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Research You Can Use

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Both research and common practice confirm the importance of a quality teacher in the classroom. Parents jockey to make sure that their child gets the best teacher. A 1998 survey conducted by Louis Harris and Associates indicated that 55% of those responding chose teacher quality as the greatest influence on student learning. According to Education Week (April 10,2002) “The growing demand for more qualified teachers couldn’t come at a more challenging time for schools. Enrollment in public elementary and secondary schools is projected to grow by 4 percent between 1997 and 2009, to 48.1 million.” Added to enrollment growth are factors of teacher attrition and increasing demands for teachers in class size reduction programs (Curran, 2000.)

This issue of **Research You Can Use** summarizes some of the key information on teacher quality. It also addresses the importance of principal quality and details some of the strategies for tackling the challenge of securing and sustaining quality staff.

The Legislative Framework

Congress in the recently reauthorized Elementary and Secondary Education Act did not want to leave selection of a quality teacher to chance nor parental insistence. Title I Part A requires that districts publish a report on the professional qualifications of a student’s classroom teachers. Title I Part A also mandates that all teachers and paraprofessionals hired with Title I funds be highly qualified beginning this fall.

Title II Part A of the No Child Left Behind Act of 2001 requires that all teachers in the core academic areas be highly qualified by 2005. Title III of the same act, the English Language Acquisition Act, stipulates that districts certify that all teachers in a language instruction educational program for Limited English Proficiency students are fluent in English and any other language used by the program, including written and oral communication skills.

Whitehurst, (2002) outlines the following assumptions as pivotal to the legislative framework:

- Teachers matter (otherwise why focus on teachers at all)
- Teachers vary in their quality (otherwise why distinguish highly qualified teachers from others)
- Quality is affected by

- General knowledge and ability (otherwise why require a bachelor's degree)
- Certification and licensure (otherwise why make that a defining feature of highly qualified)
- Experience (otherwise why distinguish beginning from experienced teachers)
- Subject matter (otherwise why require that beginning teachers have demonstrated through their college major an examination that they have knowledge of the subject matter that they teach)
- Intensive and focused in-service training (otherwise why provide funds to support such activities)
- Alignment between teacher training and standards-based reforms (otherwise why require evidence of such alignment in state applications for funding)

Defining Teacher Quality

How do we define a quality teacher? Ingersoll (1999) notes, "Despite a longstanding recognition of the importance of teacher quality, it is, surprisingly, among the least understood issues in education." Typical definitions of teacher quality look at "teacher inputs." These factors relate to teacher levels and years of experience (Wenglinsky, 2000). Kaplan and Owings, (2001), indicate that two broad areas define teacher quality: teacher preparation/qualifications and teaching practices.

Other writers in the field like Linda Darling-Hammond (1999, p.1) states that the characteristics of teacher quality are: verbal ability, subject-matter knowledge, knowledge of teaching and learning, and the ability to use a wide range of teaching strategies adapted to student needs. Individuals may equivocate on definitions of teacher quality but one thing is certain, the notion of teacher quality is at the forefront of current educational reform (Tell, 2000, Curran, 2000, NEA, 2001, Hirsch, Koppich, and Knapp, 1998, and Haycock, 1998.)

Other Educational Personnel

NCLB does not define a qualified principal. However, it indicates that new paraprofessionals hired this year:

Must have at least two years of: (Title II requirement)

A. Experience in the classroom; and

B. Postsecondary education or demonstrated competence in a field or academic subject for which there is a significant shortage of qualified teachers

"Must have completed at least 2 years of study at an institution of higher education; obtained an associate's (or higher) degree; or met a rigorous standard of quality and can demonstrate through a formal State or local assessment, knowledge of and the ability to assist in instructing, reading, writing, and mathematics; or knowledge of, and the ability to assist in instructing reading readiness, writing readiness, and mathematics readiness, as appropriate." (Title I requirement)

Research Relating to Teacher Quality

Mayer, Mullens, and Moore, (2000) state:

"Substantial research suggests that school quality is enhanced when teachers have high academic skills, teach in the field in which they are trained, have more than a few years of experience, and participate in high quality induction and professional development programs."

Whitehurst (2002) categorizes the research on teacher quality in several areas:

- Recent multi-level studies
- Value added studies
- Certification and licensure
- Subject matter knowledge
- General knowledge and ability
- Experience
- Master's degrees
- Intensive and focused inservice training

The matrix below briefly summarizes key findings from recent research on several of the above factors.

Research Area	Author (s)	Study Results
Multi-level studies	Schreens & Bosker (1997)	Roughly 20% of the differences in student achievement is associated with the schools children attend, 20% is associated with individual classrooms and teachers, and the remaining 60% is associated with differences among the children in each classroom, including the effects of their prior achievement and their socioeconomic background.
Value added studies	Sanders and Rivers (1996) Jordan, Mendro, & Weerasinghe, (1997)	This study contrasted the results of teachers who were successful in producing academic gains and those who were not. The teachers who produced academic gains were designated as effective teachers. Those who did not were designated as ineffective teachers. Children assigned to three effective teachers in a row scored at 83 percentile in math at the end of 5 th grade. Children assigned to three ineffective teachers in a row scored at the 29 th percentile. These gains persisted. Two years after the fact, the performance of fifth grade students is still affected by the quality of their third grade teacher (Haycock, 1998) Researchers in Dallas Independent School District found that reading scores of

		4 th graders assigned to highly effective teachers in a row rose from the 59 th percentile to the 76 th percentile by the end of 6 th grade. On the other hand, the scores of higher achieving students assigned to ineffective teachers three years in a row fell from the 60 th percentile in 4 th grade to the 42 nd percentile by the conclusion of 6 th grade.
Certification and licensure	Miller, McKenna, & Mckenna (1998) Darling-Hammond (1999)	Found no significant differences in student achievement for students whose teachers had been alternatively trained contrasted with those who had been traditionally trained. Teacher qualifications accounted for approximately 40 to 60% of the variance across states in average student achievement levels on the NAEP 4 th and 8 th grade reading and mathematics assessment, after taking into account student poverty and language background.
Subject matter knowledge	Brewer &Goldhaber, (2000); Monk, (1994); Monk & King, (1994); Rowan, Chiang, & Miller, (1997)	High school math and science teachers with a major in their field of instruction have higher achieving students than teachers who are teaching out of their field.
Experience	Rowan (2000)	There was a significant effect of teaching experience on reading and math outcomes in elementary school, with larger effects for later elementary school than early elementary school.
Intensive and focused- inservice training	Cohen and Hill (2000)	The more time that teachers spent in targeted training on the framework and curriculum for mathematics reform, the more their classroom practice changed in ways that were consistent with mathematics reform, and the more that they learned about the content and standards for that reform.

Whitehurst concluded that as a result of his analysis of these studies, teachers matter and differ in effectiveness. “The most important influence on individual differences in teacher effectiveness is teachers’ general cognitive ability, followed by experience and content knowledge. Master’s degrees and accumulation of college credits have little effect, while specific coursework in the material to be taught is useful, particularly in more advanced subjects. Specific, curriculum-focused and reform centered professional development appears to be important to effective instruction.”

Principal Quality

Over the years, the majority of research on principal quality has come from the arena of Effective Schools literature. According to the correlates for effective schools, instructional leadership is essential to the implementation of effective schools. Research (1996) defines the qualities of instructional leadership as:

- The principal acts to effectively and persistently communicate the mission to the staff, parents and students;
- The principal understands and applies the characteristics of instructional effectiveness in the management of the instructional program.

However, a recent study (2000), commissioned by the National Association of Elementary Principals and the National Association of Secondary School Principals speaks more directly to the notion of principal quality. The report studies the strong connection between quality principals and high performing schools and the effects of a principal shortage on education improvement activities. Gerald Terrozi, executive director of NAASP, sums it up nicely by stating, “This report supports the position that a quality school reflects a quality school leader. But for us to have whole-school and not piecemeal academic improvement, we need to address the shortage of qualified candidates, recognize the positive role the principal plays, and support the principal as the instructional leader of a school.”

Ensuring Quality Staff in Every School

The legislative mandates are clear. Every school must have highly qualified staff. Meeting the goal of these mandates will not be easy. Yet, there are strategies that can be implemented to attract and retain highly qualified staff. The involvement of individuals at many levels is essential. Listed below are actions that can be taken to ensure that all students are taught by qualified teachers and all schools are staffed by qualified principals.

State Agencies:

- Implement required activities to increase the number of highly qualified staff.
- Leverage funding by partnering with Institutions of Higher Education and other educational organizations.
- Develop and implement high quality professional development to reduce the number of teachers teaching outside of their field.
- Identify and support strategies proven to be effective in recruitment and retention.
- Publicize the availability of funding for teacher education through programs like Transition to Teaching, Troops to Teachers, and Teach for America.

Institutions of Higher Education

- Establish or revisit standards for students and graduates of education programs.
- Align course offerings with established best practices.
- Explore the development of programs for alternative certification.

School Boards:

- Examine pay for performance contracts.
- Support National Board for Professional Teaching Standards Certification.
- Commission studies of why teachers and principals leave the field.

Superintendents:

- Renegotiate union contracts to allow for flexibility in salary schedules.
- Renegotiate union contracts to give principals more authority to hire staffs.
- Partner with Institutions of Higher Education to develop and implement professional development schools.
- Use available professional development funds to sponsor leadership academies.
- Implement career ladder programs for paraprofessionals and teachers.
- Streamline hiring practices.
- Lure back retired teachers and principals.

Principals:

- Arrange for high quality mentors.
- Allow teacher collaboration in visits to other sites.
- Ensure that all teachers know and use instructional best practices that promote all students' learning.
- Provide extra mentoring, monitoring, professional development, and nurturing to teachers hired through alternative and emergency certification.
- Create learning communities.
- Develop individual teacher professional development plans to ensure that teachers take the necessary coursework and receive the necessary professional development to teach the courses to which they are assigned.
- Ensure that teaching assignments are consistent with a teacher's qualifications.

Teachers:

- Take courses; participate in professional development so that qualifications are consistent with the subjects being taught.
- Explore career ladder options leading to certification as a building administrator.
- Explore the availability of education loan forgiveness programs.

Paraprofessionals:

- Look into the possibilities of scholarships to support further education.
- Investigate district career ladder options.

Conclusion:

The strategies above are just some of the potential solutions to solving the vexing problems of educator quality. Solving these problems will require the collaborative efforts of policy makers and practitioners at all levels. Collaborative efforts that involve multifaceted strategies are key to success. These types of strategies require short and long term planning as well as coordination of resources. Nevertheless, we must bring a sense of urgency to meeting the challenges involved in recruiting and retaining quality staff. A generation of children cannot wait until we have just the right plan or process. Our children need quality educators now!

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Useful Weblinks

American Association of School Administrators: <http://www.aasa.org>

National Association of Elementary Principals: <http://www.naesp.org>

National Association of School Boards: <http://www.nasbe.org>

National Association of Secondary School Principals: <http://www.nassp.org>

National Board for Professional Teaching Standards: www.nbpts.org

National Council for Accreditation of Teacher Education: <http://www.ncate.org>

National Staff Development Council: <http://www.nscd.org>

Southeast Center for Teaching Quality: www.teachingquality.org

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