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

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April, 2004

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This article was prepared for the 2004 Annual Meeting of the American Educational Research Association, April 12-16, San Diego, California. It was made possible by funding provided by the Spencer Foundation and the Russell Sage Foundation; however, the findings and conclusions presented here are solely the responsibility of the authors.

INTRODUCTION

Teachers make a profound difference in children's learning. Recent empirical research has lent scholarly weight to this statement, which professional educators have long asserted. Highly-skilled teachers can raise student achievement (Ferguson, 1998; Goldhaber & Anthony, 2004; McCaffrey, Lockwood, Koretz, & Hamilton, 2003; Sanders & Rivers, 1996; Wenglinsky, 2002), especially the achievement of students living in low-income communities (Rivkin, Hanushek, & Kain, 2002).

As the academic community focuses its attention on teachers' impact, education experts (see, for example, the National Commission on Teaching and America's Future, 2003), elected officials (see, for example, No Child Left Behind Act of 2001), and business leaders (see, for example, The Teaching Commission, 2004) call for high-quality teachers in every classroom. Meanwhile, the teacher workforce is undergoing a major shift. Retirements, increased student enrollment, policy changes, and undesirable organizational characteristics have heightened the demand for new teachers in certain subjects, types of schools, and areas of the country (Fideler, Foster, & Schwartz, 2000; Hussar, 1999; Ingersoll, 2001; Johnson & The Project on the Next Generation of Teachers, 2004). The new teachers hired today may well form the heart of the workforce for the next thirty-five years. In the face of growing recognition of the need for strong and committed teachers, this paper 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 key areas than their counterparts working in schools with higher income students. Thus, the schools that arguably

demonstrate the most acute need for skilled teachers are, by our estimation, least likely to succeed in attracting and retaining them.

In the midst of the convergence of these three major factors—consensus about teachers' impact on student achievement, public focus on teacher quality, and major changes in the teacher workforce— concerns about equity have grown. Researchers studying the "achievement gap" have found that schools serving students from low-income communities and communities of color tend to employ teachers who, when compared to those who work in higher-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; Hanushek, Kain, & Rivkin, forthcoming; Neild, Useem, Travers, & Lesnick, 2003; Useem, 2003), higher proportions of uncertified teachers (Ingersoll, 2002; Lankford, Loeb, & Wyckoff, 2002), and higher percentages of teachers working outside their subject area (Ingersoll, 2002; Neild et al., 2003; Useem, 2003). Teachers in such schools, on average, score lower on various standardized tests (Lankford et al., 2002), and have graduated from less competitive colleges (Lankford et al., 2002). Rates of teacher attrition and mobility are also greater at low-income public schools than at their high-income counterparts (Hanushek et al., forthcoming; 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 (15.2 percent) in low-income districts than high-income districts (10.5 percent) (p.516). By 2003, Smith and Ingersoll (2003) had 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., forthcoming; Lankford et al., 2002). In short, as Kevin Carey (2004) of the Education Trust observes: “No matter which study you examine, no matter which measure of teacher qualities 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 was meant to address these inequities in the distribution of “highly-qualified” teachers among public schools. 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 to ensure that low-income students have highly skilled teachers (Keller, 2004). Moreover, the authors of NCLB adopted a rather narrow strategy of regulating teachers’ entering qualifications rather than investing in improving working conditions and schools’ capacity to support new teachers on the job. These supports are crucial if today’s incoming teachers are to meet the particularly high expectations that the American public now has of teachers and schools—expectations that they 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 tracked 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, these teachers 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 higher-income students. When such support was absent, many teachers in our sample took steps to teach elsewhere or left the profession. However, a

[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.

small number of the teachers working in schools that served 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 experiences. In this paper, we draw upon data from two multi-state surveys to investigate the kind and levels of support respondents found working 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 paper is based was conducted by Edward Liu and Susan M. Kardos at the *Project on the Next Generation of Teachers* and 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 Michigan[2]. These states were selected because 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

[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 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).

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). From the 199 schools drawn, 74 percent 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 was conducted by David Kauffman at the *Project on the Next Generation of Teachers* and examined new teachers' experiences with curriculum (Kauffman, 2004). Building on findings from the Massachusetts study (Kauffman, Johnson, Kardos, Liu, & Peske, 2002) and case studies of new teachers' experiences with different types of mathematics curricula (Kauffman, 2002), it explored second-year 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

In general, we found lower levels of support—in hiring, mentoring, and curriculum—for teachers who work with low-income students than for those who teach high-income students. It seems, then, that alongside the student “achievement gap” lies a glaring disparity in the assistance that new teachers receive in their critical first years on the job. This “support gap” may help explain why some schools constantly fight the undertow of teacher attrition while others more easily attractand retain new staff.

Hiring

On the face of it, it is not immediately obvious how hiring practices are a source of support for new teachers. Yet, for a new teacher, support can come from being well-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 important 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 the 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. 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 tackle them successfully is compromised when they do not know their specific teaching assignments until late summer or early fall. Inequities in hiring practices are reflected both in the proportion of new teachers who participate in interviews and observations and the date at which the teachers are hired.

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 as part of the hiring process. 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 interview 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).

Observations. Observations are another information-rich hiring activity, and here, 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. New teachers in high-income schools, however, are less likely to have observed classes while school was in session.

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 rigid personnel practices, seniority-based staffing provisions that delay transfers and job postings, and higher rates of turnover among teachers that 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 students in high-income schools. If they have a new teacher, she probably had less time than a new teacher at a more affluent school to prepare for her job, and 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 also are more likely to be taught by new teachers whose positions do not offer a good fit for the skills, knowledge, and dispositions. New teachers in low-income schools 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 associations, 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; S. Feiman-Nemser, 1983; Gless & Moir, ; Humphrey et al., 2000) and are more likely to stay longer in their schools (Gless & Moir) or in teaching (Humphrey et al., 2000; Smith

& Ingersoll, 2003). Without the proper support, new teachers will resort to "survival instructional strategies" (Berry, Hopkins-Thompson, & Hoke, 2002, p.4; Sharon Feiman-Nemser & Floden, 1986; Huling-Austin, 1990), that, in the long term, will not serve them or their students well (S. Feiman-Nemser, 1983; Gold, 1996; McDonald, 1980; Rosenholtz, 1989).

In our examination of the presence and nature of mentoring, we found important differences between the experiences of new teachers in high-income schools and the experiences of new teachers in 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 between the mentor and the new teacher.

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 baseline conversations with a mentor about classroom management and discipline	**58%** **(5.2)**	69% (6.9)	43% (9.0)	26%* (11.3)
Has baseline conversations with a mentor about curriculum and lesson planning	**58%** **(4.6)**	69% (5.0)	47% (8.6)	22%* (10.0)
Has baseline 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

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. While 82 percent of new teachers in high-income schools have same-school mentor matches, only 53 percent 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 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) 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 teacher, particularly 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-groups[3], the particularly low incidence of mentor interaction for new teachers in low-income schools is cause for concern. These individuals 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 have 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

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

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.

Curriculum

In addition to the face-to-face support that mentors can provide, new teachers can benefit from the concrete support provided by the 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 (Kauffman et al., 2002).

A school's curriculum, defined 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.

Insufficient Curricular Guidance. In our survey study of second-year elementary school teachers in Massachusetts, North Carolina, and Washington, we discovered important similarities and differences between the experiences of new teachers in high-income and low-income schools. As Table 3 shows, many new teachers in both low- and high-income schools lack sufficient curricular support. For all second-year teachers, the lack of guidance is most severe in social studies (69.2 percent) and science (56.2

percent), but also considerable in language arts (31.7 percent) and math (20.5 percent). Although the numbers for math and language arts are favorable compared to 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	**21%** **(2.6)**	20% (5.7)	20% (4.2)	0.1% (7.1)
Language arts	**32%** **(3.0)**	54% (6.9)	27% (4.7)	27%** (8.4)
Science	**56%** **(3.2)**	66% (6.8)	53% (5.3)	13% (8.7)
Social Studies	**69%** **(3.0)**	74% (6.2)	71% (4.9)	3% (7.9)
…Excessive direction				
Math	**13%** **(2.2)**	7% (3.5)	21% (4.5)	-14%* (5.7)
Language arts	**15%** **(2.2)**	9% (3.5)	19% (4.1)	-11%* (5.4)
Science	**2%** **(1.0)**	2% (2.4)	2% (1.6)	0.3% (2.9)
Social Studies	**2%** **(0.8)**	2% (2.4)	2% (1.6)	0.2% (2.9)
…That explicitly preparing students for testing is required and monitored				
Math	**34%** **(3.2)**	20% (6.0)	45% (5.5)	-25%** (8.1)
Language arts	**37%** **(3.2)**	27% (6.9)	43% (5.4)	-15%~ (8.7)
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, 70.6 percent of second-year elementary school teachers report insufficient curricular guidance in social studies, 53.0 percent in science, 27.3 percent in language arts, and 20.2 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.

It is important to note, however, one striking and statistically significant difference here: the proportion of new teachers in high-income schools who report that they lack curricular guidance in language arts is twice that of new teachers in low-income schools—54.0 percent compared to 27.3 percent. One explanation for this disparity is that low-income schools are more likely to use textbook-based readers and more directive reading curriculum materials like Direct Instruction and Success for All, whereas high-income schools are more likely to use balanced literacy or other curricula that rely on teacher knowledge rather than specific curriculum materials.[4] Again, these data suggest that insufficient curricular guidance for new teachers in both low- and high-income schools is cause for concern; however, we make special note of the difficulties faced by teachers and students in low-income schools and the heightened significance that insufficient curricular guidance might have for them.

Excessive Curricular Guidance. Rather than too little curriculum guidance, some new teachers report being given too much direction in math and language arts, the two subjects most often addressed in state tests. Second-year elementary teachers in low-income schools report excessive curricular prescription 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 receiving too much direction in mathematics as new teachers in high-income schools—21.1 percent compared to 7.3 percent. A similar difference exists for language arts—19.2 percent in low-income schools compared to 8.5 percent in high-income schools. For the teachers reporting excessive direction, the rigidity of the curriculum may reduce their sense of professionalism and curtail some of the intrinsic rewards of teaching (Johnson, 1990; Lortie, 1975). 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 based on 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)

Testing Pressure. 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.

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[4] The percentage of teachers who use a language arts curriculum based on a textbook, basal reader, Success for All, or Direct Instruction is 77.5 percent (se=4.5) in low-income schools and 59.5 percent (se=7.0) in

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 comply with this obligation. Table 3 shows that greater than twice the percentage of second-year teachers in low-income schools (45.2 percent) report that test preparation for math is required and monitored, compared to those in high-income schools (20.2 percent). For language arts, the percentages are 43.1 percent in low-income schools compared to 28.6 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 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

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high-income schools. The difference is statistically significant at the .05 level.

focus on instructional issues. Teachers in low-income schools also lack the curricular guidance they need in order to help their students succeed in all subjects. They 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 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. Research also shows elevated turnover at schools with high minority enrollment. 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, in themselves, they 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, grade, and school and organized around ongoing dialogue about instructional matters. 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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