The Politics of Teacher Quality: Implications for Principals

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The academic and political arguments about teacher quality affect how secondary principals do their jobs. Educational research provides useful guidance about which teacher candidates may be most likely to increase student achievement, but it must be used critically and cautiously. When individuals with varying political agendas interpret the same findings in completely different ways to advance very different solutions, confusion results. Principals who understand the No Child Left Behind Act of 2001 know how to create and maintain a positive work and learning environment for teachers and students.

Raising teacher quality has become education reform's top priority. Research affirms that teaching quality is the single most important factor influencing student achievement, moving students well beyond family backgrounds' limitations (Darling-Hammond, 2000; Kaplan & Owings, 2001; Whitehurst, 2002). Staffing all classrooms with highly qualified teachers, therefore, is a critical national concern.

Unfortunately, teacher quality has become a highly politicized issue. For several years, writers of scholarly journal articles and think-tank reports have heatedly debated what defines teacher quality. They ask: Does knowledge of teaching (in addition to content knowledge) make a difference in student achievement? Their answers conflict sharply. Briefly, one cohort believes that quality teachers are those who have content knowledge and have studied instructional ideas and practices that increase student learning. The other faction believes effective teachers only need strong content knowledge; any other criteria required for teaching candidates are burdensome and unnecessary. Both groups cite research to support their agenda.

Until now, this largely "academic" debate did not affect principals' daily practice. Today, however, the 2001 Elementary and Secondary Education Act reauthorization, No Child Left Behind (NCLB, 2002), brings the question to every schoolhouse by defining whom principals can hire to teach. Staffing classrooms with qualified teachers is now a priority for principals. This significant change in the candidate pool—and their questionable classroom

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effectiveness in producing student learning—makes a significant difference in how principals do their jobs.

This article briefly describes how the educational and political arguments about teacher quality influence principals' hiring and supervision practices. We review how the research on teacher quality and teacher certification provides guidance for hiring decisions. Finally, recommendations suggest how school leaders can employ, support, and keep high-quality educators who increase student achievement.

The Public View of Teacher Quality and No Child Left Behind Act

A recent national bipartisan poll found that 42% of respondents valued teachers "having skills to design learning experiences that inspire/interest children," whereas only 19% valued teachers "having a thorough understanding of their subject." Similarly, 67% of adults sampled said that "developing the proper skills to make information interesting and understandable is a greater difficulty than developing adequate knowledge about subject matter" (Educational Testing Service, 2002, p. 9).

Overwhelmingly, Americans believe that knowing how to teach is at least as important as knowing what to teach. When it comes to being a quality teacher, what makes the difference in student achievement is not just what you know but also how well you convey what you know to students. Research supports this view. Unfortunately, national legislators and education officials seem to be saying just the opposite. NCLB legislation defines who is a "highly qualified" teacher and seeks to overhaul how teachers are trained, recruited, inducted into the profession, and nurtured in the classroom (Blair, 2002, p. 2). It requires states to ensure by the end of the 2005–2006 school year (and Title I schools starting in the fall of 2002) that all new secondary school teachers of core academic subjects who are entering the profession must hold a bachelor's degree. Each new teacher must also have demonstrated high competency in each academic subject the individual teaches by passing a rigorous state certification or licensing test in each academic subject or by successfully completing an academic major, a graduate degree or coursework equivalent to an undergraduate academic major, or advanced certification or credentialing (U.S. Department of Education, 2002, p. 5). Testing for and/or demonstrating teaching knowledge and skills are not required.

To be considered a "highly qualified teacher" according to NCLB means prospective educators need only show subject matter expertise; knowing effective instructional practices is optional. Such a definition, observes Arthur Levine, president of Teachers College, Columbia University in New York City, is "not truth in advertising" (Gerwertz, 2002, p. 15). Conversely,

NCLB requires that new elementary school teachers pass tests in both subject knowledge and teaching skills in reading, writing, mathematics, and other areas of the basic elementary school curriculum (U. S. Department of Education, 2002, p. 5). This seeming inconsistency in expectations of qualifications for teachers of students of different ages is not explained.

Similarly, U.S. Secretary of Education Rod Paige told teacher educators at a February 2002 conference that teacher certification does not ensure teacher quality and "highly qualified teachers may not be required to be certified" (Blair, 2002, p. 4). He added that the current teacher certification system reflects both low standards and high barriers to entry into the profession. Some research supports this view, too.

As NCLB brings high-stakes testing and consequences to all 50 states, principals want the best qualified and most effective teachers in their classrooms. These new federal requirements, however, seem to contradict principals' own anecdotal experiences and professional education, which affirm that effective teaching practices—rather than content knowledge alone—increase student achievement. Although NCLB gives principals a wider pool of potential teaching candidates, many of these candidates will not understand how to work effectively with adolescent students. Many will not know how to package and deliver instructional content in ways that will increase student learning. Instead of expecting teaching candidates to have basic or minimal teaching skills before they enter their own classroom, the new law encourages principals to hire content experts who have no teaching knowledge or experience. Once these new teachers are on the job, NCLB expects principals to provide them with proven "scientifically based" professional development strategies that have been shown to increase student achievement.

With the federal government saying one thing and the public at large and professional practice seeming to say another, one can understand why principals might feel pulled in conflicting directions. Moreover, this situation has the potential to significantly change principals' professional practice.

Agreement Between Old and New Approaches

In an important way, NCLB legitimately challenges many assumptions about teacher candidates, educational research, and professional development. What value do teacher preparation courses hold for teaching quality, and can state certification guarantee it? Can education research reveal what works? Reviewing the arguments concerning traditional teacher preparation and state teacher certification can help principals know what to look for—and what to cautiously consider—in hiring teacher candidates within the NCLB context.

Archer (2002) noted that there is little actual disagreement about what teacher quality research says but that experts from different camps strongly disagree about how to interpret it and how policymakers should respond.

Several areas of consensus exist. The following section reviews research that is widely accepted and is discussed more fully in other sources.

Effective Teachers Substantially Influence Student Learning

The schools students attend and what their teachers know and do is a more important influence on student achievement than students' family characteristics and ethnicity (Darling-Hammond, 2000; Haycock, 1998; Kaplan & Owings, 2001; Scheerens & Bosker, 1997; Whitehurst, 2002). Elementary school students who worked with effective teachers for 3 consecutive years scored higher than peers of the same starting ability taught by ineffective teachers for 3 consecutive years by more than 50 points on standardized tests of mathematics skills (Sanders & Rivers, 1996) and 35 points in reading (Jordan, Mendro, & Weerasinghe, 1997). Working over consecutive years with highly effective teachers produced dramatic gains in student achievement for all student groups—low, middle, and high achieving (Haycock, 1998).

High school students working with the most effective teachers showed gains in reading and math that exceeded the national median, whereas their peers (who started the school year with the same test scores) who worked with the least effective teachers showed virtually no growth (Haycock, 1998).

African American students in a state with high-stakes testing scored on average 25 points higher—worth 2.5 years of learning—on the grade 8 writing scores on the 1998 National Assessment of Educational Progress (NAEP) than their ethnic peers in a nearby state without these high-consequence standards (Haycock, Jerald, & Huang, 2001). Latino students in the same study achieved scores equivalent to 3 to 4 years ahead.

Teachers' Verbal Ability and Content Knowledge Affect Students' Learning

Researchers agree that there is a clear predictive relationship between a teacher's basic skills, especially verbal ability, on student achievement (Darling-Hammond, 2000; Haycock, 1998; Walsh, 2001; Whitehurst, 2002). Educators and researchers also agree that content knowledge influences student achievement. Students of teachers with college majors or minors in the subjects they teach—especially in secondary math and science—outperform students whose teachers are without this strong content knowledge by about 40% of a grade level in each subject on the 1996 NAEP (Blair, 2000; Goldhaber & Brewer, 1999; Haycock, 1998; Monk, 1994; Wenglinsky, 2000). Other evidence suggests that teacher content knowledge in English and social studies may be no less important (Haycock, 1998).

How important is teachers' content knowledge in teacher or teaching quality, and how do principals know if a teacher has enough? No evidence suggests that possessing content knowledge alone is enough to be an effective

teacher (Berry, 2001; Wilson, Floden, & Ferrini-Mundy, 2002). Some researchers claim that the connection between teachers' subject knowledge and student achievement is mixed, positively influencing student learning up to a certain level of basic competence but less important afterward (Darling-Hammond, 2000; Monk, 1994). Other researchers add that college majors vary in rigor, and a prospective teacher's college transcript may not actually confirm teacher knowledge (Kanstoroom & Finn, Jr., 1999). Although strong content knowledge and verbal skills have demonstrated research links to higher student achievement, they may be necessary but not sufficient conditions for quality teaching and learning.

Where Old and New Approaches Disagree About the Research

Teaching Knowledge Makes a Difference in Student Achievement

Despite areas of agreement, a fundamental split exists over whether traditional teacher preparation positively influences student achievement. Experts with different political agendas strongly disagree about the rigor of the current research's scientific method, how to interpret the data, and how policymakers should respond (Archer, 2002; Darling-Hammond, Berry, & Thoreson, 2001; Goldhaber & Brewer, 2000, 2001; Walsh, 2001; Darling-Hammond & Ball, 1997). The tone of the debate sometimes can get intense, as when the Progressive Policy Institute (2002) referred to the new teacher quality studies as "Putting Lipstick on a Pig" (p. 1).

Traditionalists point to the research affirming that teacher expertise—what teachers know and can do—is the most important factor in determining student achievement (Darling-Hammond, 2000, 2001; Darling-Hammond & Ball, 1997). Proponents of reduced teacher credentialing, however, assert that little sound statistical research is available for evaluating which type of training and teaching degree has the best effect on student achievement or whether teacher preparation even makes a difference (Johnson, 2000; Walsh, 2001). Each group cites educational research to support their positions.

Understanding and Using Educational Research to Advance Political Agendas

Hess (2002) called a recent study supporting the benefits of teacher certification on student achievement "advocacy in the guise of research" (p. 2). This statement can be applied equally to both sides. Walsh (2001) claimed that the research supporting the positive impact of teacher knowledge of instructional ideas and practices on student achievement is cited selectively,

is too old to be reliable or retrievable, is not subjected to peer review, uses nonstandard measures, violates sound statistical analysis, does not control for key variables such as poverty or prior student achievement, uses too small a sample size, or inappropriately aggregates data (p. iv). Other researchers assert that the research supporting teaching knowledge is biased, arguing that educational and pedagogy classes are driven by ideology rather than research (Ballou & Podgursky, 1999; Johnson, 2000).

Using Walsh's analyses as justification, the Secretary of Education's annual report on teacher quality asserted that no "scientifically rigorous" research supports the belief that pedagogy or education degrees are linked to higher student achievement (U. S. Department of Education, 2002, p. 8). Likewise, using the same logic and viewpoint, the NCLB legislation removes teacher preparation in educational theory and practice as a requirement for hiring secondary level teachers.

In direct response, Darling-Hammond (2001) agreed that legitimate concerns exist about various studies on all sides of the question (p. 4) but vigorously contended that Walsh's review ignores evidence, makes unfounded claims, misrepresents the research, misunderstands some fundamental research design issues, uses a double standard in citing studies to support Walsh's own viewpoint, and draws illogical policy conclusions (pp. 5–6).

Methodological weaknesses can be important. It is true that teacher certification researchers do not account for the fact that teachers are not randomly assigned to classes within schools. The most experienced, credentialed, and respected teachers are usually assigned to upper level, more advanced courses. School culture dictates that mature, highly degreed teachers receive these highest status classes, and parents expect it (Hess, 2002). Comparing the achievement of students learning from certified teachers to that of students under uncertified teachers, then, does not present a fair picture because the students are not each starting from the same place. This does not, mean, however, that research limitations discount all findings.

Although principals may be less knowledgeable on the nuances of educational research, they remain experts in the realities of school practice. "As any reader of educational literature knows all too well, one can find experts on both sides of any...issues, each armed with his or her supporting data" (Gardner, 2002, p. 72). Students cannot ethically be randomly assigned from one "condition" to another "the way that agricultural seeds are planted or transplanted in different soils" (Gardner, 2002, p. 72). While allowing for the merits and limitation of each side, principals must step back from the academic "research wars." They must become knowledgeable consumers of such data as well as consider their own professional experiences to make sense of the issues and determine appropriate responses.

Research on the Effect of Teaching Knowledge on Student Learning and Achievement

Darling-Hammond (2000) found that teacher preparation is a stronger correlate of student achievement than class size, overall spending, or teacher salaries (p. 33) and accounted for 40% to 60% of the total variance in achievement after taking students' demographics into account (p. 27). In fact, studies showed that both knowledge of subject matter and of teaching and learning are strongly correlated with teachers' classroom performance (Guyton & Farokhi, 1987).

It is clear that teachers who learn and practice sound pedagogical techniques can affect students' measured achievement. The 1996 NAEP study (Blair, 2000; Wenglinsky, 2000) found students of teachers who conducted hands-on learning activities outperformed their peers by more than 70% of a grade level in math and 40% of a grade level in science. Students whose teachers had strong content knowledge and had learned to work with students who came from different cultures or had special needs tested more than one full grade level above their peers. Students whose math teachers stressed critical thinking skills, such as writing about math, scored 39% higher than those whose teachers did not. In addition, "the aspects of teaching quality measured (in this study) have an impact seven to 10 times as great as that of class size" in affecting student achievement (Wenglinsky, 2000, p. 31).

Teacher education coursework is sometimes more influential than extra subject matter coursework in promoting students' math and science achievement (Monk & King, 1994). Monk (1994) also examined the connection between students' achievement and their teachers' coursework in teaching methods and found a positive correlation. Monk conceded, however, that likely variations among the content of those courses made it difficult to draw any definitive conclusions.

Educational coursework, however, has a point of diminishing returns. Several studies indicated that teachers with advanced subject degrees, rather than advanced education degrees, have students who perform better in math and reading, especially as students move beyond elementary school and need a deeper and more complex understanding of content knowledge. A bachelor's degree in education may be sufficient to produce student learning, but teachers also need stronger content knowledge in certain fields as students' cognitive maturity progresses (Greenwald, Hedges, & Laine, 1996; Johnson, 2000).

In addition, systematic study of learning processes results in more effective teaching behaviors and increases in student achievement (Munro, 1999). In a study in which teachers examined contemporary learning theories and developed their own explicit learning theory, Munro (1999) found

a significant increase in the number of effective teaching behaviors in the teachers' classrooms. In addition, 73% of the students in that study showed a statistically significant gain in the learning outcome, especially among the lowest achieving students (Munro, 1999). When teachers have opportunities to "learn about learning" and to develop their own clear theory of learning, they can address students' real and varied learning needs and use alternate strategies in the classroom to promote all students' achievement.

Moreover, research suggests that teachers without teacher education preparation can be less effective at helping students learn. Teachers who lack effective classroom management skills, regardless of how much subject matter they know, cannot create a classroom environment that supports student learning. Barton, Coley, and Wenglinsky (1998) studied the effect of different student discipline practices on student achievement and found that student disorder results in more disorder and lower student achievement gains. Likewise, McDiarmid and Wilson's (1991) study demonstrated that teachers with only subject matter knowledge with alternative certification had strongly held misconceptions about appropriate ways to teach the content and were unable to integrate their subject matter knowledge with teaching practices to allow for effective instruction.

To a degree, both sides make valid points. Even traditional teacher preparation supporters admit certain shortcomings. Schools of education vary in standards for candidates, programs, teacher education curriculum, and faculty (Darling-Hammond & Ball, 1997). Most U.S. teachers have had scant preservice teacher education experience, usually with tradeoffs between disciplinary and pedagogical preparation. Typically, prospective teachers learned subject content and pedagogical techniques in unrelated courses, leaving it to the inexperienced novices to integrate (or not) the subject and teaching practices. In addition, most teaching candidates had short (or no) supervised student teaching experiences (Darling-Hammond & Ball, 1997). "Dramatically uneven levels of preparation across the teaching force" are a reality (Darling-Hammond & Ball, 1997, p. 11). It is no wonder that beginning teachers often report that their professional preparation was of little use or practicality to them (Darling-Hammond & Ball, 1997, p. 18).

In sum, data supporting pedagogy's impact on student achievement are available, credible, and substantial; but they remain open to logical and methodological challenge. Any ambiguity, however, invites partisans to use research to advance a particular agenda. Both evidence and experience show that teaching requires a set of professional practices apart from but connected with the content taught. Although content knowledge is unarguably essential and teacher education is important at the bachelor's level, teachers' pedagogical knowledge and skills—whether learned preservice or on the job in professional development—has a measurable impact on student achievement.

Research Connecting Teacher Certification and Teacher Quality

Teacher certification usually consists of counting the number and type of teacher preparation courses and professional examinations taken and comparing this with a state-approved list of professional requirements before issuing a certificate or license to practice. Licensure brings legal status to certification, making it unlawful for individuals to practice without achieving the legal standard.

Certification and teacher education are also linked. States certify teacher education graduates for teaching positions to protect the public with a minimum standard of professional performance and training. This process provides financial and political support to states' teacher education institutions. Similarly, states must also supply qualified candidates for public school classrooms.

The research connecting teacher certification and teacher quality is mixed. Some studies show that teacher certification and licensure is a highly variable, imprecise, and misleading means to assure teacher quality, whereas other studies support teacher certification as a factor in increasing student achievement. Researchers assert that the present teacher certification model is failing U.S. students by not producing either the quality or quantity of teachers needed (Hess, 2001, p. 3). Even the National School Boards Association agreed in a 2001 report that traditional certification routes provide no guarantee of teacher quality (Hess, 2001, p. 13). However, other research shows that a high proportion of teachers in a state with full certification and a major in the field they teach is the most consistent significant predictor of student achievement in reading and math (Darling-Hammond, 2000). Conversely, new teachers who are uncertified usually predict the lack of student achievement (Darling-Hammond, 2000). One study of more than 1,000 school districts concluded that every additional dollar spent on more highly qualified teachers netted greater improvements in student achievement than did any other school resource (Ferguson, 1991). Laczko-Kerr and Berliner (2002) studied teacher licensure in Arizona and found that primary school students of fully licensed teachers consistently posted greater gains—approximately 20% higher academic growth—than those whose teachers lacked them. Having a standard license appeared to translate into 2 months worth of student achievement growth.

In another example of how the politics of teacher quality can lead to differing interpretations of the same data, Goldhaber and Brewer (1999) studied whether only fully licensed teachers had positive impact on student learning. They found that students whose teachers have any kind of certification—including probationary, emergency, or private school certification, all of which are incomplete compared with regular certification—outperform math students whose teachers have no certification or who are certified in a

different subject (Goldhaber & Brewer, 1999). In reply, Darling-Hammond et al. (2001) critiqued Goldhaber and Brewer's methodology and reasserted regular certification's superiority. She noted that most of these "other certified" teachers had substantial education coursework but lacked sufficient credits in other areas required for full state licensure. Both camps concluded, however, that those who have more education training appear to do better in producing student achievement.

In another disagreement about data, the Secretary of Education's annual report noted that 70% of the states report that alternatively certified candidates have higher pass rates on licensure exams than do candidates with traditional preparation (U.S. Department of Education, 2002, p. 34). This can be interpreted in two ways: that increasing the supply and quality of teachers by streamlining teacher requirements would not decrease overall teacher effectiveness, or that certification exams cannot predict classroom effectiveness for alternatively certified individuals because of low and varying state standards and cut scores.

To be fair, teacher certification critics have a strong case. Teacher certification lacks consistent standards to classify candidates' effectiveness. Sadly, as a profession, teaching has "no consensus on how to train good teachers or ensure that they have mastered essential skills and knowledge" (Hess, 2002, p. 2), making certification based on common, mutually agreed upon, and nationally accepted standards difficult.

Moreover, Rowan, Chiang, and Miller (1997) claimed that is tricky to compare the effects of teachers' certification or lack thereof on student achievement. First, teachers without certification are usually inexperienced beginners, resulting in age and experience biases. Second, the term *certification* is unclear, often confused with the term *alternative certification*, a route that bypasses some undergraduate education coursework but is different than temporary or provisional licenses (where individuals usually have no formal experience with teaching practices). Third, some teachers have certification in content other than the one they are teaching. Fourth, licensure requirements vary state to state and sometimes within the same state. These variations in definition make it difficult to know exactly what is being compared. And, as noted previously, the most experienced teachers tend to teach the highest achieving students, making comparisons of student achievement suspect.

Complicating the picture further, teacher preparation programs vary dramatically in quality (Darling-Hammond & Ball, 1997; Hess, 2001, Laczko-Kerr & Berliner, 2002). States have broad flexibility to set their own criteria for teacher education and define which institutions fall into low-performing status. When states recently reported their data on teacher preparation, much of it was "inconsistent, complete, and utterly incomprehensible" (Huang, Yun, &

Haycock, 2002, p. 1). Only one teacher preparation institution in more than 1,300 in the United States was classified as low performing. Thirteen others were considered "at-risk" of being low performing (Huang, Yun et al., 2002, p. 4). Judging the overall quality of teacher preparation programs from these national data challenges credulity.

Licensing varies from state to state and contains an assortment of exceptions and loopholes. States set their own passing rates and cut scores on qualifying licensing exams. The Education Trust examined states' licensure exams and noted that "most of the content on licensing exams is most typically found in high-school curricula…never at the level of a bachelor's degree" (Mitchell & Barth, 1999, p. 15). In spite of the strong evidence relating student achievement to teachers' knowledge of the subject they teach, 23 states do not require subject area content knowledge for both secondary English and math (Huang et al., 2002, p. 8). Some states make no effort to screen out even the weakest applicants. Virginia, with the highest cut scores in the United States (close to the national teachers' average in reading and math), had an 80% pass rate in 1999–2000. Six states reported 100% pass rates (U.S. Department of Education, 2002, p. 25). In addition, only 24 states had teacher standards tied to their respective academic content standards (U.S. Department of Education, 2002, p. 25).

States also vary in the amount of required student teaching; some require 10 weeks or more, whereas others require none. Nevertheless, candidates from varying states must pass state certification tests with considerably different levels of preparation, and all candidates expect to pass and be employed as classroom teachers. Even the highly regarded National Board for Professional Teaching Standards program has received criticism for being vague and broad. They can show no evidence that their teachers are more effective than others at raising student achievement (Hess, 2001, p. 8).

What is more, teacher certification places "fiscal barriers to teacher preparation and entry [that] produce both chronic shortages of qualified teachers in some fields and dramatically uneven levels of preparation across the teaching force" (Darling-Hammond & Ball, 1997, p. 11). Traditional teacher preparation requires many professional courses that cost students time and money. Requirements vary state by state for entry into a profession that rewards employees with a salary scale that pays well below other college graduate degrees and is tied to seniority and advanced degrees rather than productivity. These factors discourage many promising candidates from pursuing a teaching career.

Stating the facts objectively—unpleasant truths and all—is one thing; inadvertently or knowingly misrepresenting them to advance an agenda is another. For example, the 2002 Secretary of Education's annual report on teacher quality states that "fewer than 36 percent of new teachers feel 'very

well prepared' to implement curriculum and performance standards…and less than 20 percent feel prepared to meet the needs of diverse students or those with limited English proficiency" (U.S. Department of Education, 2002, p. 15), citing the National Center for Educational Statistics as the data's source. The terms *fewer than* and *new*, however, are absent from the original text (Lewis et al., 1999). In fact, the statistics were actually from surveyed practicing classroom teachers in 1998, most of whom were not new. From these and similar data, the report concludes that a majority of teacher education graduates believe that traditional teacher preparation programs left them poorly prepared for real classroom challenges (U.S. Department of Education, 2002, p. 15). Any conclusions drawn from these incorrect data are misleading, at best.

Looking at the present situation and obvious limitations, the Education Trust recommends that states develop rigorous exams in subject matter and pedagogy to be taken by all prospective teachers prior to licensure in their teaching field. Additional suggestions include raising existing cut scores to equal the rigor of entry-level teachers in other high-performing countries. Teacher quality, the report's authors suggest, requires multiple means and more accurate measures over time. Teacher quality is not a one-shot process (Huang et al., 2002, pp. 10–11).

In short, educators can argue that teacher certification standards are too inconsistent and too low to ensure teacher quality. Certification can be a strong predictor of teacher quality for candidates from strong education schools where students had content knowledge linked to teaching practices and many real-world opportunities to integrate and use these skills with actual students in well-supervised settings. For those from weaker preparations, certification cannot be as strong an indicator of quality.

Should principals consider "content experts" who have academic majors in the discipline they propose to teach but who lack formal education coursework to be equal in potential effectiveness to traditional teacher candidates who have both relevant academic majors and education courses? Although wide variations in philosophy, implementation, and quality of teacher education programs exist, research suggests that many types of teacher preparation are successful in producing teachers who are adequately trained for the complexity of classroom instruction. Teacher candidates from accredited, respected teacher preparation programs, therefore, probably have an advantage—although no guarantee—in terms of potential teaching effectiveness.

Recommendations for Principals

The politics of teacher quality create controversy. Prospective middle level and high school teachers may now apply for positions without the professional skills and knowledge that makes them effective agents of student learning.

This requires principals to interview candidates more rigorously and to spend substantially more time providing meaningful supervision and professional development—in myriad forms—to make new teachers classroom competent. Principals must also ensure that their schools' learning and working environments support teacher retention. The following recommendations will help principals work effectively with NCLB and teacher quality.

Hiring Strategies

Principals can look for prospective teachers who have strong content backgrounds and real world experiences working with adolescents. Teachers' content knowledge is essential, but it is not enough to increase students' achievement.

Principals might consider interviewing candidates about their experiences with adolescents. Prospective teachers who have actually worked with adolescents in camps, in religious contexts such as youth groups or Sunday School, tutoring, in a previous career, or who have raised their own teenagers (or siblings) typically have more realistic views of adolescent behaviors and may be more cognizant of various strategies to manage their energies, social interests, and attention.

The interview process can provide opportunities for candidates to describe the variety of instructional practices that they use to encourage students. Not all teacher education graduates are knowledgeable about these essential skills, either. Extended internships, practicums, and student teaching experiences can also serve as evidence of candidates' supervised, reality based preparation that integrates content and pedagogy. Principals can sponsor preservice classroom observations and student teaching opportunities for teacher candidates, which in turn will allow them to develop their own candidate pool.

Sustain Teacher Satisfaction

Teacher turnover can disrupt the quality of school climate and student achievement. Ingersoll (2002) found that teacher shortages are due largely to teacher dissatisfaction with teaching and pursuit of other jobs. "Well over 90% of new hires are simply replacements for recent departures" (Ingersoll, 2002, p. 21). Improving the quality of work life for teachers and staff will increase teacher commitment, continuity, and cohesion and increase retention.

Large numbers of teachers leave the profession (17% in 2000–2001) for reasons other than retirement, including job dissatisfaction, desire to pursue a better job or another career, or a wish to improve their career opportunities in or out of education (Ingersoll, 2002, p. 21). Some teachers simply migrate to a different school where they expect a higher quality work life. Although principals cannot control teachers' salaries, they can work to remove dissatisfaction

that leads to turnover. Principals can arrange an induction process that includes high-quality mentoring for new teachers to help them quickly understand and adjust to the school culture and role expectations.

Assistant principals and master teachers can orient new teachers to a school's student culture before teachers meet their students. Administrators can help identify ways for new teachers to gain and keep students' respect and focus on learning. Coupled with strong lesson planning and effective instructional practices, these approaches can prevent many student discipline problems.

Peer coaching is another strategy that principals can provide to help new teachers regularly observe and confer with master teachers in their content areas. This allows new teachers to see how masters manage classrooms, focus students on learning, and use instructional practices that connect students with high-level understanding. By asking mature teacher leaders to study, design, and implement induction and mentoring programs, principals give effective teachers greater input and control over decision making and practices that affect their colleagues, their school climate, student achievement, and their own job satisfaction.

If new teachers' classes are reasonably small—compared with those of their more experienced colleague—then they will benefit from increased student feedback and fewer opportunities for disruption as they learn effective classroom management and instructional practices. It will also help if new teachers are not assigned the most challenging schedules as they begin their careers.

Effective principals will respond promptly to teachers' referrals of disruptive or uncooperative students. They will remove students from the classroom and seek to identify and change inappropriate student (and teacher) behaviors. This can be enhanced by prompt feedback to the referring teachers about how the situation was resolved. If returned students continue to be disruptive, it may be best to reassign them to a more experienced teacher.

Another way to invest new teachers in the school is to actively involve them in efforts to identify and address issues that affect teacher work satisfaction and student learning. One can complement this effort by making opportunities for interested teachers to attend state and national conferences and to visit model schools with similar culture and achievement issues to learn ideas and practices that work.

Support Teachers' Development

Principals can provide intensive, job-embedded, ongoing supervision, mentoring, and professional development for all teachers, especially novices without traditional teacher education preparation. Teacher development is

an essential schoolhouse mission; teachers are not "completed professionals" when they first enter their own classrooms.

Giving all new teachers, regardless of backgrounds, with a trial or probationary period allows them time to develop skills and receive close monitoring, ongoing support, and professional coaching. New teachers will also benefit from frequent intensive supervision, observations, conferencing and feedback to assure their growing effectiveness and suitability for continued employment.

Partnerships with local teacher preparation programs help link prospective teachers—traditional and nontraditional—with practicing educators for classroom observations, working with students, teaching sample lessons, and other professional growth activities to develop real-world awareness and skills before entering their own classrooms. By establishing a climate and support structures for individually tailored professional growth, administrators can meet individual teachers' professional needs as well as the organization's needs.

Consume Educational Research Judiciously

In the teacher quality arena, educational research has become a political tool used to underwrite national legislation. Not all research is valid, reliable, or meaningful enough to make informed decisions. Some methodological weaknesses in otherwise important and useful data are inevitable; principals can use their professional judgment about applying such data to their own settings.

Some researchers' own agendas bias their data selection and interpretation and cause them to discount competing research findings. Several credible ways exist to interpret the same data, but it is important to understand the writers' particular biases when making sense of their findings for school purposes. One can enlist trusted professional education writers, publications, and organizations to understand the latest findings and what they mean for their school, their students, and their role.

Summary

Communities are holding principals accountable for improving student achievement and ensuring teacher quality has become a primary concern. Providing students with highly effective teachers over consecutive years is the most important gift a community can give its children. In addition, the No Child Left Behind Act's definition of who is a "qualified teacher" has affected school leadership's day-to-day practice to the classroom level in ways not seen before. These two factors present principals with vital new challenges.

Quality teaching means more than successfully completing an academic major or graduate degree in a subject. It requires knowing how to work suc-

cessfully with teenagers. Secondary school students are adolescents with social, physical, and psychological needs actively competing for attention with school requirements. In reality, relatively few teenagers enter classrooms ready to learn. Getting middle level and high school students focused on learning requires teachers to understand their subjects well enough to create clear relevance and personally meaningful connections to it for a diverse group of students in each classroom. If learning is to occur, then the lesson's topic and skills must be important and interesting to the students, not merely to the instructors. Moreover, effective secondary teaching requires designing and enforcing classroom procedures and expectations into a learning climate that respects students' dignity as educators guide them into appropriate work, study, and interpersonal habits.

Likewise, teaching that works in secondary schools means building strong professional relationships with both students and colleagues. Typical secondary school students rarely produce for teachers they suspect do not like them. In addition, teachers increasingly work in collaborative teams with other educators to plan classroom learning activities, improve their instructional practices, and work with data and strategies in school improvement committees. These daily work requirements tap considerably more than a teacher's content knowledge.

NCLB discounts the professional experience and research literature that supports pedagogy as a middle and high school classroom requirement. It also expects secondary principals to provide these new qualified teachers with more in-depth and intensive on-the-job professional training than site-based school leaders have ever before provided. NCLB significantly extends principals' responsibility for ensuring and developing teacher effectiveness, requiring knowledge, skills, and time well beyond what principals normally provide for teacher evaluation. Even though having secondary principals become teachers of teachers may be positive, it does realign and add to principals' already overwhelming roles.

Students need quality teachers. The academic and political arguments about teacher quality affect how secondary principals do their jobs. Educational research provides useful guidance about which teacher candidates may be most likely to increase student achievement, but it must be used critically and cautiously. Only principals who understand the NCLB law, know how to create and maintain a positive work and learning environment for teachers and students, and know how to select and support promising teaching candidates and teachers will have a school in which all students learn to high levels and no child is left behind.

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