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The Support Gap: New Teachers' Early Experiences in High-Income and Low-Income Schools

Susan Moore Johnson
Harvard University

Susan M. Kardos
Brandeis University

David Kauffman
Harvard University

Edward Liu
Rutgers University

Morgaen L. Donaldson
Harvard University

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Abstract

In this article, the authors consider three sources of support for new teachers—hiring practices, relationships with colleagues, and curriculum—all found in earlier research to influence new teachers' satisfaction with their work, their sense of success with students, and their eventual retention in their job. They find that a “support gap” exists: new teachers in low-income schools are less likely than their counterparts in high-income schools to

experience timely and information-rich hiring, to benefit from mentoring and support by experienced colleagues, and to have a curriculum that is complete and aligned with state standards, yet flexible for use in the classroom. Such patterns of difference between high-income and low-income schools warrant careful consideration because they reveal broad patterns of inequity, which can have severe consequences for low-income students. Survey data for this study were collected from random samples of teachers in five states. One survey, focusing on hiring practices and teachers' relationships with colleagues, was administered to 374 first-year and second-year teachers in Florida, Massachusetts, and Michigan. A second survey, focusing on curriculum, was administered to 295 second-year elementary school teachers in Massachusetts, North Carolina, and Washington. The inequitable patterns of support for teachers reported here have important implications for the work of state policymakers, school district administrators, and principals. The authors describe these and offer recommendations for policy and practice in the conclusion.

Introduction

Teachers make a profound difference in children's learning. Recent empirical research has lent scholarly weight to this assertion, which professional educators have long believed. Highly-skilled teachers can raise student achievement, especially the achievement of students living in low-income communities (Ferguson, 1998; Goldhaber & Anthony, 2004; McCaffrey, Lockwood, Koretz, & Hamilton, 2003; Rivkin, Hanushek, & Kain, 2002; Sanders & Rivers, 1996; Wenglinsky, 2002; Rivkin, Hanushek, & Kain, 2002). In the face of growing consensus on the need for strong and committed teachers, this article presents evidence that many schools serving large numbers of low-income students fail to provide new teachers with the support they need to do their jobs well.

Indeed, we find that a "support gap" exists: new teachers in low-income schools receive significantly less assistance in the key areas of hiring, mentoring, and curriculum than their counterparts working in schools with high-income students. Compared to new teachers in high-income schools, they are less likely to experience a hiring process that gives them a good preview of their job, less likely to have a good match with their mentor and to have frequent and substantive interactions with him or her, and less likely to feel that they receive appropriate curricular guidance. This gap in support is cause for alarm, for previous research shows that support for new teachers helps them feel successful in their first years of teaching and may facilitate their retention (Johnson & The Project on the Next Generation of Teachers, 2004; Johnson & Birkeland, 2003; Kardos, Johnson, Peske, Kauffman, & Liu, 2001; Kauffman, Johnson, Kardos, Liu, & Peske, 2002; Smith & Ingersoll, 2003). Thus, because they offer significantly less support to new teachers, the schools that demonstrate the most acute need for skilled teachers are, by our estimation, least likely to succeed in attracting and retaining them.

The findings presented here on the existence of a new teacher support gap reinforce other research on the inequities between high-income and low-income schools in teacher quality and attrition rates. Researchers studying the student achievement gap have also found that schools serving students from low-income communities tend to

employ teachers who, when compared to those who work in high-income schools, are less qualified on a number of measures. Schools with high concentrations of low-income students have higher percentages of new teachers (Ingersoll, 2002), higher proportions of uncertified teachers (Ingersoll, 2002; Lankford, Loeb, & Wyckoff, 2002), and higher percentages of teachers working outside their subject area (Ingersoll, 2002; Neild, Useem, Travers, & Lesnick, 2003; Useem, 2003). Teachers in such schools also, on average, score lower on various standardized tests (Lankford et al., 2002), and have graduated from less competitive colleges (Lankford et al., 2002).

In addition to employing a less-qualified teaching force, low-income schools also suffer higher rates of teacher attrition and mobility than their high-income counterparts (Hanushek, Kain, & Rivkin, 2004; Ingersoll, 2002). Ingersoll (2001) studied annual turnover rates—the combined effect of teachers leaving the profession and transferring to new schools—and found them to be higher in low-income districts than in high-income districts (15.2 percent versus 10.5 percent). In 2003, Smith and Ingersoll (2003) confirmed the soaring turnover rate that schools—particularly those in low-income urban and rural communities—were experiencing. Moreover, when teachers exit low-income schools but stay in teaching, they tend to move to schools serving higher-income students (Hanushek et al., 2004; Lankford et al., 2002). Although some attrition is certainly desirable, chronic turnover such as that experienced by many low-income schools can disrupt children's education, fragment a school's instructional program, and waste substantial funds already invested in a teacher's professional development (Guin, 2004). Whether due to failed recruitment or retention, Kevin Carey (2004) of the Education Trust observes: "No matter which study you examine, no matter which measure of teacher quality you use, the pattern is always the same—poor students, low-performing students, and students of color are far more likely than other students to have teachers who are inexperienced, uncertified, poorly educated, and under-performing. Many of those teachers demonstrate most or all those unfortunate qualities all at the same time" (p. 8).

In theory, the *No Child Left Behind Act of 2001* (NCLB) was meant to ensure a "highly qualified" teacher for every public school student, regardless of that student's socio-economic status. However, dispute over the meaning of "highly qualified" has been ongoing and there is little evidence to date that the law has delivered on its intent (Keller, 2004). Moreover, the authors of NCLB adopted the rather narrow strategy of regulating teachers' entering qualifications rather than investing in improving working conditions and the schools' capacity to hire and support new teachers on the job. Our findings suggest that this approach is shortsighted.

The Importance of Support for New Teachers

Ensuring that all new teachers receive intensive, on-the-job support is crucial if today's incoming teachers are to meet the high expectations that the U.S. public now has of teachers and schools—expectations that they must help *all* students to learn and achieve at high levels. Our research, over the past five years, has identified a number of school-based supports that new teachers need in order to serve students effectively, feel successful in their jobs, and, ultimately, stay in teaching.

In our first study, a qualitative, longitudinal study of fifty Massachusetts new teachers, we sought to understand better the career decisions of new teachers and to

compare the decisions of teachers working in different types of schools—low-income and high-income, conventional and charter, urban and suburban. We interviewed fifty respondents in 1999-2000; surveyed their career decisions at the end of that school year; conducted follow-up interviews in the summer of 2001; and surveyed them again in the summer of 2002 and the summer of 2003.¹

We found that today's new teachers enter the profession with a tentative commitment to teaching (Peske, Liu, Johnson, Kauffman, & Kardos, 2001) and decide whether to continue teaching based on the support they receive at the school site and the success they experience with their students (Johnson & Birkeland, 2003; Johnson et al., 2001). As we followed the fifty new teachers' job decisions over four years, we found, similar to prior research, that all the teachers who changed schools moved to schools serving higher wealth students (Johnson & Birkeland, 2003). However, our interviews suggested that the new teachers' decisions to transfer rested primarily on the extent to which their original schools supported them in serving their students. To succeed with their students, these teachers indicated that they needed an information-rich hiring process that provided them with a good preview of their job, experienced colleagues who mentored and supported them, curriculum that was aligned with district and state standards, teaching assignments that were fair and appropriate, and schoolwide approaches to student support and discipline. We found evidence of these kinds of support most consistently in the accounts of teachers working at schools serving high-income students. When such support was absent, many teachers in our sample took steps to teach elsewhere or leave the profession. However, a small number of the teachers working in schools serving low-income students did find the support they needed and chose to stay in those schools.

Subsequently, seeking to understand whether these findings would hold in other settings, we surveyed broader, random samples of new teachers in several states to learn more about their early career experiences. Here, we draw upon data from two multi-state surveys to investigate the kind and levels of support respondents found as they worked in low-income and high-income schools. We focus here on three kinds of support that proved to be important to teachers in our initial qualitative study: hiring, mentoring, and curriculum.

Methods

The first of the two survey studies on which this article is based examined new teachers' experiences of hiring and professional culture (Kardos, 2004; Liu, 2004). Building on the Massachusetts qualitative study and an exploratory quantitative study of New Jersey new teachers (Kardos, 2001; Liu, 2001), Kardos and Liu analyzed survey data collected in Florida, Massachusetts, and Michigan². These states were selected because

¹ See Johnson, S.M. & The Project on the Next Generation of Teachers (2004), *Finders and Keepers: Helping new teachers survive and thrive in our schools*. San Francisco: Jossey-Bass for more details about the methods and findings of this study.

² This sub-analysis is part of a larger random sample survey study that also included California. However, here we consider only Florida, Massachusetts, and Michigan. We omit California in this analysis because California is different from the three other states in terms of demographics and other relevant characteristics. There is potential sample bias in the

they are located in different regions of the country and vary in size, yet share some important policy features. All were experiencing a teacher shortage; have alternative routes to certification; have charter school legislation; use criterion-referenced tests tied to standards-based curriculum; and engage in collective bargaining. The sample consists of 374 randomly selected first- and second-year, K-12 public school teachers (excluding arts and physical education). Kardos and Liu used two-stage stratified cluster sampling to draw the sample, with the first stage involving stratification by state, school level (elementary, middle, high), and school type (charter, conventional). Seventy-four percent of the 99 schools drawn agreed to participate. Liu and Kardos then asked principals for names of all first- and second-year teachers at these schools. From the 564 teachers whose names were provided, 374 completed the 225-item surveys, for a response rate of 66 percent. Sampling weights were used in analyses to correct for over- and under-sampling and proper adjustments were made to account for clustering and stratification effects.

The second study examined new teachers' experiences with curriculum (Kauffman, 2004). Building on findings from the Massachusetts study (Kauffman et al., 2002) and case studies of new teachers' experiences with different types of mathematics curricula (Kauffman, 2002), this survey explored second-year elementary school teachers' access to, use of, and satisfaction with curriculum materials in the context of state and local curriculum and assessment policy. The study was conducted in North Carolina, Massachusetts, and Washington because these states had adopted several common elements of standards-based reform, including the use of state standards, the implementation of state assessments aligned to those standards, and accountability for schools and teachers based on, at a minimum, publication of school-level student achievement data. The data were collected using a 212-item survey instrument administered through the mail to a random sample of second-year, full-time, public school elementary school (kindergarten through fifth grade) classroom teachers. Of the 439 eligible teachers sampled, 295 completed surveys, for a response rate of 67 percent.

Consistent with reports from The Education Trust, "Education Watch State Summaries," (2003), we have defined "low-income schools" as those in which more than 50 percent of students qualify for free or reduced-price lunch. We have defined "high-income schools" as those in which less than 15 percent of students fit this description.

Findings

We found that, overall, new teachers in low-income schools experience less support in hiring, mentoring, and curriculum than those who teach in high-income schools. It seems, then, that alongside the student *achievement gap* there exists a comparable and troubling *support gap* for new teachers during their first critical years on the job. The existence of this support gap may help explain why some schools constantly fight the undertow of teacher attrition while others more easily attract and retain new staff.

California subpopulation, and the possible swamping effect resulting from sample weights used to correct for the study design. For a more detailed discussion of the methodology and state characteristics, see (Kardos, 2004; Liu, 2004)

Hiring

On the face of it, hiring practices, which occur before a teacher begins work, may not seem to offer support. Yet, support can come to a new teacher from being well introduced and matched to her position. Teaching jobs vary a great deal and each presents the new teacher with a unique set of demands, challenges, and opportunities. A new teacher's effectiveness and success in the classroom may depend not only on her general qualifications but also on the fit between her particular skills, knowledge, and dispositions and the teaching position she has been hired to fill. Our research indicates that new teachers in low-income schools are less likely to have supportive hiring experiences than new teachers in high-income schools.

Supportive hiring practices, those that increase the likelihood of a good match between teacher and school, share several characteristics. First, they are largely school-based rather than district-based. In school-based hiring, individual schools review candidates and can, from the start, decide whether those candidates fit the requirements of a particular position and the specific needs and culture of the school. Second, and most important, supportive hiring practices are information-rich (Liu, 2003). That is, they rely on an array of activities, including interviews with a wide cross-section of the school community, teaching demonstrations, and observations of classes or staff meetings. Information-rich hiring processes provide both candidates and those doing the hiring with multiple opportunities to collect information about and form impressions of one another, which facilitates the making of good matches. Third, supportive hiring happens early and gives new teachers plenty of time to prepare for the challenges of assuming full-time teaching responsibilities. Teachers' ability to prepare for these challenges and meet them successfully is compromised when they do not know their specific teaching assignments until late summer or early fall. Inequities in hiring practices are found in three areas: interviews, observations, and the timing of hiring decisions.

Interviews. Interviews are one of most interactive parts of the hiring process and a potentially rich source of information for schools, districts, and teaching candidates. As Table 1 demonstrates, whereas 100 percent of new teachers in high-income schools participate in at least one interview as part of the hiring process for their current position, only 82 percent of new teachers in low-income schools do. In other words, in Florida, Massachusetts, and Michigan, almost one in five new teachers in low-income schools are hired without an interview.

Table 1
Comparison of New Teachers' Hiring Experiences in
High- and Low-Income Schools in FL, MA, and MI (n=374)

	All New Teachers	New teachers: High-income schools	New teachers: Low-income schools	Difference
Interviews				
Participated in at least one interview for the position	89% (3.2)	100% (0.0)	82% (5.9)	18%** (5.9)
Interviewed with school principal	85% (3.3)	94% (3.4)	80% (5.9)	15%* (6.8)
Interviewed with current teacher(s) at the school	43% (5.3)	50% (9.3)	33% (9.1)	17% (13.1)
Interviewed with department chair or grade-level leader?	19% (3.1)	29% (7.2)	13% (4.9)	16%~ (8.7)
Observations				
Was observed teaching a sample lesson	14% (3.5)	22% (8.3)	13% (5.3)	9% (9.9)
Observed classes in session	19% (3.3)	10% (4.2)	27% (7.3)	-17%* (8.4)
Timing				
Hired after the school year started	22% (3.8)	8% (3.6)	28% (7.7)	-20%* (8.6)

All statistics take into account the complex nature of the survey sample; standard errors are in parentheses. ~p<.10, *p<.05, **p<.01, ***p<.001

It is also important to consider the range of individuals with whom teaching candidates interact during the hiring process. Virtually all new teachers in high-income schools interview with their future principal as part of the hiring process (94 percent). A smaller percentage of new teachers in low-income schools, though still a high percentage, do so (80 percent).

New teachers in high-income schools are also more likely to interview with their future colleagues. Whereas approximately one half of new teachers in high-income schools are interviewed by teachers during the hiring process, only one third of new teachers in low-income schools are interviewed by future colleagues. New teachers in high-income schools are also more likely to interview with a department chair than new teachers in low-income schools (29 percent versus 13 percent).

Overall, it appears that new teachers in low-income schools have fewer opportunities to learn about their school through interviews than do new teachers in high-income schools. They are less likely to meet their future colleagues, who might have valuable insights to share about the school, its students, and its surrounding community. Also, because they typically only interview with the principal, new teachers in low-income schools may receive a narrow perspective on the school and may not come away from the hiring process with accurate and reasonable expectations about what it will be like to work there.

Observations. Observations are another information-rich hiring activity. Teaching demonstrations, for instance, allow school officials to collect information about candidates' teaching abilities and potential. They and the conversations surrounding them can also convey information to candidates about what types of teaching a school values or promotes.

With observations, too, we observe some differences in the experiences of new teachers in high-income schools and those of new teachers in low-income schools. New teachers in high-income schools are almost twice as likely to be observed teaching a sample lesson as new teachers in low-income schools—22 percent compared to 13 percent. Another type of observation involves opportunities for candidates to visit or sit in on classes at the school. In this case, prospective teachers in low-income schools have the apparent advantage, for they are more likely than teachers in high-income schools to observe classes and, thus, gauge what it might be like to teach there. Even so, the percentage of teachers in low-income schools that do observe classes is still quite low (27 percent).

Timing. Some of these differences in hiring experiences likely result from differences in timing. A much larger percentage of new teachers in low-income schools are hired late. Indeed, 28 percent of new teachers in low-income schools are hired after the school year has already started. In contrast, only 8 percent of new teachers in high-income schools are hired that late. Late hiring results from a number of factors: delayed budget approval by the state or district, student mobility that makes it difficult to forecast staffing needs, excessively centralized and bureaucratic personnel practices, seniority-based staffing provisions that require additional time for transfers and job postings, and higher rates of turnover among teachers, which increase late resignations and the openings created by them.

The disparities in hiring between low-income and high-income schools raise serious concerns about equity. They suggest that students in low-income schools are more likely to be taught by a new teacher who was hired late than are students in high-income schools. If they have a new teacher, she probably had less time to prepare for her job than a new teacher at a more affluent school, and she may have taken the position without a good sense of what it involved or whether it fit her skills, interests, and expertise. The new teacher may also be less qualified, since there is some evidence that, because of their drawn-out hiring processes, urban districts lose out to suburban districts in the competition for the most highly qualified teachers and for teachers who are able to teach high-demand subjects (Levin & Quinn, 2003).

Students in low-income schools may also be taught by new teachers whose positions do not offer a good fit for their skills, knowledge, and dispositions. Also, they do not experience information-rich hiring practices to the same extent as new teachers in high-income schools. As a result, in making the hiring decision, both the new teacher and the school may fail to gather sufficient information to make a good match.

Mentoring

Like positive hiring practices, mentoring can provide critical support for new teachers. Policymakers, teacher unions, school leaders, and new teachers, themselves, tend to support mentoring programs. Research shows that new teachers who are mentored early in their careers are more effective teachers (Darling-Hammond, 1999; Feiman-Nemser, 1983; Gless & Moir, ; Humphrey et al., 2000) and are likely to remain in their schools or in teaching longer (Humphrey et al., 2000; R. Ingersoll & Kralik, 2004; Smith & Ingersoll, 2003). Without the proper support, new teachers resort to “survival instructional strategies” (Berry, Hopkins-Thompson, & Hoke, 2002, p.4; Feiman-Nemser & Floden, 1986; Huling-Austin, 1990), which, in the long term, do not serve them or their students well (Feiman-Nemser, 1983; Gold, 1996; McDonald, 1980; Rosenholtz, 1989).

Models of mentoring and induction programs exist (Breux & Wong, 2003; Fideler & Haselkorn, 1999; Huling-Austin, 1990; Stansbury & Zimmerman, 2000; Villani, 2002; Zeichner, 1979), and a composite of their successful features suggests the following: In the ideal scenario, new teachers have mentors who help them meet the challenges of being a beginning teacher (Feiman-Nemser, 1983; Feiman-Nemser, 2001; Gold, 1996; National Commission on Teaching and America's Future, 2003; Veenman, 1984) in the context of a strong, trusting relationship (Gless & Moir, ; Gold, 1996; Villani, 2002). Mentors help novices decide what to teach and how to teach it, advising them as they choose, adapt, or create appropriate instructional practices. Mentors help them manage classrooms and develop strategies for succeeding with their students. Mentors observe novices in their classroom, offer useful feedback, model good teaching, and share materials and ideas. In short, the mentor's work with the new teacher is focused on the central components of teaching: classroom instruction, curriculum and lesson planning, and classroom management. Mentors help new teachers acclimate to the modes of professional practice in the school and acculturate them to the particular norms of their school and the families it serves (Kardos et al., 2001; Villani, 2002).

In our examination of the presence and nature of mentoring, we found important differences between the experiences of new teachers in high-income and low-income schools. First, new teachers in low-income schools have what we regard as ideal mentor matches in lower proportions. Second, these teachers have substantive interactions with their mentors about the core activities of teaching in lower proportions than their counterparts in high-income schools.

Presence of Mentor. As Table 2 shows, 78 percent of all new teachers in Florida, Massachusetts, and Michigan are assigned official mentors by their schools or districts during their first year. Ninety-one percent of new teachers in high-income schools have official mentors, while only 65 percent of new teachers in low-income schools have official mentors. While this is certainly a stark difference and potentially an important one, it is possible that the mere presence of an official mentor may matter less to a new teacher than the characteristics of that mentor or the nature of the interactions with them .

Characteristics of the mentor match. When we examine the characteristics of the mentor match—whether the mentor is situated at the same school, in the same grade level, and teaching the same subject as the new teacher—we see that new teachers in

high-income schools share location, assignment, and subject with their mentors at much higher proportions than new teachers in low-income schools. Although 82 percent of new teachers in high-income schools have same-school mentor matches, only 53 percent

Table 2

Comparison of New Teachers' Official Mentoring Experiences During the First Year in High- and Low-Income Schools in FL, MA, and MI (n=374)

	All New Teachers	New Teachers: High-income Schools	New Teachers: Low-income Schools	Difference
Presence of a Mentor				
Percentage of new teachers who have a mentor	78% (5.0)	91% (3.1)	65% (9.6)	26%** (10.0)
Characteristics of the Mentor Match				
Has a mentor who is in the same school	68% (5.6)	82% (6.0)	53% (10.4)	29%* (11.9)
Has a mentor who in the same grade level	44% (3.9)	61% (5.4)	28% (5.6)	33%*** (7.7)
Has a mentor who is in the same subject	48% (4.7)	60% (8.1)	40% (7.6)	20%~ (11.0)
Nature of Interactions				
Was observed at least once by a mentor	41% (5.1)	31% (6.5)	42% (8.8)	-11% (11.1)
Has at least three conversations with a mentor about classroom management and discipline	58% (5.2)	69% (6.9)	43% (9.0)	26%* (11.3)
Has at least three conversations with a mentor about curriculum and lesson planning	58% (4.6)	69% (5.0)	47% (8.6)	22%* (10.0)
Has at least three conversations with a mentor about classroom instruction	56% (4.8)	61% (6.7)	47% (8.8)	14% (11.0)

All statistics take into account the complex nature of the survey sample; standard errors are in parentheses.

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

of new teachers in low-income schools do. While 61 percent of new teachers in high-income schools have same grade level mentors, only 28 percent of new teachers in low-income schools do. Finally, while 60 percent of new teachers in high-income schools have same subject mentors (also arguably low), only 40 percent of new teachers in low-income schools do.

These large and statistically significant differences indicate real contrasts in the school-based support that new teachers in high- and low-income schools experience, with important consequences for their students. While having a mentor in the same grade level or subject certainly would not guarantee an ideal match for the new teacher, it might increase the chance that the mentor and the new teacher would share students or have other teaching or curricular issues in common. Despite the increased chance for interaction that same-subject or same-level mentoring provides, it is important to note that when teachers' responsibilities are not also entwined, there is less chance for meaningful exchange between them. Finally, recent analysis of nationally representative data by Smith and Ingersoll (2003; see also Ingersoll and Smith, 2003) found that first-year teachers with same-subject mentors are less likely to leave teaching or leave their schools than their colleagues without same-subject mentors.

Nature of the Interaction. It is important to examine the nature of the interaction between the new teacher and the mentor, and the extent to which they talk about the substantive challenges of being a new teacher: classroom instruction, curriculum and lesson planning, and classroom management and student discipline. When asked whether they had discussed these topics with their mentors on at least three occasions, larger proportions of new teachers in high-income schools than in low-income schools reported that they had.

While 69 percent of new teachers in high-income schools had at least three conversations with their mentors about classroom management and discipline, only 43 percent of new teachers in low-income schools did. Sixty-five percent of new teachers in high-income schools had conversations with their mentors about curriculum and lesson planning, while only 47 percent of their counterparts in low-income schools did. Finally, sixty-one percent of new teachers in high-income schools had conversations with their mentors about classroom instruction, while only 47 percent of their counterparts in low-income schools did.

Although these percentages are low for both sub-groups³, the particularly low incidence of mentor interaction for new teachers in low-income schools is cause for concern. These individuals often have the most challenging teaching positions; yet according to these data, they are receiving the least support from experienced colleagues whose job it is to mentor, guide, and support them.

We found one exception to this pattern in these data. A larger proportion (42%) of new teachers were observed by their mentors in low-income schools than in high-income schools (31%), although the difference is not statistically significant. This is surprising, since one might expect that schools in low-income communities might lack the resources required to support observations and meetings between mentors and their new teachers. On the other hand, just over half of these new teachers (53%) have a mentor in their school. Given the data we collected, it is impossible to know who these mentors are, whether they are well trained, how they carry out their responsibilities, and whether new teachers find their assistance valuable. However, we do know that most new teachers in low-income schools are not appropriately matched with their mentors and that few interact frequently with their mentors about core issues of teaching and learning.

³ We believe that all new teachers, in low- and high-income schools alike, should be supported through substantive conversations with mentors.

Curriculum

In addition to the face-to-face support that mentors can provide, new teachers can benefit from the concrete support provided by the adopted curriculum. New teachers today enter schools with various levels of content knowledge and pedagogical training. Some have academic majors or work experience in the subjects they teach, training in how children at various ages make sense of new knowledge and skills, or extensive experience with lesson planning, but others do not. Regardless of the skills and experience they bring to their first years of teaching, effectively planning instruction is difficult work, and most new teachers need and expect curricular support (Grossman, Thompson, & Valencia, 2001; Kauffman et al., 2002). The nationwide introduction of standards-based reform, typically characterized by specific curriculum standards and statewide testing of students, has focused greater scrutiny on what teachers teach and whether students learn (Schmoker & Marzano, 1999), which may intensify new teachers' need for curricular support (Achieve, Inc., 2002).

A school's official curriculum, defined here simply as what and how teachers are expected to teach, is a mechanism for providing such support and guidance. It is usually conveyed to teachers through instructional materials that come in various shapes and sizes, including curriculum frameworks or testing information issued by the state; textbooks and teacher's guides purchased from publishers; and lesson plans or teaching units developed by teachers at the school. Research has consistently shown that many teachers at all levels of experience rely heavily on commercially published curriculum materials to plan and deliver instruction (Goodlad, 1984; Woodward & Elliott, 1990). Because curriculum materials are present in most classrooms and directly address teaching and learning, they are fundamental sources of support and learning for teachers (Ball & Cohen, 1996). The set of curriculum resources available to new teachers thus may shape their opportunities for professional growth and learning, at least partially affecting the type of teachers they become (Grossman & Thompson, 2004).

Teachers generally exercise considerable discretion in how they use curriculum materials (Schwille et al., 1983; Sosniak & Stodolsky, 1993). An overly rigid curriculum can reduce teachers' sense of professionalism and compromise some of the intrinsic rewards of teaching (Johnson, 1990; Lortie, 1975; McNeil, 2000). In a recent study, new teachers cited mandated curriculum and scripted lessons as primary reasons for leaving the profession (Costigan, Crocco, & Zumwalt, 2004). Although new teachers typically expect and appreciate detailed curriculum guidance, they also hope to adapt or modify the curriculum as they see fit (Kauffman et al., 2002).

Insufficient Curricular Guidance. In our survey study of second-year elementary school teachers in Massachusetts, North Carolina, and Washington, we discovered that the curricular support provided to new teachers in both high-income and low-income schools is insufficient in all major subjects (see Table 3), although teachers in low-income schools reported receiving more curricular support in language arts than their counterparts in high-income schools. For all second-year teachers, the lack of guidance is most severe in social studies (69 percent) and science (56 percent), but also considerable in language arts (32 percent) and math (20 percent). Although the numbers for math and language arts are favorable compared to

those for science and social studies, they are quite high when one considers that these two subjects are heavily emphasized in schools today.

Table 3
Comparison of Second-Year Elementary School Teachers' Experiences with Curriculum in High- and Low-Income Schools in MA, NC, and WA (n=295)

Teachers who report...	All New Teachers	New teachers in high-income schools	New teachers in low-income schools	Difference
...Insufficient direction				
Math	20% (2.6)	20% (5.7)	20% (4.2)	0.0% (7.1)
Language arts	32% (3.0)	54% (6.9)	27% (4.7)	27%** (8.4)
Science	56% (3.2)	65% (6.8)	53% (5.3)	13% (8.7)
Social Studies	69% (3.0)	74% (6.2)	71% (4.9)	3% (7.9)
...Insufficient freedom				
Math	15% (2.3)	7% (3.5)	20% (4.3)	-13%* (5.5)
Language arts	16% (2.3)	10% (3.4)	20% (4.2)	-10%~ (5.4)
Science	5% (1.3)	2% (2.4)	5% (2.4)	-3% (3.4)
Social Studies	2% (0.8)	0% (0.0)	4% (2.1)	-4%~ (2.1)
...That explicitly preparing students for testing is required and monitored				
Math	32% (3.1)	18% (5.5)	43% (5.3)	-25%** (7.7)
Language arts	34% (3.1)	25% (6.3)	40% (5.2)	-15%~ (8.2)

Science and social studies Not regularly tested in these three states at the time of this study.

All percentages are weighted estimates; standard errors are in parentheses.

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

In low-income schools, 71 percent of second-year elementary school teachers report insufficient curricular guidance in social studies, 53 percent in science, 27 percent in language arts, and 20 percent in math. Given the particular and cumulative challenges

faced by teachers and students in low-income schools, the lack of sufficient curricular guidance amplifies existing problems for new teachers, making their teaching and student learning even more difficult.

However, it is important to note the striking and statistically significant difference between the proportion of new teachers in high-income schools who report that they lack curricular guidance in language arts (54 percent) and those in low-income schools who report this (27 percent). One explanation for this disparity is that new teachers at low-income schools are more likely to report using textbook-based readers and more directive reading curriculum materials such as *Direct Instruction* and *Success for All*, which provide specific lesson plans, whereas new teachers at high-income schools are more likely to use *Balanced Literacy* or other curricula, which do not. The percentage of teachers who report using a language arts curriculum that is based on a textbook, basal reader, *Success for All*, or *Direct Instruction* is 77 percent (se=4.5) in low-income schools and 60 percent (se=7.0) in high-income schools. The difference is statistically significant at the .05 level. As the following discussion suggests, the support that teachers in low-income schools experience as a result of having such materials may be outweighed by the demands they experience in being required to use them.

Excessive Curricular Prescription. Rather than receiving too little curriculum guidance, some new teachers experience excessive curricular prescription, especially in math and language arts, the two subjects most often tested by the states. Second-year elementary teachers in low-income schools report having too little freedom to determine what and how to teach in higher proportions than their counterparts in high-income schools. Table 3 shows that new teachers in low-income schools are nearly three times as likely to report having insufficient curricular freedom as new teachers in high-income schools—20 percent compared to 7 percent. A similar difference exists for language arts—20 percent in low-income schools compared to 10 percent in high-income schools. Although new teachers may be more willing than their experienced colleagues to accept constraints on what and how they teach, they still express an interest in retaining the ability to modify their curriculum in response to their particular students. Ultimately, they want their students to succeed academically, and may defer to a prescriptive curriculum if they think it benefits their students. At the same time, they want their own work to be engaging and interesting, and to allow them to exercise professional discretion (Johnson & The Project on the Next Generation of Teachers, 2004; Kauffman et al., 2002)

Pressure to Teach to the Test. Mandated testing has been shown to reduce teachers' sense of professional control (Lutz & Maddirala, 1990; McNeil, 1986). Many educators discredit "teaching to the test," which implies a focus on coaching students about how to correctly answer the questions on a particular type of test, rather than on learning the broader set of knowledge and skills that is being tested. Although explicit test preparation does not necessarily imply "teaching to the test," it often involves teaching test-taking skills, practicing sample test items, and formatting classroom assessments in the bubble-form of standardized tests—activities that many teachers disdain.

New teachers in low-income schools are more likely to report being required to explicitly prepare students for state tests and having someone check to ensure that they do. Table 3 shows that greater than twice the percentage of second-year teachers in low-income schools (43 percent) report that test preparation for math is required and monitored, compared to those in high-income schools (18 percent). For language arts,

the percentage of teachers reporting that they must spend instructional time preparing students to take tests are 40 percent in low-income schools compared to 25 percent in high-income schools.

Again, the consequences for new teachers and their students in low-income schools are similar to those outlined above. If student test scores are improving, new teachers may be pleased with their students' achievement. However, they may soon wonder why they have devoted their days to test-taking skills when they had aspired to teach children to read great literature, creatively solve challenging problems, and love learning. They may be willing to do it for the sake of their students' short-term success, but may ultimately become frustrated and dissatisfied with the work.

Conclusions and Implications

Overall, the findings of these studies are consistent and provide cause for concern. They suggest that, taken together, low-income schools fail to support new teachers as well as high-income schools do. Hiring is less personal, less informative, and occurs later for new teachers in low-income schools than for those in high-income schools. Fewer teachers in low-income schools have mentors than their counterparts in high-income schools. Those who do have mentors are less likely to be paired with an experienced teacher in the same school, grade, or subject, and mentoring discussions—when they occur—are less likely to focus on issues of classroom teaching. Many new teachers lack the curricular guidance they desire, which has greater implications in low-income schools where students typically need greater instructional support in order to succeed in all subjects. New teachers in low-income schools are more likely than teachers in high-income schools to find that the curriculum they do have is too prescriptive and requires them to spend scarce instructional time on test preparation activities.

Combined, these conditions of teaching in low-income schools are likely to compromise new teachers' satisfaction with their work and their schools and limit their success with students. Given that the supports for new teachers are far from ideal even in high-income schools, we should not be surprised to find that turnover rates in low-income schools are alarmingly high (Ingersoll, 2001).

Research also shows elevated turnover at schools with high minority enrollment (Hanushek et al., 2004). While this analysis does not look at school racial composition and new teacher support, given the high correlation between race and socioeconomic status, future research should investigate such relationships.

We know, however, that low-income schools and those serving high numbers of students of color are not necessarily low-performing schools. High-performing schools in low-income communities are deliberately organized to support new teachers and their students (Johnson & The Project on the Next Generation of Teachers, 2004). Principals and teachers in these schools have developed sufficient capacity and deliberate strategies to hire their teachers in a timely, information-rich process, to mentor them effectively, and to provide them with sufficiently detailed curricula that also require the teachers to exercise professional judgment in response to varied student needs. Although appropriate policies and adequate funding are essential to make this possible, it is clear that these alone are not sufficient. The state and the district can do only so much. Ultimately, it is the principals and teachers within a school who must take responsibility

for the induction of new teachers through careful hiring, attentive mentoring, and first-rate curriculum that encourages good teaching.

State policymakers and district administrators have important roles to play in increasing the odds that low-income schools will attract and retain strong teachers. By passing budgets and authorizing hiring during the spring rather than the late summer, politicians and school officials can ensure that the strongest teaching candidates will not be lost to high-income schools that hire early. School officials can also negotiate with teacher unions to start the hiring process earlier or to reduce the role that seniority plays as a criterion in staffing decisions. By upgrading human resource offices, moving hiring decisions to the school, and offering training in hiring practices for principals and teachers, districts can increase the probability that schools will achieve a good match between their program and needs and what a new teacher has to offer.

In response to our findings about mentoring, a conscientious administrator of a low-income school might try to place each new teacher with a mentor. Our work suggests that this strategy would be unwise unless all the matches between new and experienced teachers can be good ones, with individuals deliberately paired by subject and organized around ongoing dialogue about classroom instruction. However, guaranteeing appropriate one-to-one mentoring assignments for all teachers is impossible in many schools. Same-school and one-to-one matches also may be less important than providing all novices the chance to work with an experienced teacher who has the appropriate skills, experience, and commitment to address relevant instructional topics and support the new teacher's steady development. This might be done individually or with a group of new teachers. Given the many challenges of working in low-income schools, teachers ultimately need to have broad, substantive support from a range of experienced colleagues, rather than simply an assigned individual, who in the end may fail to deliver what the new teacher needs. At a minimum, new teachers in these schools need substantive, structured, regular interactions with expert, veteran colleagues.

The curricular needs of new teachers must be addressed at both the district and the school levels. New teachers deserve and need to have concrete curricular guidance in the form of high-quality curriculum materials for each subject they teach. In addition, they must have ongoing professional development about how to work with those curricular materials. Watching expert teachers, discussing how to use the curriculum, and receiving regular coaching and feedback are essential if new teachers are to develop effective pedagogy. Clearly, providing such supports calls for substantial resources, both human and financial. Whether decisions about curriculum and professional development are made at the district office or the school, individuals making them must have the knowledge and judgment to select high-quality curricula and to provide effective professional development. This, of course, requires sufficient funding. Also, those who select the curriculum and monitor its use need to achieve a sensible balance between accountability and autonomy for the new teacher. Detailed prescription about what to teach and how to teach, coupled with excessive reliance on test preparation, may generate some short-term gains on test scores, but ultimately, students will not be well served. In the process, good teachers may become so demoralized that they leave the classroom, thus perpetuating the problem of shortage in the very schools where high-quality teachers are most needed.

It is clear that these elements of hiring, mentoring, and curriculum are not free-standing, but rather are interdependent components of a good school. When new teachers are selected in a timely and deliberate way, they have time to build relationships

with their new colleagues, come to know the curriculum, and prepare to teach. When they are effectively mentored, the new teachers can learn to use the curricula effectively. When they receive job-embedded professional development that assists them in teaching their courses and subjects, they increase the capacity of the school to serve all students well. In turn, the school becomes an attractive workplace for able and committed new teachers. Only when schools are engaging places for talented and dedicated adults will they also be vibrant places where young people can learn and thrive.

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About the Authors

Susan Moore Johnson

Harvard Graduate School of Education

Email: susan_moore_johnson@gse.harvard.edu

Susan Moore Johnson is the Pforzheimer Professor of Teaching and Learning and Director of the Project on the Next Generation of Teachers at the Harvard Graduate School of Education. Johnson studies and teaches about teacher policy, organizational change, and administrative practice. From 1993-1999, Johnson served as Academic Dean of the Harvard Graduate School of Education. She is the author of many published articles and four books: *Teacher Unions in Schools* (Temple University Press, 1984), *Teachers at Work* (Basic Books, 1990), *Leading to Change: The Challenge of the New Superintendency* (Jossey-Bass, 1996), and, with the Project on the Next Generation of Teachers, *Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools* (Jossey-Bass, 2004). Johnson is a member of the National Academy of Education.

Susan M. Kardos

Brandeis University

Email: skardos@brandeis.edu

Susan M. Kardos is the Postdoctoral Research Fellow in Education at the Mandel Center at Brandeis University and a research affiliate of the Project on the Next Generation of Teachers. A former elementary and middle school teacher, Kardos studies education policy, new teacher induction and retention, professional culture and the organization of schools, school leadership, and mentoring. She is co-author of *Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools* (Jossey-Bass, 2004) and has published articles about new teacher support and induction, including "Counting on Colleagues: New Teachers Encounter the Professional Culture of Their Schools" in *Educational Administration Quarterly*. Kardos is also author of "Clandestine Schooling and Resistance in the Warsaw Ghetto," published in the Spring 2002 issue of the *Harvard Educational Review*.

David Kauffman

Harvard Graduate School of Education

Email: david_kauffman@post.harvard.edu

David Kauffman is Elementary Programs Supervisor in the Austin Independent School District and an advanced doctoral student at the Harvard Graduate School of Education. A former classroom teacher, Kauffman studies curriculum, teachers' professional development, school leadership, and education policy. He has also consulted as a whole school improvement coach for a Boston public school and conducted federal education policy research in Washington, DC. He is co-author of *Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools* (Jossey-Bass, 2004) and other articles about new teachers and

curriculum, including “Lost at Sea: New Teachers Experiences with Curriculum and Assessment” in *Teachers College Record*.

Edward Liu

Rutgers University

Email: ed.liu@rutgers.edu

Edward Liu is assistant professor of educational administration at Rutgers University and a research affiliate of the Project on the Generation of Teachers. A former high school history teacher and director of a nonprofit educational program for low-income middle school students, Liu studies teacher hiring and retention, schools as organizations, leadership, and education policy. He is co-author of *Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools* (Jossey-Bass, 2004), as well as a number of scholarly articles on new teachers’ experiences in schools. His latest article, “New Teachers and the Massachusetts Signing Bonus: The Limits of Inducements,” is forthcoming in *Educational Evaluation and Policy Analysis*. Liu is also a former co-chair of the *Harvard Educational Review*’s editorial board.

Morgaen L. Donaldson

Harvard Graduate School of Education

morgaen_donaldson@gse.harvard.edu

Morgaen Donaldson is a Research Assistant at the Project on the Next Generation of Teachers and an advanced doctoral student at the Harvard Graduate School of Education. She has taught in a variety of settings and was a founding teacher of the Boston Arts Academy. She studies new teachers, mid-career entrants to teaching, and collegial exchange within diverse school faculties. She is co-editor of *Reflections of First-Year Teachers on School Culture: Questions, Hopes, and Challenges* (Jossey-Bass, 1999) and co-author of *Finders and Keepers: Helping New Teachers Survive and Thrive in Our Schools* (Jossey-Bass, 2004). Donaldson is an editor of the *Harvard Educational Review*.

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Sigfredo Chiroque

Instituto de Pedagogía
Popular, Perú

Gaudêncio Frigotto

Universidade Estadual do Rio
de Janeiro, Brasil

Roberto Leher

Universidade Estadual do Rio
de Janeiro, Brasil

Pia Lindquist Wong

California State University,
Sacramento, California

Iolanda de Oliveira

Universidade Federal
Fluminense, Brasil

Miguel Pereira

Catedrático Universidad de
Granada, España

Romualdo Portella do

Oliveira

Universidade de São Paulo

Daniel Schugurensky

Ontario Institute for Studies
in Education, Canada

Daniel Suarez

Laboratorio de Políticas
Públicas-Universidad de
Buenos Aires, Argentina

Jurjo Torres Santomé

Universidad de la Coruña,
España