondents. The interview protocol and a blank consent form are included in the appendix. Interviews with building principals followed the protocol closely, which began by asking principals to identify a particular hire made in the previous year. Interviews with central office staff and superintendents started more broadly, asking about the range of elementary hires made the previous year and then moving to a discussion of the typical hiring practices and changes to those practices that may have occurred during his or her time with the district. Extensive notes were taken in longhand and then transcribed within hours. In a few instances, questions of clarity were sent to respondents.

Essential concepts from the conceptual framework guided the coding of the responses prior to analysis. Bounded rationality posits two major limits to rational choice facing decision makers: limitations of resources and ambiguity of meanings. Limitations include both scarcity of time and scarcity of attention. Scarcity of time refers to external time – the number of days between the identification of a choice situation and the need for an answer. Scarcity of attention

refers to internal time – the amount of mental bandwidth available to decision makers to allocate to this decision, as opposed to all the other decisions concerning other issues confronting any particular decision maker. Additional limitations include unidentified or incomplete information about one or more of the options under consideration, and limited experience or capacity to evaluate all the factors that go into making a best choice or decision. Ambiguity refers to incomplete, conflicting, or incoherent understanding of the organizational preferences that obtain to a particular choice event, or a conflict between organizational and personal preferences.

Thus, comments that reflected either of these limitations were coded “L” for limits. Comments that reflected the primary theoretical responses to these limits were also coded. For example, those reflecting satisficing behavior were coded “S”; those that reflected ambiguity of information or preferences were coded “AB.” Comments that suggested rule-following or reliance on organizational identity were coded “RF” or “I,” respectively.

March pointed out, however, that satisficing behavior in particular exists along a continuum. It seemed important to note comments during the interviews that indicated efforts on behalf of the decision maker or the organization to mitigate the effects of limited resources and ambiguity on the organization’s decision-making process. Therefore, comments were coded “ATE” if they reflected attempts to allocate additional time early in the process in anticipation of limits on time later in the process. Similarly, comments that indicated efforts to gather relevant information beyond the processing of candidate applications themselves were coded “GRI.” The code “BC” was developed to distinguish efforts by the decision maker or the district to build capacity in the district’s decision-making process, either by providing training or scaffolded experiences for less experienced or capable decision makers, or by specializing a particular aspect of the process to allow greater focus and develop skills and experience (March, 1988).

Finally, comments illustrating a respondent's recognition of the role of bounded rationality in the hiring process were coded "R," and participant observations about external factors affecting the decision-making process were coded "X." Given the conversational style of the interviews, many comments were assigned multiple codes. For example, two districts conduct a preliminary screening process before teaching openings have been officially identified; comments about these screening practices were coded both ATE, indicating that the district had allocated extra time early in the process, and GRI, because these districts used these screening sessions to gather relevant information about candidates that went beyond the acceptance of applications. A complete table showing the number of coded responses by district and by administrative role appears in the appendix.

Note that the coding used in analyzing the interview data was based on the topic of the comment, not its content. When a building principal recounted reviewing hundreds of applications to fill a single position, he did not explicitly mention the time or attention this task required, but his comment was coded as an example of issues related to time and attention. As can be seen in the examples provided throughout the presentation of findings, the comments were a combination of descriptive and evaluative statements. For example, a principal explaining that "moving a teacher from one school to another to fill a vacant position simply opens up a new position to be filled," is a descriptive statement about what is commonly called the domino effect. The inference, supported by other comments from other administrators, is that several factors such as reassigning current staff can influence the time required to post an open position. On the other hand, her superintendent's statement about "the crazy things you have to do to get people in these positions" is an evaluative statement that implies that a considerable amount of effort and attention can be required to fill a position. Some comments contain a combination of

description and evaluation, such as when another superintendent explained, “The 1014 report [the Michigan Department of Education’s Bulletin 1014 on district financial information] tracks dollars allocated to instruction and the ratio of administrators to pupils; at one point [our ratio] would be a matter of pride, but now we’re talking about tired people.” The reference to Bulletin 1014 is descriptive; the reference to tired people is evaluative. This comment was coded as data about scarcity of attention and capacity.

If decision makers spoke a lot about the challenges they face in hiring teachers, they also spoke a lot about some of the strategies they use to overcome those challenges. For example, to overcome the scarcity of information they felt they needed to make a decision, administrators described ways in which they gathered additional information about candidates. Knowing that limited time would be available for actual consideration of alternatives, decision makers described efforts to allocate time early in the process in order to save time later. Descriptions of these efforts were coded separately from those describing the challenges of time.

Administrators also made a significant number of comments describing the strategies they use in response to the constraints of scarcity and ambiguity. These comments about strategies were coded as allocating time early, gathering additional relevant data, and building capacity. About a fifth of the coded comments reflected either a kind of metacognitive recognition on the part of the interviewee concerning district practices, or comments on external factors that influence the work of educators generally or of decision makers in hiring new teachers. The data gleaned from these interviews were supplemented with data from similar interviews conducted in the same districts in late 2004 and early 2005.

CHAPTER 5

FINDINGS FROM THE QUANTITATIVE DATA ON TEACHER CHARACTERISTICS

The goal of the quantitative analysis of data on teacher characteristics was to determine if district teacher hiring decisions made during the 12-year period under examination resulted in changes to the demographic, professional, or assignment characteristics of new elementary teachers, whether in Michigan generally or in any of the subgroups of districts – city, suburb, town, or rural districts – or in the districts included in the case studies.

Of all the educational personnel who worked in school districts from 2004-2015, this study focused on elementary teachers and new elementary teachers, and on general education elementary teachers ostensibly working to improve student achievement in mathematics and reading in grades 3-8.

To determine whether the results of district teacher hiring practices changed during the 12 years between 2004 and 2015, I looked at the demographic and professional preparation characteristics of teachers who were hired during this period of time. To make sense of the data obtained and analyzed, I began by analyzing the demographic characteristics of all K-12 teachers in Michigan statewide. As explained in the chapter on research methods, the total population of K-12 teachers declined significantly over the 12-year period. Therefore, trends in teacher characteristics were tracked by percentage of the total number of teachers employed in each year. Table 7 summarizes the results of that analysis. Data were obtained from the REP Summary Reports for the years indicated; 2005 is the earliest year for which the REP summary report is available.

Between 2005 and 2015, total student enrollment in the state fell 9.3 percent, and the total number of teaching positions declined by 16 percent. While the total number of students fell, the

actual number of non-white students rose 5.3 percent, meaning the percentage of non-white students in the state's public schools rose, from 27.9 percent of total enrollment to 32.3 percent. At the beginning of the No Child Left Behind era, minority students in Michigan represented about a quarter of the students across the state; in 2015, they comprised nearly one-third of the state's student body.

Table 7: Changes in Student and Teacher Demographics, 2005-2015

	2005	2015	Percent Change
Student count	1,709,583	1,550,802	-9.3%
White students	1,233,287	1,049,302	-14.9%
Non-white students	476,296	501,500	5.3%
All teachers	117,973	99,127	-16.0%
Female teachers	74.8%	76.9%	2.1%
Male teachers	25.2%	23.1%	-2.1%
White teachers	89.6%	91.4%	1.8%
Non-white teachers	10.4%	8.6%	-1.8%

Source: CEPI Public REP Summary Reports, 2005 & 2015

The focus of this study was on the factors that influenced district decision making during a time of increased accountability, measured primarily by student achievement scores in mathematics and reading in grades 3-8. For this reason, particular attention was paid to the characteristics of new elementary teachers. Analyzing these characteristics required the use of the restricted teacher-level data provided by CEPI and MDE. For practical reasons, these data were pared down from the total data set of all Michigan teachers to the set of teachers assigned to the 25 most common teaching assignments in the five districts that were the focus of this study, out of the 91 assignments districts can choose when reporting teacher data to the REP. These 25 teaching assignments represented slightly more than 78 percent of the teachers working in the five districts; the largest assignment groups omitted from the analysis were the physical, health, art, and music education teachers. The teachers omitted in the analysis of the individual teacher data represent important aspects of a student's total education, but including all of the

assignment codes resulted in consistently erroneous query results. Therefore, the following analyses and results refer to this subset of teachers, referred to below as “core teachers.”

Did the racial characteristics of core teachers in Michigan change over the 12 years covered by my study? Racial diversity among elementary teachers was not evenly distributed across district types. Although white teachers made up the majority of teachers in all school district types, elementary teachers in city districts as a group were much more diverse than in other types of districts. Table 8 below summarizes the proportion of non-white elementary teachers in the four major categories of districts in 2004 and again in 2015.

Table 8: Diversity in Core Elementary Teachers, 2004-2015, by District Type

District Type	2004 Percent Non-white	2015 Percent Non-white	Percent Change, 2004-2015
City	36.7	34.8	-1.9%
Suburb	4.9	5.9	1.0%
Town	0.7	1.3	0.6%
Rural	1.1	1.3	0.2%

Source: CEPI restricted teacher-level data

Black or African American teachers represented most of Michigan’s non-white teaching staff – 10.1 percent of the 12.3 percent non-white elementary teachers in the state in 2015 (see Table 9). Over the 12-year period, the number of black elementary teachers in city districts dropped 35.2 percent, compared to a 28.9 percent drop in the number of white teachers in city districts. The non-white category includes all teachers identified as American Indian/Alaskan native, Asian American, Black or African American, Native Hawaiian or Other Pacific Islander, Hispanic or Latino, or multiple origins. In 2015, blacks comprised 70 percent of the non-white teacher population; Hispanic/Latino teachers made up 14 percent of the non-white teachers.

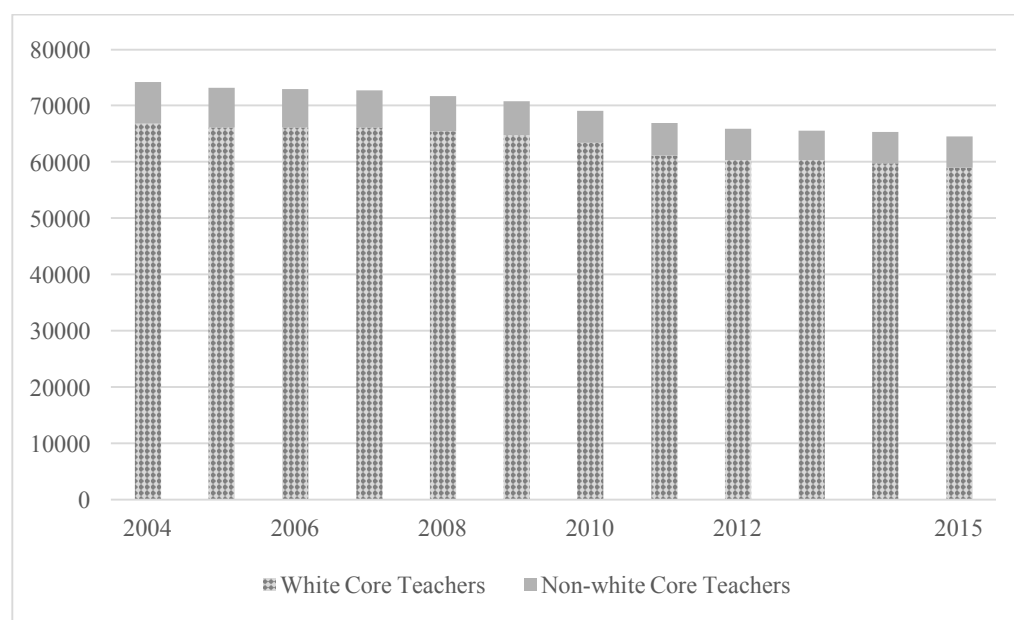
Table 9: Demographics of Michigan Core Teachers, 2004-2015, by Race/Ethnicity

All Districts	2004	2006	2008	2010	2012	2014	2015
American Indian/ Alaska Native	161	154	158	149	152	139	133
Asian American	313	343	369	398	472	505	454
Black or African American	6,305	5,575	5,101	4,480	4,071	3,938	4,044
Native Hawaiian or Other Pacific Islander	44	46	54	43	64	102	107
White	66,803	66,175	65,460	63,355	60,318	59,803	58,913
Hispanic or Latino	556	581	596	611	697	669	702
Multiple	25	27	9	32	166	168	185
Total Core Subject Teachers	74,207	72,901	71,747	69,068	65,940	65,324	64,538
White Core Subject Teachers	90.0%	90.8%	91.2%	91.7%	91.5%	91.5%	91.3%
Total New Hires	6,253	9,199	7,881	5,567	5,682	6,547	6,885
Percent New Hires	8.4%	12.6%	11.0%	8.1%	8.6%	10.0%	10.7%

Source: CEPI restricted teacher-level data

Figure 3 below shows the total numbers of white and non-white core teachers in the state from 2004 through 2015. It shows that the overall number of core teachers fell by nearly 10,000, from 74,207 to 64,538. It also shows that the number of non-white teachers –about 10 percent of the total number of teachers – fell by a larger proportion.

Figure 3: Trends in Statewide Teacher Numbers, by Race, 2004-2015



Source: CEPI restricted teacher-level data

Table 10 reports the specifics of this trend: the total number of core teachers analyzed by district and locale code dropped 13 percent. During the same time period, the number of non-white teachers in the same schools dropped 24.1 percent, including a 35.9 percent decline in black teachers.

Table 10: Trends in Michigan Teacher Numbers, 2004-2015, by Race

Statewide	2004	2015	Percent Change
White Core Teachers	66,803	58,913	-11.8%
Non-white Core Teachers	7,404	5,623	-24.1%
Total Core Teachers	74,207	64,536	-13.0%

Source: CEPI restricted teacher-level data

These trends in race were not evenly distributed by district type. The decline in the number of elementary teachers varied significantly by district locale code, as shown in Table 11.

Table 11: Number of Elementary Teachers 2004-2015, by District Type

District Type	2004	2015	Percent Change
City	8,182	5,650	-30.9%
Suburb	9,095	8,422	-7.4%
Town	1,828	1,568	-14.2%
Rural	4,854	5,019	3.4%

Source: CEPI restricted teacher-level data

These data make it clear that the decrease in teaching positions affected city districts significantly: the loss of elementary teachers in city districts was nearly twice the decline statewide, and four times the decline in suburban districts. The rate of decline in town districts was on par with the statewide drop, but the number of elementary teachers in town districts is a small portion of the total number of teachers statewide. The number of elementary teacher in rural districts actually increased between 2004 and 2015.

Within this statewide context, the five districts that were the focus of the district leader interviews showed steeper declines than the statewide averages.

Table 12: Core Teachers in Five Interview Districts, 2004-2015, by Race

5 Districts, All Core	2004	2015	Percent Change
White Core Teachers	1,394	1,078	-22.7%
Non-white Core Teachers	182	117	-35.7%

Source: CEPI restricted teacher-level data

Across the five districts in which interviews were conducted, the number of white teachers fell 22.7 percent, while the number of non-white teachers fell even more, by 35.7 percent. As shown in Table 13, much of this disparity can be attributed to significant declines in District A, the midsize city district: although the decline in white and non-white teachers in District A was comparable, District A employed a larger number of non-white teachers overall.

Table 13: Number of Non-white Core Teachers, 2004-2015, by District

	2004	2015	Loss/Gain
District A (midsize city)	160	95	-65 (-41.7%)
District B (small city)	13	8	-5 (-38.5%)
District C (large suburban)	3	6	+3 (+100%)
District D (mixed locale)	6	5	-1 (-16.7%)
District E (large suburban)	0	3	+3 (n/a)
5 District Total	182	117	-65 (-35.7%)

Source: CEPI restricted teacher-level data

Compared to its midsize city peers across the state (Table 14), District A's decline in non-white teachers is slightly less than in other districts with the same midsize city locale code.

Table 14: Core Teachers in Michigan Midsize City Districts, 2004-2015, by Race

Midsize City	2004	2015	Percent Change
White Core Teachers	1,747	1,373	-21.4%
Non-white Core Teachers	447	235	-47.4%

Source: CEPI restricted teacher-level data

The statewide average decline in non-white teachers for small city districts (Table 15) was less than in District B, but the small number of non-white teachers in District B makes the change in percent seem dramatic.

Table 15: Core Teachers in Michigan Small City Districts, 2004-2015, by Race

Small City	2004	2015	Percent Change
White Core Teachers	4,507	4,012	-11.0%
Non-white Core Teachers	530	464	-12.5%

Source: CEPI restricted teacher-level data

Both of the large suburban districts that participated in the interview portion of the study had small numerical gains in non-white core teachers; across the state, comparable districts showed a similar uptick, large in percentage (14.4 percent) but modest in numbers (a gain of 104 non-white core teachers statewide).

Table 16: Core Teachers in Michigan Large Suburban Districts, 2004-2015, by Race

Large Suburban	2004	2015	Percent Change
White Core Teachers	13,493	12,781	-5.3%
Non-white Core Teachers	723	827	+14.4%

Source: CEPI restricted teacher-level data

Finally, districts with schools with multiple locale codes, such as District D, showed a small decline in non-white teachers overall. However, this small overall decline masked a significant drop in black teachers, as shown in Table 17 – 325 teachers, or 34.3 percent of the non-white teacher total.

Table 17: Core Teachers in Michigan Districts with Multiple Locale Codes, 2004-2015, by Race

Districts w/multiple codes	2004	2015	Percent Change
White Core Teachers	27,810	24,095	-13.4%
Non-white Core Teachers	1,344	1,310	-2.5%
Black Teachers	948	623	-34.3%
Hispanic Teachers	185	274	+48.1%
Asian Teachers	121	215	+77.7%

Source: CEPI restricted teacher-level data

By comparison, the decline in teachers overall, and in non-white teachers specifically, was greatest in large city districts (Table 18): a nearly 40 percent drop in non-white teachers, and a 53.3 percent drop in white teachers.

Table 18: Core Teachers in Michigan large City Districts, 2004-2015, by Race

Large City	2004	2015	Percent Change
White Core Teachers	2,143	1,127	-53.3%
Non-white Core Teachers	3,987	2,419	-39.3%

Source: CEPI restricted teacher-level data

Next, I analyzed the trends in teacher characteristics among new hires over the time period in question. Overall, the ratio of white to non-white and male to female elementary teachers changed very little across the state, as shown in Table 19.

Table 19: Gender and Race of New Elementary Teachers in Michigan, 2004-2015

New Elementary Teachers	2004	2015	Percent Change
Female	86.1	86.7	0.6
Male	13.9	13.3	-0.6
White	89.9	87.4	-2.5
Non-white	10.1	12.6	2.5

Source: CEPI restricted teacher-level data

This diversity of new hires largely matches the existing diversity in districts when separated by district type. As shown in Table 20, suburban districts made gains in the diversity of their new hires, although they still hired nine white teachers for every teacher of color, at a time when their student populations grew increasingly diverse. Districts and schools classified as town districts also made modest gains in the percentage of non-white teachers hired, but the small number of total teachers makes these gains fairly trivial, both in the districts themselves and in the state numbers and percentages overall.

Table 20: Percent of New Elementary Hires, 2004-2015, by District Type

District Type	2004 Percent Non-white	2015 Percent Non-white	Percent Change, 2004-2015
City	30.6	29.1	-1.5%
Suburb	4.4	10.1	5.7%
Town	0.0	2.5	2.5%
Rural	2.5	1.7	-0.8%

Source: CEPI restricted teacher-level data

Table 21 shows the aggregate number of new teachers hired between 2004 and 2015.

Table 21: 12-Year Totals of New Core Teachers in Michigan, by Race

Statewide New Teachers	2004	2015	12-Year Total
White Core Teachers	5,697	6,060	77,255
Non-white Core Teachers	556	825	8,842
Percent non-white	8.9%	12.0%	10.3%

Source: CEPI restricted teacher-level data

Among the five districts that were the focus of the qualitative data collection, the 12-year totals were very similar, as shown in Table 22.

Table 22: 12-Year Totals of New Core Teachers in Five Districts, by Race

5 Districts, New Core	2004	2015	12-Year Total
White Core Teachers	74	120	1219
Non-white Core Teachers	0	18	115
Percent non-white	0%	15.0%	9.4%

Source: CEPI restricted teacher-level data

Another way to look at issues of racial and gender diversity is to compare the total number of elementary hires to the number of new male or non-white elementary teachers over the time period in question. Table 23 shows the total number of elementary hires during the 12-year period of the study for each district in the qualitative portion of the study, and the number of male and non-white hires each district made.

Table 23: Elementary Hires by District, 2004-2015

	2004-2015	Percent of District Total
District A		
Total Elementary Hires	150	
Male	29	19.3
Non-white	34	22.7
District B		
Total Elementary Hires	118	
Male	23	19.8
Non-white	17	14.4
District C		
Total Elementary Hires	172	
Male	44	25.6
Non-white	18	10.5
District D		
Total Elementary Hires	121	
Male	6	5.0
Non-white	2	1.7
District E		
Total Elementary Hires	111	
Male	20	18.0
Non-white	0	0.0
5 District Totals		
Total Elementary Hires	670	
Male	122	18.2
Non-white	71	10.6

Source: CEPI restricted teacher-level data

The percentage of male elementary teachers hired by the five districts varied from just 5 percent in District D to 25.6 percent in District C; the five-district average of 18.2 percent is slightly higher than the statewide average of about 13.5 percent. The percentage of new elementary hires who were non-white varied even more, from 0 percent in District E to 22.7 percent in District A; the five-district average was 10.6 percent, in line with the statewide average of about 11.3 percent.

The data in the tables above strongly suggest that districts did not increase the diversity of their teaching staff through hiring practices. We turn now to issues of subject matter focus.

The accountability measures districts faced during this time period focused on student achievement in mathematics and reading in grades 3-8. Table 24 below summarizes the total number of elementary teachers with endorsements in mathematics or reading over this time

period. The number of elementary teachers with endorsements in mathematics was just 5.5 percent in 2004; in 2015, the number with endorsement in mathematics was even lower, 3.4 percent. Note that in 2015 there were 1,493 elementary schools in Michigan, meaning there was one elementary teacher with a math endorsement for every six public elementary buildings in the state.

Table 24: Michigan Teachers with Mathematics and Reading Assignments, 2004-2015

	2004	2015	Percent Change
Teachers with Math, K-12	7,336	7,155	-2.4%
Teachers with Math, K-6	389	244	-37.3%
Teachers with Reading	1,059	427	-59.7%
Elementary with Reading	470	221	-53.0%

Source: CEPI restricted teacher-level data

Among the five districts in which interviews were conducted, the total numbers are small, but the pattern is unmistakable. In fact, virtually all of the elementary mathematics assignments shown in Table 25 were attributable to one district, District C, which reported six elementary mathematics assignments in 2004, eight in 2005, and then none in each of the following years until 2014, when the number of elementary assignments in mathematics jumped to 17, followed by 14 in 2015. It seems likely that these data are artifacts of a change in reporting rather than changes in actual assignments; none of the other districts showed any elementary mathematics assignments in the 2014 or 2015, and very few over the 12-year period.

Table 25: Five District Core Teachers with Mathematics Assignments, 2004-2015

Math Assignments	2004	2015	Percent Change
5 Districts, All Levels	133	120	-9.8%
5 Districts, Elementary	7	14* (or 0)	n/a

Source: CEPI restricted teacher-level data

Table 26 shows the number of teachers with reading assignments in the five districts; these declines suggest that districts pursued other instructional strategies for reading, although no mention was made of them during the district interviews.

Table 26: Five District Core Teachers with Reading Assignments, 2004-2015

Reading Assignments	2004	2015	Percent Change
5 Districts, All Levels	12	2	-83.3%
5 Districts, Elementary	9	1	-88.9%

Source: CEPI restricted teacher-level data

Analysis of the quantitative data related to teacher characteristics provides a sense of who taught in Michigan's public schools over time, and what trends have transpired over that time that represent either changes or consistency in the characteristics of teachers hired by districts during a time of intense policy pressures on districts to improve a central aspect of their core mission: student achievement, as measured by high-stakes statewide student exams. The patterns in the data are clear: teacher characteristics conceptually related to accountability levers – more teachers with backgrounds in mathematics and reading, more teachers of color, more male elementary teachers – remained essentially unchanged. A deeper understanding of teacher hiring in such a policy context requires us to investigate the decision-making process behind these teacher hires – to ask not just who, but why.

CHAPTER 6

FINDINGS FROM THE QUALITATIVE DATA ON DISTRICT DECISION MAKING

Michigan's teacher population became less diverse from 2004 to 2015. There were fewer teachers of color, both in actual headcounts and in the percentages of the overall teaching population, while the proportion of female teachers grew. The same trends held for teachers at the elementary level.

During this time period, districts did not increase the diversity of their teaching staffs. In fact, diversity decreased during this time period, both in gender and in race/ethnicity. This demographic pattern took place at a time when districts were starting to be held accountable for the performance of their students overall, and of student subgroups related to race in particular.

The data on new teacher hires show that districts did not increase the diversity of newly hired elementary teachers during this period. There are several possible reasons why this would be so. Diversity may not have been a priority for districts, or for some districts; alternatively, districts may have tried but were unable to identify greater numbers of qualified minority candidates. Did districts not intend to increase diversity and expertise in math and reading? Or were their intentions frustrated?

To investigate district intent, we turn to the qualitative data from the administrators interviewed in five school districts during 2016. What factors influenced district teacher hiring decisions?

Organizational theory argues that decision making is rarely a matter of rational choice in the classic sense of a full search for options with the goal of maximizing the alignment between a choice and a set of organizational preferences. According to theorists such as March and Simon, districts and administrators face two basic constraints that prevent them from maximizing their

hiring choices as rational choice would have then do. The first constraint is scarcity of resources: there are limits to the resources decision makers have available to them in the search process. The second constraint is ambiguity in the information available and upon which to base a decision, as well as ambiguity in the organizational preferences that should guide administrators in deciding which candidate maximizes their choice options.

Table 27 summarizes the number of comments made by district decision makers in the five case study districts that referred to scarcity of resources facing them during the teacher hiring process.

Table 27: Coded Comments from Administrators Related to Scarcity

Comment Category	Number of Comments	Percentage of Total Comments (N=702)
<i>Limits on Rational Choice</i>		
Scarcity	190	26.0%
Of time	51	7.3%
Of attention	52	7.4%
Of information	34	4.8%
Of capacity	53	7.5%

This table conveys a sense of the relative focus of the responses of decision makers to the three general prompts in the interview protocol: what process was used to make a recent teacher hire; how did this hire compare to typical hires in the district; what would you change in the process if you could?

Scarcity of Resources

March and Simon enumerated four types of resources that are limited in most organizational decision making: time, attention, information, and capacity. District decision makers mentioned all four types of limitations in their explanations of their hiring practices.

Scarcity of Time

References to time were among the most common comments across the interviews. When it comes to hiring teachers, the scarcity of time is about late starts and late finishes, and about processes that are at once fast and slow. Liu and Johnson (2006) noted as much in their study of urban hiring practices, which they described as late, rushed, and information-poor. Decision makers were limited in the amount of time available to make decisions concerning teacher hiring. The administrators interviewed identified multiple ways that time presents a challenge to the hiring process. The most common was the relatively narrow window of opportunity decision makers had to complete the process. All districts had strong motivation to have teachers in place before the first day of the school year. “You have to have someone in front of those kids,” stressed one superintendent. Although the occurrence of hiring teachers after the start of school is reported to be distressingly common (Jones, Maier, & Grogan, 2011), district administrators identified having teachers in place by the first day of school as a top goal. What made this goal challenging was variability in a district’s ability to identify the start of the hiring process. Districts necessarily relied upon teachers to inform them if they were retiring, resigning, or going on medical leave. “The timing of retirements is different from [the timing of] hiring,” observed another superintendent. Sometimes, such as in cases of medical leaves or spouses whose jobs prompt a family relocation, teachers themselves did not know very far in advance of leaving a position. Several district administrators mentioned occurrences when positions opened unexpectedly. Administrators in all five districts reported having to hire during the summer, even in the final days before school opened. “Hiring season is March-April, or July-August – whenever teachers inform us,” explained a superintendent with a wave of her hand.

Another reason for variability in the identification of teaching positions to be filled was uncertainty in student enrollment. “We need to see butts in seats,” reported one superintendent in a district struggling to reverse declines in enrollment. Other districts had the opposite problem. “We were all set for teachers in the spring, but over the summer kids kept trickling in, forcing us to add a section,” explained a principal. In either case, the result was the same: the district needed to hire a teacher relatively quickly. Time is a limited resource in the teacher hiring process.

Time is a limited resource in another important way. Districts sometimes compete for candidates, so the timing of the hiring process can affect whether a district secures its top choice of candidate. Sometimes this competition is head to head: one principal described how she called the candidate she wanted to hire, only to learn that the candidate had accepted an offer from another district. Liu and Johnson (2006) documented this phenomenon in urban districts, but it also happened in suburban districts in this study. “This happens a lot,” complained a veteran principal in another district. Other times, the competition is relative: districts that identify and post openings earlier have access to a larger, better pool of candidates than do those who post positions later in the hiring season. Several administrators spoke of the challenges of “shallower” pools, in the words of a central office administrator. “We don’t hire as well in the summer as we do in the spring,” he admitted. “The talent pool is much shallower later.” Whether because of the approach of the first day of school, or because of competition between districts for particular candidates, decision makers identified the scarcity of time as a limiting factor in the hiring process.

Scarcity of Attention

A second scarcity of resources identified by March and Simon is related to the scarcity of time, but can be measured in minutes rather than days or weeks, and affects individual decision makers directly as well as the organization indirectly. As human beings, decision makers have a limited amount of attention to devote to their responsibilities. Superintendents are the chief executive officers of organizations with hundreds of employees and multi-million dollar budgets. They report directly to a school board and indirectly to thousands of parents. Principals are responsible for the operations of their buildings, each with hundreds of students and dozens of employees. Central office personnel provide the administrative support that allows teachers and principals to perform their primary roles of instruction and supervision.

Identifying and selecting a preferred candidate to fill a teaching position is, in practical terms, an additional task that presents itself to district administrators, often during the busiest times of their school year. As one superintendent admitted, “Our administrators just don’t have the spare time.” None of the districts in the case studies had a full-time director of human resources; two districts had central office administrators whose duties included HR functions as well as other responsibilities; a third district was in the process of re-staffing such a position after several years of going without. As a deputy superintendent put it, “A lot of districts dropped HR staffing during the lean years. They figured, ‘We have so many needs, so few resources, we don’t need them in HR.’”

Teacher hiring is only one aspect of the human resources system, as Odden (2014) and colleagues pointed out. Human resources management includes managing the employment of instructional and non-instructional employees, staff development and evaluation, changes in status, managing benefits, and processing retirements and dismissals. When districts lack HR

capacity, these duties get assigned to other administrators and compete for their attention with pre-existing core responsibilities.

Moreover, the decision of whom to hire actually requires a host of preliminary decisions that vie for attention. First, the decision has to be made whether to fill an opening at all, and whether to reassign a current staff member – potentially creating a different opening – or to hire a new staff member. Enrollment stability and its consequent budget implications are complicating issues in districts. Administrators in four of the five study districts mentioned finances as an important consideration in the decision of whether to post an opening. Once that decision had been made, someone needed to decide what position description and required qualifications should go into the posting, and when and where to post it. Four of the five districts participated in their county's online job application system; two also sent postings to teacher preparation programs in the area. As March (1994) pointed out, in many organizations “the deciding is as important as the doing” (p. 24).

Once the posting closed, someone in the district needed to review the applications the district received, screening for obviously unqualified applicants (such as the wrong certification level or subject area). One principal described a recent hire this way: “In the past, a senior administrator did the initial looks at candidates before paring them down and sending a shorter list to principals to review. This time, I did the initial review. We had 172 candidates for this 3rd grade position. I looked through all the resumes and folders.” If each application took just five minutes to review, 172 applications represented nearly 15 hours of attention to this task alone, attention not directed at other tasks.

All of the districts had some process to narrow the field to a manageable number, from which the principal or principals could choose a pool to bring in for interviews. Another

principal admitted that “it takes a lot of time – nights and weekends.” Screening applications outside of working hours may have allowed decision makers to avoid the conflict of attention to routine work duties, but it also shifts the scarcity of time and attention into the decision maker’s personal life. Once the initial pool of applicants had been winnowed, every district in the case studies had a practice of assembling teams to review the shorter list of candidates. Such a practice required someone in the district to decide whom to include on the team. Next, interview questions needed to be selected and assigned to team members. Whether substantive or administrative, each of these decisions required someone’s attention.

Limited attention sometimes directly affected a candidate’s chances and the decision maker’s action. One principal reported checking references on three finalists. She was told by a reference that the first candidate had many strengths, but not the strong classroom management skills she sought. She could not reach the references for the second candidate. She chose the third candidate. With more time and attention to devote to her reference checks, she may have learned something about the second candidate that would have affected her decision, and potentially the second candidate’s career. Another principal described the review team’s post-interview discussion of the candidates: “These conversations can go just a few minutes or up to 30 minutes in total. Then the team reviews all the candidates in summary – not exactly a comparison.” After what can often be a full day of interviews, team members must still allocate attention to a discussion of each of the candidates interviewed. One principal explained why she took photos of candidates as they interviewed. “We take photos during each screening interview; after 15-20 of these in a row, you start to ask, ‘Which one was that?’ so we put up their photos while we debrief.” These descriptions of actual hiring processes suggest that scarcity of attention was a

common challenge for decision makers in teacher hiring situations. Decision makers across roles and across districts admitted that their attention was sometimes less focused than other times.

Scarcity of Information

District decision makers offered 34 comments about limits they faced in using the information they had on hand to inform their decisions. Paradoxically, they consistently reported a deluge of information, at least in terms of the number of applications received for each open elementary teaching position, while at the same time lacking the kind of information that would give them clear choices. Two administrators complained that the AppliTrack online application system “makes it too easy to apply for a position, which leads to unqualified applications because all they had to do was push a button.” Simon (1994) pointed out the irony of the information age: not too little, but too much information. The scarcity becomes one of relevance, of discerning the signal within the noise.

The real question facing each decision makers was, which candidate will meet my needs? This was a question without an obvious answer, or even a leading indicator. Districts received cover letters, resumes, references, work histories, transcripts, letters of recommendation, and sometimes even portfolios of academic and professional work. Most of this information was deemed by decision makers to be necessary but insufficient to answer the fundamental question. “You can sort [on AppliTrack] all you want – no one’s identity comes through,” offered one principal.

All five districts collected additional information through candidate interviews, but decision makers disagreed on how helpful these were in making decisions. Some administrators found interviews helpful in ruling out candidates. “You can tell pretty quickly whether you want to continue the conversation,” said a central office administrator about the screening phone

interviews used in his district. Others felt they gained valuable insight from meeting face to face with candidates, particularly compared to written applications. “You can tell, they just get it when they talk,” said a veteran principal. Several administrators discounted interviews as unreliable and offered the direct experience of candidates who interviewed well but fell short in actual performance, either in sample lessons or later on the job. “I remember one candidate who was terrible in the sample lesson, she said absolutely inappropriate things to the kids, but based on her interview she would have been one of my top choices,” admitted one principal. Human relations professionals such as Rose, English, and Finney (2014) have argued that, although ubiquitous, interviews are not reliable indicators of future job performance.

Scarcity of Capacity

The fourth type of limited resource that bounds rational choice as described by March and Simon was that of capacity. There were 52 comments related to limited capacity in the interviews. They showed that organizations can lack capacity, as can individual decision makers. This lack of capacity can be a lack of infrastructure. As mentioned earlier, administrators in each of the districts described a conspicuous lack of HR support. One superintendent used understatement in observing, “We are undermanned in this area.” The largest district in the study had the most capacity in human resources. Still, in a district with over 1,500 employees, the district director of HR was also director of curriculum for the district. This district had recently instituted a sophisticated process to evaluate teacher candidates that included performance tasks, such as a data analysis scenario and preparing a sample lesson. However, one central office administrator in that district acknowledged that “the district doesn’t have the bandwidth to do this” for every teacher opening, and that late hiring situations can revert to former practices of application screenings and single interviews.

Limited organizational capacity can also refer to funding. Two superintendents spoke with frustration about salary limitations, either in the budget or in the union contract, that prevented them from pursuing top candidates for openings. Explained one superintendent, “I want more discretion in recognizing years of experience; if one of our AP teachers retires, I want to be able to steal someone else’s AP teacher. In the past, the union has been more about equality. At least we put it in our postings, ‘shall recognize X [sic] years experience.’ This has opened up a whole new world of candidates. Candidates can choose to take a lower step; there used to be limits on years of experience. Budget used to be a factor. We are a base funded district; no Title I or 31A teachers who come with federal funding for their salaries.”

The challenges of limited capacity were also apparent at the individual decision maker level. When asked how they learned to hire, all of the interviewees admitted that they had no formal training in hiring. “This is one place I think institutions of higher education could be doing better,” said one superintendent. “I think we talked about it in one class.” Hess and Kelly (2007) came to the same conclusion in their review of administrator preparation programs. Academic classwork is only one avenue of training. The deputy superintendent in one district described administrator professional development provided by the regional education service agency that supports several of the districts in the study. The RESA provides monthly peer-alike professional support for district administrators, but the administrator acknowledged that none of these sessions has ever focused on issues related to teacher hiring.

Several of the administrators responded to the question about learning how to hire by citing on-the-job experience as their primary opportunity to learn. As one principal put it, “As a principal, you facilitate the professional development [of your staff]. You’re not taught how to do that, but you have to figure it out. Same with hiring. I learned based through experience.”

However, for most decision makers in districts, this opportunity was episodic at best. Principals and superintendents with six to ten years of experience in their current positions could all count and name the specific teachers they had hired. For principals this averaged about one each year. A key concept in organizational theory is the specialization of tasks, which allows members of the organization to gain experience and expertise through repetition. The principal who insisted that hiring was “the most important thing” she did as a building leader nevertheless had only done it seven times in as many years, and had spent only days each time to do it. Her recognition that she has gotten better at hiring over time raises questions about her capacity during these earlier decisions. It is possible that better refers not to her results, but to her process – to her efficiency or her confidence. Still, the interview data support the concept of capacity as a limited resource in decision making about teacher hiring, both for the organization and for the individuals in it.

Satisficing Behavior

Organizational theory argues that the organizational response to scarcity of resources is satisficing, the serial search for and consideration of alternatives until a threshold of acceptability is reached, at which point the search is ended and a decision is made. This describes well the hiring practices described by administrators in the case studies.

With one exception that is described later in the chapter, districts posted open positions to identify alternatives – hundreds of them if early in the hiring season, scores of them even late in the summer. The postings described in the interviews ran as few as three days and as many as ten days. Extending the posting window would have allowed districts to identify even more alternatives, a clear goal of rational choice when time is not a factor. But time was always a factor, and the goal of the posting was not to identify all possible alternatives, but simply enough

alternatives. Scarcity of time and attention prevented the consideration of a larger pool of candidates.

The information in the application packets may have been insufficient to identify the best candidate, but it was sufficient to enable a decision maker to screen an unmanageable number of applications down to a manageable number. The function of the screening was to apply threshold criteria; those above the threshold were added to the candidate pool, those below were not. “I selected 13 candidates” for one position, explained a principal; “Given the sensitivity of time, I may not have found all the candidates who met those criteria, but I found enough of them to give us a choice.”

Districts and the decision makers in them had a limited amount of attention to pay to the hiring process. Districts assigned aspects of the hiring process to different members, all of whom had full time jobs already; together they assembled enough attention to complete the task of filling the position, even if that amount of attention varied by circumstances largely associated with the timing of the opening. “From August to June, we have to revert back to a minimalist process of online applications and interviewing,” admitted one central office administrator. Another spoke of the “desperation of late summer hires; principals have so much chaos at the start of school.” Criteria slipped from “best” to “best we can do under these circumstances.”

Districts satisfied when it came to capacity as well. Peterson (2002) observed that some administrators have better hiring skills than others, and recommended that districts assemble their teacher hiring teams accordingly. None of the district interviews included any mention of marshaling the best hirers to make decisions about candidates in their descriptions of their hiring processes. Instead, they reported that candidate review teams often depended upon volunteers to participate. Administrators in each district described efforts to assemble representative teams of

teachers, specialists, and administrators, but the factors that determined the actual representatives, such as willingness or availability, suggest that representation was defined by roles, not talent.

In describing his plans to establish a process to create an early pool of candidates, one superintendent indicated that “May is a decent time for our administrators; I’m not convinced that every administrator has to be there.” In this situation, less than a total commitment by his principals seemed sufficient. A central office administrator in another district described the process recently replaced by his district: “By the end of the shuffle, it was August; there was a pretty perfunctory screening process, mainly interviews. Maybe the principal was involved, but the principal’s role was quite limited. Goodness of fit, pedagogical skills were not considered.” This process was in place until 2015. One superintendent’s explanation of a fail-safe policy actually described the consequences of satisficing when hiring teachers: “Probationary teachers who receive evaluations of ineffective or minimally effective are terminated.” Its impact on teacher quality was not lost on her: “In any school, the weakest link becomes the standard – this is what the principal will put up with.”

Another superintendent acknowledged the “good enough” approach: “This year, we hired more than I am comfortable with on just one interview, but none were rookies.” Perhaps the upside of satisficing behavior was best and most honestly summed up by a principal in another district. She concluded her assessment of the limitations that constrained a recent hiring she had participated in by saying, “But you only need one good one.” The downside of satisficing behavior, on the other hand, could be heard in the observation of a veteran administrator who acknowledged that, at times, “We would hire, then have to fire if we hired quickly and poorly.”

Ambiguity

Scarcity of resources is one limiting factor in organizational decision making. The other factor identified by Simon and March is ambiguity. Ambiguity refers to the lack of clarity concerning which preferences should apply as decision makers attempt to align choices to preferred outcomes. Organizational preferences can be ambiguous for a number of reasons. There is often more than one preference, and these may conflict with one another. They may be imperfectly or incompletely communicated to all decision maker. As shown in the Table 28 below, comments about ambiguity were less commonly expressed than were comments concerning scarcity. In fact, rather than identifying lack of clarity in organizational preferences as a specific constraint on teacher hiring – which arguably would have been a metacognitive task for interview respondents – the decision makers interviewed instead identified multiple preferences in the form of district initiatives.

Table 28: Coded Comments Related to Limits on Rational Choice, by Type

Comment Category	Number of Comments	Percentage of Total Comments
<i>Limits on Rational Choice</i>		
Scarcity	190	26.0%
Of time	51	7.3%
Of attention	52	7.4%
Of information	34	4.8%
Of capacity	53	7.5%
Ambiguity	28	3.9%
Rule-following	69	9.7%
Identity	49	6.9%

Ambiguity of Preferences

Comments related to ambiguity were less frequent in the interviews – only 28 of the 709 coded comments related to ambiguity. No one who was interviewed complained about unclear district preferences. Indeed, one superintendent was hired specifically to bring leadership to a

struggling district. She listed four distinct goals that guided her direction and that of the district. In fact, superintendents described multiple initiatives underway in their districts. It was this proliferation of preferences that made it difficult for decision makers to identify a clear organizational preference to guide their selection of the candidate who best aligned with district goals. Clearly, district administrators attempted to hire the best possible candidate for a teaching position. What was not clear, however, was what “best” meant, or what indicators decision makers could use to evaluate a candidate’s alignment to that preference, and how that preference related to the district initiatives. “There is always political pressure to have kids perform at high levels, but there are so many variables beyond teaching and learning that make kids successful,” observed one principal. The ambiguity here concerns a narrow versus broader understanding of student success and how to foster it, and how this understanding should be applied to teacher selection.

District initiatives varied widely, and included a district-wide move toward team teaching; the adoption of one-to-one student technology; increasing cultural competency among staff and students; and providing students with school to work experiences. Only in one district was the need to improve student achievement explicitly named as a district priority and a value district decision makers looked for as they reviewed candidates. In that district, the principal said she looked for “classroom management and reading and mathematics intervention. I don’t care about project-based learning right now,” she said, even though project-based learning was an important instructional strategy used in her school. Her rationale for her choice of classroom management and content expertise over instructional strategy was, “If they can do these, I can teach them that.” In her district, the superintendent and leadership team had made the bold decision to shift the district’s focus away from student achievement as measured by the statewide

student assessments. Instead, the district began collecting and analyzing its own data on instructional practices. “Practice is amenable to change,” asserted the superintendent. Moreover, the district aligned the position description in its posting to its selection process and even to the metrics used to evaluate the new teacher’s performance. This suggested a set of coherent preferences to guide teacher hiring.

The other four districts were less explicit in their organizational preferences. Even when district goals were relatively clear, the strategies for achieving them or the qualities to look for in candidates and how to recognize those qualities in the information at hand were less so. “We need teachers who know how to use technology as a tool to learn, how to access information and build skills for success later in life,” said another superintendent, but none of these topics were identified by her principals as district preferences that guided teacher hiring decisions.

Organizational theory acknowledges the potential for conflict in the identification and implementation of organizational preferences. The organization itself may adopt divergent goals that lead to conflicting preferences. Individuals within the organization may hold incomplete or incorrect understandings of those organizational preferences. They may also hold personal preferences that conflict with organizational preferences. Rutledge and colleagues, for example, describe the hiring practices of principals anxious to hire talented math teachers (2010). The district policy was to give hiring priority to the principals of Title I schools in the district. In the interests of their own students, principals in the non-Title I schools found ways to circumvent the official district policy, putting their preferences ahead of district preferences.

Several studies on teacher hiring have used the concept of organizational fit to make sense of how administrators, primarily building principals, identify and evaluate candidates during teacher hiring. Rutledge et al. used person-group (P-G) and person-job (P-J) fit to

describe the practices of the decisions makers in their studies. They were silent on the issue of person-organization (P-O) fit, but it seems that P-G and P-J fit as described in these studies were detached from the question of whether the person actually fits the needs and preferences of the organization. Decision makers were either unaware or unconvinced of the merits of the organizational preferences.

The conflict can be less direct when organizational preferences are more ambiguous. “We should be teaching reading in the content areas,” said one superintendent, but this preference was not reflected in the conversations with other district decision makers. When asked what he looked for in a candidate, a principal in the same district answered, “What else does a candidate offer a building that can make everybody better around them?” This teacher characteristic is a worthy preference to apply to decisions about teacher candidates, but it reflected the principal’s preferences more than those of the district.

In fact, organizational preferences can be ambiguous in part because they reflect the environments in which they operate, and thus can be shaped by various forces external to the district itself. In important ways, school districts are themselves reflections of the communities they serve. “We’ve had a transition of school board members, asking different questions, which is good,” explained a central office administrator. He continued,

“Our community expects high levels of performance. Still, we are wrestling with our identity: we are not an urban district, not a bedroom suburb; what are we? What should our academic expectations be? What are we doing to support kids? We are no longer a rural district, either.”

Administrators in two districts spoke of how enrollment and its impact on the district budget prompted the districts to adopt initiatives to attract students through the state’s schools of choice policy, which in turn affected how the districts thought about their priorities.

Clarity of organizational preferences by itself is no guarantee of better hiring decisions. In describing district practice before the recent state law that took right of teacher assignment off the bargaining table, a central office administrator explained that, under the old system, “open positions were subject to teacher bumping rights. We might have a meeting for 15 positions, and anyone with more seniority could bump in, purely at the teacher’s discretion, regardless of the fit for the school or the students. Between layoffs and other movement, it was just chaos; most important, it was not good for the kids. It made notions of instructional coherence meaningless.” He told of a sixth grade teacher who took a first grade position just so that she could remain in the same building. The district had clear organizational preferences in decisions regarding staffing – but those preferences were focused on employee needs, not student needs.

Rule-Following

Ambiguity in organizational preferences makes it hard to determine which choice to make; it also makes it difficult to assess the success of that choice after the fact. If you are not sure if you made the right choice – that is, not only did you not make a bad choice, but also you did not fail to make a better choice – how do you evaluate your performance in decision making? Simon and March argued that when outcomes are ambiguous, when effective action is hard to identify, organizations and decision makers adopt a different perspective: not effective action, but appropriate action. Appropriate actions are based on previously established policies and practices that define appropriate behavior.

Descriptions of various aspects of rule-following were the most frequent type of comment coded in the interview data. Rules can be formal and official, as in union contracts; they can also be informal but widely understood as established practices. The outcome of a teacher hiring decision is hard to quantify; the process used in making it is less so. “You can do

everything right and still lose,” reflected a veteran principal. Doing everything right refers to appropriate behavior, to following established procedures – following the rules. Another principal observed that, of the eight teachers he had hired, “seven are or will be phenomenal teachers.” The one teacher about whom he had concerns was “the one who only had no experience,” an exception to his established practice of hiring candidates with previous teaching experience. In this particular example, the decision maker referred not to district policy regarding how to assess a candidate’s potential, but rather to his own decision-making heuristic.

Rule following in general has several virtues. First and foremost, it insures compliance with state and federal laws protecting the rights and safety of students and educators alike. Teachers must be licensed by the state, and they undergo fingerprinting and background checks. Union rules limit the number of students assigned to each teacher. Second, rule following provides efficiency. Instead of reinventing a process to solve a problem or make a decision, organizations can refer to pre-established policies and practices. In essence, rules are previously determined decisions: in situations such as this, do that. For example, a central office administrator explained how the district went about reassigning teachers to accommodate enrollment patterns. First, the district asked for volunteers; the district compensated the teacher for time spent moving classrooms, and provided logistical assistance in doing so. If no teacher volunteers, the district will still move someone, and will decide who will be moved. “When we have to, we move teachers very humanely, with a process, and come to the right outcome.” Rule-following can serve to protect relationships between groups within organizations.

Third, rule following provides consistency across units in organizations. This consistency provides the promise of quality control, at least in terms of the process used to make a decision. The elementary principals in a given district all followed the same basic process for hiring

teachers in their buildings: they got approval to post a position, posted it for an established number of days, reviewed the applications that arrived in response, established an interview team, selected final candidates, checked references, and recommended a top choice for the superintendent to take to the school board for approval. These basic rules were sometimes suspended, as will be demonstrated below, but even in such cases there were rules for when and how not to follow the rules. Rule-following allowed for consistency of practice between buildings in a district.

Finally, rule following provided the promise of consistency over time. Rules allowed decision makers to use the same process this year as they did in previous years. They also provided new decision makers with a framework to follow that reduced the time and attention required to accomplish the multiple steps involved in deciding whom to hire. Organizationally established practices also safeguarded against a new decision maker's potential lack of individual capacity due to inexperience. "We have procedures, systems we can trust. There's value in that," commented one principal. Of course, organizations can and do learn from experience, and these lessons can be institutionalized and disseminated through changes to established practices.

The interview data showed that there were rules and established practices for each aspect of the hiring process that districts used, from how long to post a position, to how many applicants would pass the initial screening; from how interview teams would be assembled, to how long interviews would last, what topics would be covered, and how teams would debrief the interviews. Districts each had their own rules on what else would be asked of candidates, and how the information gathered would be used to make a decision about which candidate to offer a position. Districts even had rules on what would happen if their first choice of candidates did not

accept their offer. Districts varied somewhat in the specifics of their established practices, but they all had them.

For example, each district assembled a review team to evaluate candidates. Each team included the building principal, at least one teacher from the same grade level in the building as the opening, and a central office administrator. Some districts included another building principal, or a teacher from another grade level, or a counselor, or even the school secretary. Teams sometimes included a special education or curriculum coordinator, as well as a representative of the teacher union. The practice, then, was to include a variety of people with particular sets of expertise, and with whom the eventual selection would be expected to interact. More important, perhaps, the practice emphasized that principals did not conduct the hiring process by themselves. “Principals don’t make individual hires,” affirmed a superintendent.

For the interviews, teams were given a set of questions that would be asked of each candidate; in some districts, team members would be assigned specific questions. Some districts used scoring rubrics; others did not. As mentioned earlier, some districts required principals to consider internal candidates first, and one district required the principal to hire a qualified internal candidate. In another district, candidates were ranked by scores, and internal candidates were given additional points for being current employees.

Districts varied in their rules concerning how much experience they were willing to recognize when hiring a teacher they wanted. “In this district, regardless of experience, all new teachers come in at Step 1,” explained one superintendent. One of his colleagues, on the other hand, had the option to recognize three to five years of experience, and had some discretion in how he did that.

Some rules were contractual; other rules were practices that guide decisions but were sometimes suspended if the decision makers felt the situation warranted it. The pressure of limited time to make a decision was usually the precipitating factor. One superintendent described the recent hiring of a candidate who had served as an intern in the district.

“We posted a position, interviewed internally and this intern; he was the clear choice, so we hurried an offer because I knew this person would be swooped up somewhere else; he is amazing with students and staff alike. We followed our procedures, did our due diligence, but shortened our typical procedure in order to meet an identified need of students and staff.”

Another superintendent granted a request from a principal to extend an offer to a strong candidate without requiring a sample lesson. “[The candidate] was from a family I knew and a parent I had taught with, so I said it was OK to hire without a sample lesson.” This was a district leader who spoke unequivocally about the value of seeing candidates in action; it was also a situation of a late opening that needed to be filled in the final days before the start of the school year.

Not all rules work in the best interests of districts or their students. That same superintendent explained that when a county-run instructional program ended,

“A state law from the 1970s required the districts in the ISD to put these teachers on the recall list; we had to offer 3 of these teachers positions, and had to recognize all of their experience (give them full steps). We interviewed 8 candidates for one position, and one of these recall teachers was ranked 8th on the list. We had to offer her the position. We considered a buy-out option, because she just did not seem the right fit. She is now in a 1-year probationary period (not 2 as usual); we have set high expectations for this teacher, and have encouraged her to explore other opportunities. The other two teachers we had to offer positions wound up finding positions elsewhere. I have contacted our legislators and told them I am willing to testify if they would introduce bills to get rid of this law.”

Evocation of Identity

When organizational preferences were ambiguous, decision makers sometimes called upon their organizational and even individual identities to guide their actions and decision. It

may have been the case that organizational preferences were not evoked strongly enough to supplant individual preferences. Sometimes these organizational and individual identities aligned with organizational preferences. “My principals have autonomy because they have earned it,” said one superintendent.

Teams were assembled because input was valued – up to a point. Several principals made it clear that decisions were made by them as the building administrator, not by the team. Several district superintendents spoke of actively encouraging principals to adopt the district’s perspective in evaluating and assigning candidates to particular openings, rather than the building perspective of what they would prefer. This was one reason why districts used teams in teacher hiring, particularly when a district had several similar openings. “We always have a central office administrator [at meetings to assign top candidates to specific buildings] to keep things balanced – I won’t say fair,” admitted a principal.

Even so, several comments across districts revealed instances in which the personal preferences of principals determined decisions. Sometimes these personal preferences aligned with district preferences. One principal said she looked for experience or expertise in working with English language learners, but this was because her student population was more international than that of other schools in the district. A different principal, on the other hand, said he paid attention to whether candidates delivered their applications in person, even when the instructions included information on where to mail them and to whose attention. To him this conveyed commitment and enthusiasm. “The teacher I wound up hiring? Hand-delivered his application.”

One principal explained how she brought her own building priorities to a district screening of candidates. “Because I knew of my building’s impending opening in April, I came

to the May screening meeting with that opening in mind,” she said. In this case, her preferences were aligned with district preferences in terms of what principals would look for in candidates. Another principal explained that “as a teacher, I always believed in handling discipline problems in the classroom, so I look for candidates who are strong in management, comfortable working with kids who struggle.”

Counteracting Scarcity and Ambiguity

Scarcity of time, attention, information, and capacity, and ambiguity of organizational preferences were well represented in the descriptions of the decision-making processes used by districts to select teachers to fill open positions. This is what organizational theory and its conception of bounded rationality would predict to happen.

However, if decision makers spoke a lot about the challenges they face in hiring teachers, they also spoke a lot about some of the strategies they use to overcome those challenges. In fact, almost a third of the coded comments related to these strategies. As shown in Table 29 below, these strategies included allocating time and attention early in the process; gathering additional relevant information; and building capacity both in the organization and in individual decision makers.

Table 29: Interview Comments Related to Compensation Strategies, by Type

Comment Category	Number of Comments	Percentage of Total Comments
<i>Strategies to Compensate</i>		
Allocating Time Early	16	2.3%
Gathering Additional Relevant Information	111	15.7%
Building Individual or District Capacity	89	12.6%

Allocating Time Early

Administrators in every district in the study tried to identify possible teacher openings as early as possible. Districts ran projections of student enrollments based on current enrollment and historical trends. They asked parents during spring parent-teacher conferences about plans for the coming year, or sent surveys home to parents of current students. They ran kindergarten roundups to identify families new to the district. They publicized their policies and available openings for families interested in schools of choice options. They analyzed their employment data, looking at the ages of teachers and their years of service.

One central office administrator spoke of the potential benefit of including a retirement notification incentive into the next bargaining contract. “If it helps two or three teachers to decide, we’ve avoided August 31 chaos, and it helps with our finances, too, because we aren’t paying substitutes.” All of these actions helped districts anticipate the potential demand for teacher hiring.

One district in the study allocated time early to assemble a potential supply of teachers as well. This district invited applicants to participate in prospective screening interviews before openings were even identified or posted. The elementary principals in this district worked together to identify and “pre-approve” a pool of approximately 30 candidates that they could call as soon as openings were approved to be filled. Because there were several elementary schools in the district, the principals focused on the potential of each candidate to work well in any of their schools. As one principal explained, “These are very general interviews, not grade specific, and determine which of the candidates are acceptable to all four elementary principals – that we all agree we would be happy with this teacher – knowing that teachers who enter the district may start at one school but move to another school in the district.”

These early candidates were ranked 1, 2, or 3. A ranking of 1 indicated that a principal would definitely want that candidate in the pool; a 2 indicated that the principal was willing to have a candidate in the pool if another principal wanted him or her; a ranking of 3 indicated that a principal would not want to consider this candidate, and essentially served as a veto vote for that candidate, who was then eliminated from the pool. Thus, the candidates who wound up in the final pool were all rated 1 or 2 by all of the elementary principals in the district. This early allocation of time by the district allowed principals to act quickly when openings were identified. It also provided some consistency across the district, because all of the elementary principals participated, making later transfers between schools less anxious for both teachers and principals. One administrator noted that late hiring “is always going to happen, but the disruption is greatly mitigated through our process.”

Gathering Additional Relevant Information

A significant portion of the interview comments referred to ways in which decision makers attempted to overcome scarcity of relevant information on the teacher candidates under consideration. The most ambitious of these strategies was the elaborate process recently established by one of the districts in the study. This process involved having multiple candidates participate at once, rotating them through three performance stations. Candidate involvement lasted two hours, more than twice as long as typical interviews. The stations included an interview, a data analysis simulation, and the presentation of a lesson plan or teacher workshop. Candidates had already submitted writing samples during the application process. Each station had a team of reviewers, including principals, teachers, and central office administrators. The data simulation station had candidates work with each other to review a set of data and make recommendations on instructional strategies based on what they saw in the data. Reviewers were

able to evaluate both data and teamwork skills. The questions posed during the interview were aligned both with the posting description and with the evaluation tools that would eventually be used to rate the performance of whomever was eventually hired. The sample lesson station had candidates explain lessons they had prepared beforehand. The current format of the process made it difficult to arrange for live classrooms that would allow candidates to teach sample lessons, but the central office administrator in charge of HR indicated that using students in the process was a priority for him in future hires. After the candidates were excused, the station teams came together to review each candidate's performance.

Other sources of relevant information focused on gathering additional information about past performance. This meant that, for almost all of the decision makers interviewed, experienced teachers had an advantage over recent graduates. District administrators were split over the value of an internship in evaluating teacher candidates. Each of the districts had relationships with several teacher preparation programs in the region, which allowed them to place dozens of elementary teacher interns in their districts each year.

Each district had its reasons for accepting interns, and only one said the relationship served as a significant source of likely teacher hires. In part, this was because only one of the teacher preparation programs placed interns for most of the school year as a fifth year of the student's preparation for teaching. "We'll take any teacher we can get from them," said the superintendent from that district. The other districts referred to a professional obligation to host interns. "We develop a lot of our own curriculum materials, and [programs] like that," explained one superintendent. "Actually, we don't hire a lot of interns – surprising, really," he added. "the teachers we have coming in have three to ten years of experience; we hire very few fresh out of

college.” His colleague in another district reported that “this is something we do for the profession. Interns get a fabulous experience here working with our teachers.”

Experience served as additional information about candidates in two important ways. First, experienced teachers had already passed through another district’s hiring process, and so had already been vetted by someone else. According to one superintendent, “[one year] we wound up hiring four kindergarten teachers. We decided to take the top candidates with lots of experience over other candidates. The union was upset because we were ‘paying lots of money to teachers who don’t even work here,’ but I told them I wanted the best teachers for our kids. We worked it out with the union.”

Second, these candidates had track records that could be checked. “As superintendent, I believe the best predictor of success is previous, successful experience.” Another district leader indicated that “when hiring, we look for folks with experience in the use of assessments and data, curricular development experience, people who have been in positions to make decisions.” These criteria put interns and recent graduates at a disadvantage.

Decision makers in every district spoke of the importance of contacting references to gather additional information about candidates. “The best source of information about a candidate?” asked one principal rhetorically. “Reference checks through our network to get honest answers.” This typically included talking to the principal of the building a candidate was coming from. Another principal counted contacting the references for three candidates, usually the mentor teachers; she recalled hearing “one of the most glowing references she has ever heard” for the eventual choice. This principal was quite pleased with her new hire, and noted with interest that she was the candidate with the least elementary experience. One district’s practice was to collect from the interview teams a set of “I wonder” questions that principals

could then use to frame their conversations with references. Several administrators mentioned the value of calling their own contacts in addition to the references provided by the candidate. “I can use my network of colleagues to check up on them; I can call and get an honest answer.”

The importance of seeing candidates in action was stressed in some but not all districts. “Last year we had a 6th grade social studies position,” recalled one principal. “We had two candidates, one of whom really talked the talk, while the other lacked some depth. But when they taught the lesson, the second one had the kids on the edge of their seats, really engaged; the first one didn’t engage the kids. That’s the power of the lesson.” A central office administrator insisted that “we are always trying to ascertain a teacher’s effectiveness by having them teach a class, or doing field observations on them in their district.” When invited to propose any change to his district’s hiring process that would lead to better results, one principal volunteered that “I would [go] watch teachers in action, shop the market and invite teachers to consider us. I would tell them, ‘You would fit into our district, here’s the kind of support you could expect if you came.’ I know that would be hurting other kids in other districts to do that, but that’s what I would like to do.”

An administrator in the district that now has candidates prepare a lesson plan said that “I’d love to be able to include kids in the process; have candidates actually teach to students. And we plan to do this next summer. You can fake a lot in an interview; you can talk a good game and do the homework to prepare for an interview. It’s harder to fake it in front of kids – that’s tough to do with kids.”

Hiring during the summer months can make it difficult to provide the appropriate context for a sample lesson. Nonetheless, one principal related her success in doing just that. She sent an email message to parents in her school, inviting their students to be a part in the selection of a

new teacher for the school. “I think it’s the most important part of the interview, to see them in front of kids,” she said. “People can talk the talk, but it’s really hard to fake teaching. It’s an ‘authentic interview’ – it’s very hard to fake teaching if you can’t do it,” explained the principal. “You can tell so much by watching them teach.” A principal in a different district observed that “not putting the candidates in front of a live classroom is a potential weakness in the process” used by her district.

Building Capacity

Even as they acknowledged limits to the district’s capacity to maximize teacher hiring decisions, administrators described ways in which the practices they had developed helped build capacity to do better. Making teacher hiring a district-level process rather than a building-level process represented a large step toward building capacity across roles. “I like having all four principals in the process because they bring different lenses and perspectives. One is strong with data, another with management, another with instruction,” said one superintendent. “We are always conscious of thinking about the bigger picture, teachers who fit not just the grade and school but the larger district as well,” offered another superintendent. “These teachers could wind up in other buildings.”

Additionally, making teacher hiring a district-level activity gives more people practice in the selection process. A particular school principal may not have hired a new teacher for her building for a few years, but she may still have participated in one or more hires during that time. Besides the repetition of practice, such cross-building activities may help establish greater clarity of district preferences; it may also reinforce the organizational identities of those involved.

Districts built capacity through teamwork and mentoring. They also outsourced a chunk of the teacher hiring process by joining the county consortium for online applications. Not all

districts used it, and not all decision makers in districts that did liked using it. Still, the online application system had the advantage of relieving district staff of some basic tasks. It provided cloud-based access to applications, saving on paperwork. It also potentially broadened the candidate pool by making it easy for candidates to find opportunities and apply to several districts at once. Another district hired a consultant to help it revise its hiring process. A superintendent in a third district expressed a desire to get training for his principals on how to use the AppliTrack system more effectively. “We probably are not taking advantage of all it can do,” he admitted.

CHAPTER 7

DISCUSSION

This study of district teacher hiring practices grew out of a set of assertions and assumptions. The assertions were that teachers matter, that therefore teacher hiring matters, and that little research to date has focused on how districts hire teachers. The studies cited in the introduction and literature review support these assertions. Another assertion this study made was that an appropriate unit of analysis for a study of teacher hiring is the district as an organization. Individual administrators play important roles in the decision-making process, but ultimately teacher hiring is a collective effort – that is, it is an organizational decision. Districts may delegate aspects of this task differently, but delegation is itself an organizational decision. The assumptions underlying this study were that districts generally do the best they can, that circumstances affect what that best may be, and that districts control some of those circumstances and not others. These assumptions were tested and borne out by the data.

These assertions and assumptions also make organizational theory a suitable conceptual framework, particularly the concept of bounded rationality in organizational decision making. Rational choice theory explains how decisions are made under ideal circumstances: a problem presents itself; alternative solutions are sought out and their consequences projected; the alternatives and consequences are compared to a set of desired outcomes, and the alternative that aligns best with these preferences is selected. When all of these conditions are met, a choice is said to be maximized. In theory, all alternatives are identified and consequences considered, and clear outcomes or preferences are available to guide selection.

In practice, rational choice conditions are rarely attained. Not all alternatives can be identified, nor their consequences determined beforehand. In the case of teacher hiring, districts

have neither the time nor the capacity to identify all potential candidates for a particular position. More important, they have no reliable way of determining the potential consequences of hiring any particular candidate; no clear indicator of teacher quality has yet been discovered. Human resource experts maintain that the best predictor of future success in a position is current and previous success in the same or similar position (Rose, English, & Finney, 2014). Districts attempt to assess current success through sample teaching, and previous success through reference checks. In most cases, the most these attempts can do is to help districts avoid selecting weaker or inappropriate candidates. Although one principal described the sample lesson as an “authentic interview,” few would argue that sample lessons are more than crude approximations of actual practice. Reference checks have the potential for providing an assessment of work over a larger sample of work, but they also introduce the issue of indirect evidence, in that they depend upon the opinion of the person serving as reference.

Compounding the challenges of valid, reliable information about alternatives is that the desired outcomes or preferences are often obscure, either because they are incompletely expressed or understood, or because multiple desired outcomes present contradictory guidance in selection. Thus, while decision makers in organizations are intendedly rational, they are limited in their efforts to maximize choice. They are bounded by scarcity of resources and ambiguity of preferences. The resource limits include the amount of time available to start and complete the search process, and the amount of attention various actors can devote to the process during that time. Part of the search process includes gathering information about the alternatives identified and their potential consequences, but this information can be insufficient or irrelevant to the matching of an alternative to the desired outcomes, and those outcomes may be ambiguous. Finally, a decision maker may be limited in his or her capacity to assess alternatives and their

alignment with organizational preferences, whether because of lack of skill or experience, or the organization may lack the capacity to support the decision maker in the process or a particular decision as an outcome.

A major goal of this study was to illuminate the decision-making processes districts used to fill vacant positions, and the challenges decision makers faced in filling them. There were variations to these processes across districts, but also much congruence. The hiring process began when an opening was identified. Applications were solicited and screened; a candidate pool was selected; a review team was assembled, met with candidates and provided input; references were called; a preferred candidate was selected and offered the position. If that candidate was unavailable, a second choice was pursued or the process was reopened. One district identified a candidate pool before openings were identified. Another district reviewed multiple candidates at once, rotating them through three stations, including one at which they worked together on a data analysis scenario. Some districts arranged for sample teaching in classrooms with students; others had candidates explain a lesson plan or other work product.

The data collected from district administrators responsible for teacher hiring decisions supported the applicability of bounded rationality as a theoretical construct for making sense of how districts make decisions about teacher hiring. Administrators had important decisions to make under difficult circumstances. Scarcity of time, attention, information, and capacity led to satisficing behavior, in which decision makers evaluated alternative choices sequentially until a candidate was identified who surpassed a set of threshold criteria, after which the search was ended and a decision was made. The search for the ideal candidate was superseded by the search for a suitable candidate. This is not to say that the candidate was a poor choice or that the threshold criteria were low – just that the clearest organizational preference was for an

acceptable teacher ready to face a classroom of students on the first day of school. Scarcity of organizational resources led to the search for good enough; with scores or hundreds of elementary teacher candidates to choose from, occasionally excellent or even exceptional could be discovered.

If the first day of school represents an important deadline in the teacher hiring process in an absolute sense, there is an earlier, relative deadline that affects the hiring process as well. Teacher hires almost always come from pools of teacher candidates, and pools dry up as the hiring season progresses. Liu and Johnson documented how delays in the hiring practices of urban districts could cost them better candidates. These candidates were interested in working in urban districts. They were even more interested in working, period; many felt compelled to take offers from other districts for lack of decision making capacity on the part of the urban districts. This pressure to take advantage of a hiring opportunity effectively moves up a district's hiring deadline to as soon as possible. All of the districts in the case studies practiced simultaneous postings – that is, opening the position to internal and external candidates at the same time. All of the districts gave preference to some degree to internal candidates. In most districts, the right for a current teacher to take an opening at another grade or in another building was part of the union's contract with the district; the district had bargained away to the union its right to assign teachers to specific positions. In 2013, state law narrowed the list of negotiable items to salary schedule and aspects of the school calendar. Still, administrators in three of the districts indicated that internal candidates who were properly certified for the position were given the position; a third district required that the internal candidate be interviewed, but did not require a building principal to accept the transfer. The fifth district did not require the principal to include the current teacher in the candidate pool.

Simultaneous postings illustrate the time constraint districts face in searching for candidates. One principal interviewed had a “bubble” opening: a need for an extra teacher at one grade to accommodate an enrollment bubble moving up through the grades in her school. The internal posting was a formality – “What established teacher in the district would want to take a bubble position?” she explained. A simultaneous posting allowed her to start searching for candidates without waiting for the meaningless internal posting to close. Even so, district rules required her to wait until the external posting closed before offering the position to her preferred candidate; in the meantime, another principal in her district whose position posting closed the day before hers offered the same candidate a position at the other school. “These things happen very quickly,” the principal told me.

Thus, the window of opportunity for decision makers is constrained by time, the number of days between the time a position is identified and the time a decision needs to be made on who should fill it. But time – or rather, timing – constrains the decision-making window another way as well. Teacher hiring is in many respects a seasonal activity, the opening day deadline notwithstanding. The challenge, however, is that when the season starts varies widely. All of the district administrators spoke of beginning the hiring process in the spring, sometime between April and June; and yet representatives from each of the districts also recounted instances of candidate searches in the late summer and even around or after the beginning of school. Two main reasons caused this variation in when openings surfaced: teacher departures or unanticipated student appearances.

Most districts started looking at staffing needs as many as six months before the start of a school year. They polled staff about their plans for the coming year; they held kindergarten roundups, talked to parents during parent teacher conferences, held open enrollments for schools

of choice entries. These activities highlighted two unknown variables that affected decisions about teacher hiring: the intentions of existing staff to return in the fall, and the number of students to anticipate serving.

All of the districts in the case studies asked staff members to inform them by a certain date if they planned not to return for the following year. A few of the districts offered a small financial incentive to teachers who made their plans known in advance. Teachers belonged to a statewide retirement system that required them to submit retirement paperwork six months before they started to receive retirement checks. Still, a teacher considering retirement (i.e., a tenured teacher) had to weigh that against a guaranteed salary and benefits. Unstable economic times were advanced as one reason why long-anticipated teacher shortages had yet to arrive.

Planned retirements were only one way that teacher openings appeared. Personal and family reasons could be less predictable. Spouses may want or need to relocate for work reasons; a teacher's health or that of a family member can change unexpectedly, requiring an unanticipated change of plans. Two district leaders reported that some staff waited until the beginning of the school year to announce their retirements: "Some just do it for spite," one superintendent reported. Said another, "Hiring season is March-April – or July-August, whenever teachers inform us." Both admitted that they did not blame teachers for not informing districts early.

Beside these unknowns surrounding teacher supply, the districts faced regular uncertainty about teacher demand – how many students they would see by the first official student count in the fall. Some staffing needs could be anticipated: a large kindergarten cohort this year presaged the need for first grade capacity next year, adjusted for historical and anticipated student attrition rates. Several district decision makers, however, reported continued enrollments over the

summer – and even during the first days of the new school year – that led to the need for staff adjustments. Districts varied in the language in their labor contracts about class size and what happened when it was exceeded. If a district needed to hire a new teacher, the time line to accomplish that was very short. “We need to see butts in seats before hiring,” admitted one superintendent.

Both time and timing could be a limiting factor in teacher hiring decisions. When the hiring process took place before the end of the school year, more people were potentially available to participate in the selection process. On the other hand, the end of the school year was a busy time for school employees; tasks related to teacher selection competed with other pressing demands upon the time of those who would participate. Decisions made over the summer could change the dynamic of the hiring process, with some people not easily available or willing to participate.

Whether spring or summer, there were other time constraints facing decision makers. Other districts were also potentially trying to fill teacher openings; candidates, for their part, were trying to secure the best possible opening for them. Therefore, teacher openings were usually posted for short periods of time, from three to ten business days. Teacher hiring, from the perspective of the district, was a process. Postings went up; applications came in; postings closed; applications were screened; candidate pools were identified; candidates were contacted; arrangements were made to evaluate candidates, usually through interviews but sometimes with performance tasks as well; candidate pools were narrowed, sometimes with second interviews or reference checks; candidates were selected and offered positions, contingent on background checks; district boards of education approved contracts. Each step took a finite amount of time. All the while, both districts and candidates strove to conclude a matching as quickly as possible.

From the district's perspective, the pool of candidates only shrank from the top during a brief season.

One of the essential features of the context of teacher hiring was that it was urgent, episodic work. Even in districts with human resources capacity, most of the information and expertise required for effective hiring resided in decision makers whose primary responsibilities were constant distractions from the important but momentary work of teacher hiring. Principals were central players in these decisions, yet the principals in the interviews admitted that teacher hiring represented a “rare opportunity” to build instructional capacity in their buildings. Most of the experienced principals and superintendents were able to count precisely the number of teachers they had hired in their buildings and districts. Granted, the principals were not counting their participation in the screening of candidates in other buildings, so their opportunities to influence the instructional capacity of their districts were wider than just those in their own buildings. Still, two full weeks of attention to a hiring decision represented 10 days out of a principal's 200-day work year; this would mean that, literally, at least 95 percent of her time and attention was devoted to other important concerns.

The hiring process coincided with what decision makers described as particularly busy times of the school year, although few of their comments suggested better times for it to happen. Moreover, the timing of hiring decisions depended on the timing of other important factors, from the state funding cycle to student enrollment cycles. The commitment, or at least desire, to begin the school year with a permanent teacher to greet a classroom of students on the first day of the school year was one of the few constants in this cycle of cycles. The fact that much teacher hiring took place during the summer avoided some of the conflicts, but also meant that hiring then competed with summer vacations, limiting the available capacity to convene selection teams

or have candidates perform teaching simulations in actual classrooms of students. Scarcity of information resulted in two districts using short screening phone interviews with some candidates to determine if full in person interviews were warranted. “You can tell in 15 or 20 minutes if you want to spend more time with a candidate,” reported one decision maker. This was almost a classic instance of satisficing behavior: did this candidate have enough to offer – did he or she surpass a threshold of interest – to pursue further? Such a question demonstrates the value of satisficing behavior: it allows decision makers to make use of limited amounts of time, attention, and information to reduce the number of possible options, allowing them to focus more time and attention on the remaining options.

Scarcity was not the only challenge facing district decision makers. Other than “teacher-no teacher” on the first day of school, decision makers typically lacked a clear organizational preference with which to measure candidates, either because the preferences were multiple or ill-defined, or because the indicator or indicators of a particular preference were not available in the information decision makers had during the choice process. In the face of an uncertain outcome of a decision – was this the right candidate to select? – appropriate behavior in the form of rule-following often guided administrator actions – did we follow an appropriate, defensible process in selecting this candidate? Thus, districts advertised the position for a set number of days; screened out all but a set number of candidates for initial consideration, then a smaller set for further consideration.

Districts assembled review teams with representative perspectives, and collected further information in the form of interviews and reference checks. Some districts asked candidates for a demonstration of knowledge or skills. Final recommendations were made to the superintendent to take to the school boards for official action. Interestingly, two superintendents described

situations in which rule following and appropriate actions were held in abeyance. In both cases, the choice of candidate was obvious and compelling to a decision maker, and the need to commit to the decision immediately was urgent, lest the candidate become unavailable. In most situations, however, the alignment of choice of candidate with organizational preferences was hazy enough that districts and decision makers followed the rules they had largely set for themselves through precedent.

Following an established set of practices assured consistency across the district and over time; rule-following saved decision makers the time and effort of reinventing procedures in different parts of the organization or from year to year. Comments from several administrators supported the notion that rules built capacity into the system so that decision makers with less experience or expertise could learn from previous decisions that had been codified into rules, whether formal policies or informal precedent of previous practice. In March's words (1994), rule following allows decision makers to "embrace the intelligence captured by accumulated experience represented in rules" (p. 221).

The causes and effects of bounded rationality described by March and Simon largely explain the descriptions of district teacher hiring practices gathered from the decision makers in the five case study districts. Scarcity of resources – of time, attention, information, and capacity – frequently prevented decision makers from maximizing their teacher hiring choices. As a result, decision makers often satisficed, searching for and evaluating options until identifying a candidate who surpassed a threshold of acceptability, at which point the search ended and a decision was made to offer the position to that candidate. Note that the threshold did not need to be minimal; rather, rational choice theory and its goal of maximizing choice were unrealistic. One principal reported that "I've hired some real rock stars" as teachers. Implicit in her

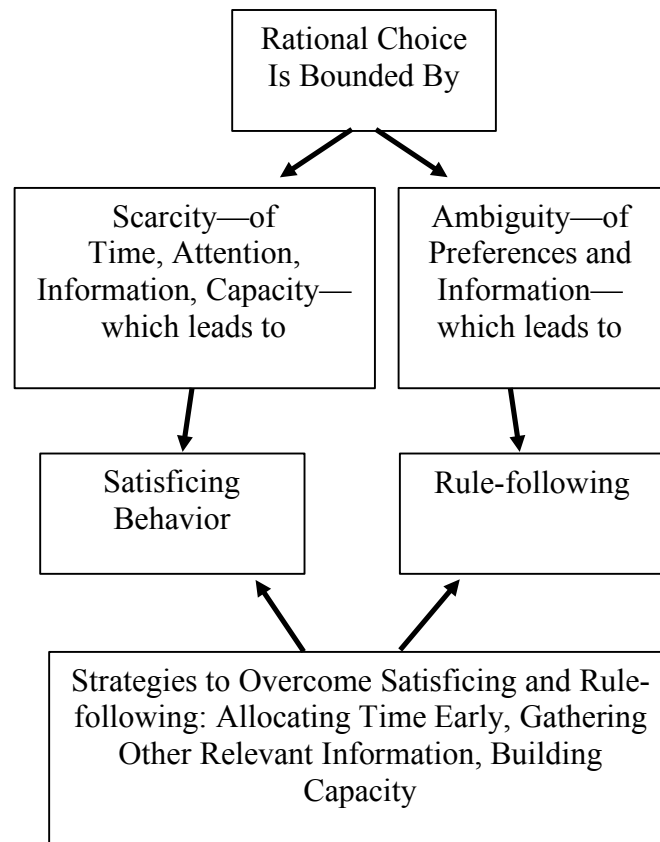
statement, however, was that not all of her hires had been rock stars. Nor did this inference suggest that this principal sometimes settled for less than the best she could find. Rather it drove home the uncertainty, even the impossibility, of assessing all possible outcomes of any choice option. Her past choices were all “good enough” to justify ending the search process; the rock stars simply exceeded expectations. This principal went on to acknowledge, “Sometimes, it’s luck.”

If administrator descriptions of district hiring practices validated the notion of bounded rationality developed and expressed by March and Simon, they also provided support for an extension of the concept that March and Simon did not address. This extension takes into account the various strategies that decision makers used to mitigate the challenges of scarcity and ambiguity. March and Simon focused on the limits that bounded rationality impose upon decision makers, and the subsequent responses of satisficing and rule-following.

The descriptions offered in this study suggest another aspect of bounded rationality that would enrich the concept if developed, that of organizational responses to scarcity and ambiguity. Figure 4 depicts an enhanced conceptual map containing this aspect. Recognizing the scarcities of time and attention, district administrators described ways that they strove to allocate time and attention early in the search process, most notably in one district by assembling a pre-qualified candidate pool before vacant positions were even identified, or in every district by collecting information from parents and staff in an attempt to estimate potential hiring needs in anticipation of the hiring cycle. They worked to assemble additional relevant information about candidates, sometimes through performance tasks, or through their own network of colleagues who had additional insight into a candidate’s qualifications or experience. Districts worked to build capacity into the organization generally, and in individual decision makers specifically, by

establishing cross-district teams to participate in the screening and selection process. These teams and processes promoted clearer organizational preferences and provided additional practice in what can be for individual decision makers an episodic responsibility.

Figure 4: The Components of Bounded Rationality and District Responses



Previous research on teacher hiring has focused on discrete pieces of a complex, nested set of relationships involved in districts as organizations. Studies of the role of the principal, as provided by Harris, Ingle, Thompson, Bishop, and others, have provided rich descriptions of how these key decision makers approach their responsibilities in hiring new teachers. Rutledge, et al. (2007) illuminated the tools principals use to assess the suitability of candidates. These tools were primarily sources of information, such as resumes, interviews, letters of reference, or portfolios. These researchers also noted that the effectiveness of the principal's decision making

is compromised by “ambiguity regarding the characteristics that comprise an effective teacher” (p. 49). Ingle, Rutledge, and Bishop ((2011) found an emphasis on person-job (P-J) fit in elementary principals in a large Florida school district. Administrators in my study spoke consistently about encouraging principals to take a wider, district perspective (P-O fit), suggesting that P-J fit was the inclination of principals in the five midsized districts in my study. However, districts were consistent in having principals participate cross-district in the hiring process as a way to build capacity and instill a P-O perspective.

Overall, these studies considered the district to be the context in which these autonomous actors function, rather than the actors being a part of the context themselves. Admittedly, as Ingle, Rutledge, and Bishop (2011) pointed out, districts can pose challenges to individual decision makers, particularly in the structure of rules in which principals are required to act. Perhaps this is a function of the size of the district: these other studies were conducted in fairly large districts, as was the Liu and Johnson study of urban district hiring practices.

These previous studies are important contributions to our collective understanding of teacher hiring practices. On the other hand, they describe practices in larger urban districts. The current study sheds light largely on the middle third of the educational system – not the large urban districts, nor the small rural districts. Also, it presents a description of teacher hiring at its best, in the sense that, by focusing on general education elementary teaching positions in a well-populated area, the issue of teacher supply was removed from the equation. When districts are not faced with a shortage of teacher candidates – under the best of conditions – what does teacher hiring look like?

Further Research

This study begins a potentially fruitful line of research on teacher hiring practices that uses the concept of bounded rationality from organizational theory as the conceptual framework to explore how decision makers act under conditions of scarcity and ambiguity. The sample size for the qualitative data was small, and the degree to which the practices of these districts was representative of other districts like them, or of districts generally, was untested, although the analysis of elementary teacher numbers suggests they were not unusual. Surveying a representative sample of districts regarding the key findings of this study, and regarding both the challenges districts face and the strategies they adopt to mitigate challenges, would provide data that could confirm, clarify, or complicate the depiction of decision making in districts regarding teacher hiring.

The data regarding the demographic and professional preparation characteristics of elementary teachers and their teaching assignments raise several questions about the larger context in which teacher hiring takes place, including teacher mobility and attrition. The total number of elementary teachers employed by districts declined substantially statewide, although less so in the five districts where interviews were conducted. When large city districts declined in size, which teachers left? Where did they go? The number of new hires, both in individual districts and statewide, fluctuated erratically between 2004 and 2015. What role did state funding, or teacher contracts, play in the variation? Were new hires replacing retirees, or other recently hired teachers?

Implications for Practitioners

The notion that state and federal accountability policies would provide incentives to hire teachers with particular demographic and preparation characteristics, or to assign them to

particular roles in schools as reading and math specialists, was neither supported nor disproven by the data. Administrators in three districts specifically mentioned efforts to close achievement gaps between high-achieving and low-achieving students, but in only one district was this explicitly connected to teacher hiring. The superintendent in a fourth district mentioned the slowly changing demographics of his community as his incentive to seek out diversity, but as the superintendent in another district put it, this was more about “doing the right thing” for all students than a reaction to accountability incentives.

This struggle with diversity pointed to a global type of satisficing across all of the districts: not which teacher would be ideal for our kids, but which white teacher do we choose? Which of the currently available candidates who have presented themselves for consideration do we select? This pragmatic question essentially limited the search to the easy and quick, and to those possible solutions which presented themselves. March helped develop the garbage can model of decision making (1952), in which the physical and temporal proximity of problems (teacher openings) and solutions (teacher candidates) get matched up by whoever happens to be paying attention at the time.

There are, moreover, competing explanations for the lack of policy effect seen in the data. Districts may have pursued strategies other than hiring to respond to student performance, such as professional development for existing staff, new curricular materials or instructional approaches, or changes in student groupings. Districts may have identified characteristics in teacher candidates, unrelated to demographics or subject matter preparation, which they felt responded to the need to improve performance in student subgroups. Several administrators referred to affective qualities as characteristics they were looking for, such as commitment or empathy, or to experience working with at-risk students.

In actuality, district administrators reported that they wanted to hire teachers who would bring diversity to their staffs, but that they could not find candidates who met their threshold criteria and were also teachers of color, or male, or possessing advanced training in reading or mathematics intervention. One principal recalled pleading with one of her teacher preparation contacts, “Please send me high quality, plus diversity.” In a study that attempted to control for teacher supply in investigating decision-making practices, the lack of supply of teachers of color was reported to be a significant factor beyond the control of the districts.

Larger Lessons

For the past 12 years – an entire “generation” of students from a schooling perspective – public school districts have faced significant pressure to meet accountability measures set by state and federal policy makers. The data presented in this study provide strong evidence that, for the most part, districts have been unmoved by this pressure, at least as measured by the trends in teacher characteristics investigated, analyzed, and reported here. It is tempting to conclude that, as policy levers, high-stakes testing and measures of adequate yearly progress have been remarkably ineffective.

This investigation of district teacher hiring practices begins and ends with the premise that districts choose who works for them. Choice in this study had three meanings. First, districts chose teachers in the sense that teachers were not assigned to schools by a central government, as happens in some other nations. Districts had a say in who would represent them in the classroom. Second, districts chose teachers in the sense that they had both the opportunity and the need to select from among alternatives. They had the opportunity to choose because they received scores of applications for a single opening. At the same time, districts had the need to choose, because

starting the school year with a classroom of students without a permanent teacher assigned to it was considered an undesirable option.

This dual condition of opportunity and need is an important feature of decision making in districts as organizations. As described earlier, teacher hiring is an opportunity for districts to build instructional capacity (Odden, 2014), perhaps a greater opportunity than typically provided by the professional development efforts of districts expended to build capacity in existing staff (TNTP, 2015). The opportunity represented by a hiring decision has significant stakes, in that choosing well can have real effects on students (Hanushek, 2011; Sanders & Rivers, 1996) and fellow staff members (Sun, Loeb, & Grissom, 2015), while choosing poorly can have a detrimental effect on students (Chetty, Friedman, & Rockoff, 2011), organizational culture, and the district budget (Odden, 2014). Because of teacher tenure laws, teacher hiring is potentially a decades-long commitment.

The need to choose underscores the potential impact of scarcity and ambiguity described in organizational theory that gives rise to bounded rationality as a fact of life in organizations. Scarcity and ambiguity challenge districts to make sound decisions under demanding conditions. Districts have a limited amount of time between the identification of a teaching opening and the date by which it should be filled; they have a limited number of alternatives, even when that number is larger than they have the time and talent to consider; they have limited attention and organizational capacity on the part of district leaders responsible for engaging in the decision-making process. A teaching opening presents opportunities to reevaluate existing staff capacity and preferences, district and building priorities, and school improvement and professional development plans (Odden, 2011; Rose, English, & Finney, 2014), but little time in which to do

so. Little wonder, then, that districts respond to scarcity and ambiguity with satisficing and rule-following behaviors.

The third meaning of choice acknowledges the autonomy of the candidates in the teacher hiring process. Candidates choose where to apply for teaching positions. For most of them, there is scarcity of opportunity in that there are many more applicants than openings. Even so, some candidates may get multiple offers. This can mean that districts may not get their first choice of candidates, prolonging the decision-making process for districts. Perhaps more important, relatively few teachers of color chose to apply to the five districts. “I don’t blame them,” admitted a superintendent in one district who was echoed by administrators in another district. “This community does not have a lot to offer them.”

Still, there is much that districts can choose. Recent legislation removed the right of teacher assignment from the list of allowable bargaining conditions, meaning district administrators are no longer prevented by labor contracts from making these fundamental decisions about how best to staff classrooms. Decision makers in one district reported that this made a big difference in how they thought about teacher hiring. Administrators in two other districts reported that the law had little effect in their practices, one indicating that the district had never bargained away the right to assign teachers. One district chose to give up control over teaching assignments, the other did not. The superintendent in one district voiced his desire to adopt the early candidate pool strategy, something his district can choose to do if it chooses. Districts can choose to review their hiring practices, keep what works for them, and change what does not. More important, districts can choose to clarify organizational preferences and align them with hiring and even evaluation practices. One district in the study has recently done exactly this, and it will be exciting to follow the results.

REFERENCES

REFERENCES

- Balter, D., & Duncombe, W. (2006, March). *Staffing classrooms: Do teacher hiring practices affect teacher qualifications?* Paper presented at American Education Finance Association, Denver, CO.
- Barros, G. (2010). Herbert A. Simon and the concept of rationality: Boundaries and procedures. *Brazilian Journal of Political Economy*, 30(3), 455-472.
- Bogdan, R.C., & Biklen, S.K. (1992). *Qualitative research for education: An introduction to theory and methods* (Second edition). Needham Heights, MA: Allyn & Bacon.
- Boyd, D., Lankford, H., Loeb, S., & Wyckoff, J. (2005). The draw of home: How teachers' preferences for proximity disadvantage urban schools. *Journal of Policy Analysis and Management*, 24(1), 113-32.
- Chetty, R., Friedman, J., & Rockoff, J. (2011). The long-term impacts of teachers: Teacher value-added and student outcomes in adulthood. (Working Paper 17699). National Bureau of Economic Research. Retrieved from <http://www.nber.org/papers/w17699>
- Christensen, C.M., Horn, M.B., & Johnson, C.W. (2008). *Disrupting class: How disruptive innovation will change the way the world learns*. New York: McGraw Hill.
- Coppola, A.J., Scricca, D. B., & Connors, G.E. (2004). You're hired! *Principal Leadership (High School Ed.)*, 4(8), 47-52.
- Darling-Hammond, L., & Snowden, J.B. (2005). *A good teacher in every classroom: Preparing the highly qualified teachers our children deserve*. San Francisco, CA: John Wiley & Sons.
- DeArmond, M., Gross, B., & Goldhaber, D. (2008). Is it better to be good or lucky? Decentralized teacher selection in 10 elementary schools. (CRPE working paper #2008-3). Seattle, WA: Center on Reinventing Public Education. Retrieved from www.crpe.org
- Dee, T.S. 2001. *Teachers, race and student achievement: A randomized experiment*. (Working paper 8432). Cambridge, MA: National Bureau of Economic Research.
- Desravines, J., Aquino, J., & Fenton, B. (2016). *Breakthrough principals: A step-by-step guide to building stronger schools*. San Francisco: Jossey-Bass.
- Dilworth, M.E., & Colman, M.J. (2014). *Time for a change: Diversity in teaching revisited*. Washington, D.C. National Education Association. Retrieved from [https://www.nea.org/assets/docs/Time_for_a_Change_Diversity_in_Teaching_Revisited_\(web\).pdf](https://www.nea.org/assets/docs/Time_for_a_Change_Diversity_in_Teaching_Revisited_(web).pdf)

- Engel, M. 2012. The timing of teacher hires and teacher qualifications: Is there an association? *Teachers College Record*, 114(12), 1-29.
- Feuer, M. J., Berman, A. I., & Atkinson, R. C. (Eds.). (2015). *Past as prologue: The National Academy of Education at 50. Members reflect*. Washington, DC: National Academy of Education.
- Garet, M.S., Cronen, S., Eaton, M., Kurki, A., Ludwig, M., Jones, W., et al. (2008). *The impact of two professional development interventions on early reading instruction and achievement*. Washington, DC: National Center for Educational Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Gomm, R., Hammersley, M., & Foster, P. (Eds.). (2000). *Case study method: Key issues, key texts*. Thousand Oaks, CA: Sage Publications.
- Gray, L., & Taie, S. (2015). *Public school teacher attrition and mobility in the first five years: Results from the first through fifth waves of the 2007–08 beginning teacher longitudinal study (NCES 2015-337)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubsearch>
- Hanna, R., & Pennington, K. (2015). *Despite reports to the contrary, new teachers are staying in their jobs longer*. Center for American Progress. Retrieved from <https://www.americanprogress.org>
- Hanushek, E.A. (2011). The economic value of higher teacher quality. *Economics of Education Review* 30, 466-479.
- Harford, T. (2005.) *The undercover economist*. Boston: Little, Brown, & Company.
- Hattie, J.A.C. (2002). Classroom, composition and peer effects. *International Journal of Educational Research*, 37, 449-481.
- Hattie, J.A.C. (2003, October). *Teachers make a difference: What is the research evidence?* Paper presented at the Building Teacher Quality: What does the research tell us? Australian Council for Educational Research Conference, Melbourne, Australia. Retrieved from http://research.acer.edu.au/research_conference_2003/4/
- Hess, F.M., & Kelly, A.P. (2007). Learning to lead: What gets taught in principal-preparation programs. *Teachers College Record*, 109(1), 244-274.
- Hoy, W.K., & Miskel, C.G. (1991). *Educational administration: Theory, research, and practice* (4th ed.). New York: McGraw-Hill.
- Hoy, W.C., & Tarter, C.J. (1995). *Administrators solving the problems of practice: Decision-making, concepts, cases, and consequences*. Needham heights, MA: Allyn and Bacon.

- Hughes, T.R. (2014). Hiring at risk: Time to ensure hiring really is the most important thing we do. *NCPEA International Journal of Educational Leadership Preparation*, 9(1), 90-102.
- Ingle, W.K., & Rutledge, S.A. (2010). Selecting the “best applicant(s)” with limited options and policy constraints. *University Council for Educational Administration*, 13(1), 37-47.
- Ingle, K., Rutledge, S., & Bishop, J. (2011). Context matters: Principals’ sensemaking of teacher hiring and on-the-job performance. *Journal of Educational Administration*, 49(5), 579-610.
- Jones, N., Maier, A., & Grogan, E. (2011). *The extent of late-hiring and its relationship with teacher turnover: Evidence from Michigan*. SREE Conference. Retrieved from <http://files.eric.ed.gov/fulltext/ED519005.pdf>
- King, W.R. (ed.). (2009). Knowledge management and organizational learning, *Annals of Information Systems* 4, DOI 10.1007/978-1-4419-0011-1_1
- Liu, E. (2005, April). *Hiring, job satisfaction, and the fit between new teachers and their schools*. Paper presented at the Annual Meeting of the American Educational Research Association. Montreal, Canada.
- Liu, E. & Johnson, S.M. (2006). New Teachers’ Experiences of Hiring: Late, Rushed, and Information-Poor. *Educational Administration Quarterly* 42(3), 324-360.
- Loeb, S., Kalogrides, D., & Betteille, T. (2012). Effective schools: Teacher hiring, assignment, development, and retention. *Association for Education Finance and Policy*, 269-304.
- March, J.G. (1988). *Decisions and organizations*. New York: Basil Blackwell, Inc.
- Maxwell, J.A. (2005). *Qualitative research design: An interactive approach*. Applied Social Research Methods Series Volume 41. Thousand Oaks, CA: Sage Publications.
- Michigan’s Center for Educational Performance and Information, Student Counts. 2005-2015. Retrieved from <https://www.mischooldata.org/DistrictSchoolProfiles/StudentInformation/StudentCounts/StudentCount.aspx>
- Michigan Department of Education. 2014 Top to bottom school rankings. Retrieved from http://www.michigan.gov/mde/0,4615,7-140-22709_56562---,00.html
- National Council on Teacher Quality. (2004). *Increasing the odds: How good policies can yield better teachers*. Washington, D.C. Retrieved January 12, 2016, from http://www.nctq.org/dmsStage/Increasing_the_Odds_How_Good_Policies_Can_Yield_Better_Teachers_NCTQ_Report

- National Council on Teacher Quality. (2014). 2014 teacher prep review: A review of the nation's teacher preparation programs. Washington, D.C. Retrieved from http://www.nctq.org/dmsView/Teacher_Prep_Review_2014_Report
- Odden, A.R. (2011). *Strategic management of human capital: Improving instructional practice and student learning in schools*. New York: Routledge.
- Papay, J.P., & Kraft, M. (2105). *Delayed teacher hiring and student achievement: Missed opportunities in the labor market or temporary disruptions?* Retrieved from http://scholar.harvard.edu/files/mkraft/files/papay_kraft_late_hire_and_student_achievement.pdf
- Papay, J.P., Taylor, E.S., Tyler, John H., & Laski, M. (2016). *Learning job skills from colleagues at work: Evidence from a field experiment using teacher performance data*. (Working Paper 21986). National Bureau of Economic Research.
- Rivkin, S.G., Hanushek, E.A., & Kain, J.F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417–458.
- Rodman, B. (1987, March 18). Teacher recruitment, selection procedures outdated, study says. *Education Week*. Retrieved from <http://www.edweek.org/ew/articles/1987/03/18/2525rand.h06.html>
- Rose, D. S., English, A., & Finney, T.G. (2014). *Hire better teachers now: Using the science of selection to find the best teachers for your school*. Cambridge, MA: Harvard Education Press.
- Rutledge, S.A., Harris, D. N., Thompson, C.T., & Ingle, W.K. (2008). Certify, blink, hire: An examination of the process and tools of teacher screening and selection. *Leadership And Policy In Schools*, 7(3), 237-263.
- Rutledge, S.A., Harris, D.N., & Ingle, W.K. (2010). How principals “bridge and buffer” the new demands of teacher quality and accountability: A mixed-methods analysis of teacher hiring. *American Journal of Education*, 116(2), 211-242.
- Sanders, W.L., & Rivers, J.C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Research Progress Report. Knoxville: University of Tennessee Value-Added Research and Assessment Center.
- Sawchuk, S. & Rebor, A. (2016, October 4). New teachers make up a significant segment of profession. *Education Week*. Retrieved from <http://www.edweek.org/ew/articles/2016/10/05/new-teachers-make-up-a-significant-segment.html?cmp=eml-enl-eu-news2>

- Schneider, J. (2016, June 22). America's not-so-broken education system. *The Atlantic*.
<http://www.theatlantic.com/education/archive/2016/06/everything-in-american-education-is-broken/488189/>
- Simon, H. A. (1956). Rational choice and the structure of the environment. *Psychological Review*, 63(2), 129-138.
- Simon, H.A. (1997). *Administrative behavior: A study of decision-making processes in administrative organizations* (4th ed). New York: The Free Press.
- Steele, M.D., Remillard, J., & Herbel-Eisenmann, B. (2016). *Learning about new demands in schools: Considering algebra policy environments (LANDSCAPE). Technical report, April 2016*. (Research Report 86). Consortium for Policy Research in Education.
- Supovitz, J. (2010). Knowledge-based organizational learning for instructional improvement. In *Second international handbook of educational change*, 707-723.
- Sun, M., Loeb, S. & Grissom, J. (2015). *Building teacher teams: Evidence of positive spillovers from more effective colleagues*. (CEPA Working Paper No. 15-20). Retrieved from Stanford Center for Educational Policy Analysis: <http://cepa.stanford.edu/wp15-20>
- Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.
- Taylor, F. W. 1917. *The principles of scientific management*. New York: Harper.
- TNTP. (2015). *The mirage: Confronting the hard truth about our quest for teacher development*. Retrieved from http://tntp.org/assets/documents/TNTP-Mirage_2015.pdf
- Villegas, A.M., & Irvine, J.J. (2010). Diversifying the teaching force: An examination of major arguments. *Urban Review* 42, 175–192.
- Weber, M. 1947. *The theory of social and economic organizations*. Henderson, A. M., and Parsons, T. (trans.) New York: Oxford University Press.