A Review of Literature
On Beginning Teacher Induction

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SNAPSHOT OF THE CURRENT CONTEXT

Research shows that a highly qualified teacher workforce—composed of skilled, knowledgeable, culturally astute, and compassionate beginning[1] and veteran educators—is the single greatest leverage point for assuring that all students achieve at their highest level (Berry, 2004; National Commission on Teaching and America's Future, 1996). Indeed, the authors of *What Matters Most: Teaching for America's Future* (1996), the report of the National Commission on Teaching and America's Future, assert that, "A caring, competent, and qualified teacher for every child is *the* most important ingredient in education reform" (p. vi).

Unfortunately, not every teacher has the tools they need to help children excel in the classroom and to implement systemic reforms. Studies of beginning teachers from a variety of both traditional and alternative teacher preparation programs show that many new teachers do not feel adequately prepared to meet the challenges they face when they first begin teaching in their own classrooms (Berry, 2004; Public Education Network, 2003). Further, new and veteran teachers alike are being swept up by rapidly moving currents of change—in what they are expected to know and be able to do in the

[1]Research suggests that the traditional definition of beginning teachers—novice educators who have recently completed teacher preparation programs—needs to be broadened to include mid-career entrants who may have pursued alternate or no routes of certification en route to their classroom and first career entrants who intend to teach for a few years before pursuing their "real" careers (Johnson, 2005).

classroom, in national education policies, and in the population of students they serve—that bring new pressures to bear on an already stressed workforce.

New challenges, including pressures for standards-based teaching required by No Child Left Behind[2] and the increased multicultural composition of the student population, are requiring teachers to continually master new competencies and refine their practice to meet students' needs. At the same time, teachers continue to experience lower rates of job satisfaction caused by many factors, including "a general lack of public support for teaching as a profession," (Zeichner, 2003, p. 494), poor working conditions, and low salaries. Consequently, our nation's schools suffer from high rates and costs of teacher attrition and turnover[3]—especially among new teachers and those in high-poverty schools (Johnson, Berg, & Donaldson, 2005). Exacerbating this staffing crisis is the fact that a large population of teachers is nearing retirement age, and in the decades to come it will be critical to attract, support, and retain an equally large or larger influx of new teachers to meet the growth of the school-age population.

Across the United States, school and district leaders are beginning to recognize the critical importance of providing sustained and purposeful professional support to teachers, including—and perhaps especially—those in the beginning years of their profession, as a means of maintaining a strong, stable workforce and improving measurable outcomes for student learning (Berry, 2004; Johnson et al., 2005). However, as many as fifty percent of beginning teachers do not participate in induction programs beyond a one-time orientation and only 1% of the new teacher workforce participates in

[2]The No Child Left Behind legislation requires a "highly qualified teacher" in every classroom in the United States by the end of the 2005–2006 school year.

[3]Johnson et al. (2005) suggest the following use of language when discussing teacher "attrition" and "turnover." When teachers leave the teaching profession altogether, it is referred to as "attrition," whereas when teachers leave their jobs in schools and move from one school to another, it is called "turnover."

the kind of comprehensive program recommended by researchers (Alliance for Excellent Education, 2004; Johnson et al., 2005). Further, there can be a gap between programs' articulated intentions and actual outcomes. Found in the literature of beginning teacher induction efforts are acknowledgements that not all induction programs work well or perhaps as intended. Surveys of, and interviews with, beginning teachers frequently cite the misalignment of intended and actual support (a recognized but missed potential for support) or raise issues of relevance (Fideler & Haselkorn, 1999; PEN, 2001).

ADDRESSING THE NEEDS OF NEW TEACHERS IN THE 21ST CENTURY

This review of teacher induction[4] literature is designed to summarize current research on the practices, policies, and programs intentionally developed to support novice teachers. The literature is both significant and significantly recent—many of the studies described herein were conducted during the last two decades.

Studies provide clear evidence of the rising number of beginning induction programs under development at state and district levels. While researchers have amassed a large and growing body of qualitative reporting about the rationale for, impact of, and features of such programs, only a smaller number of quantitative studies exist. Accordingly, several researchers present cautionary arguments, citing that the lack of empirical, quantitative data and the interdependent nature of "effective practices" in schools, leave conclusive, data-rich analysis of the impact of mentoring and/or teacher induction currently beyond reach (Feiman-Nemser, 1996; Ingersoll & Kralik, 2004; Lopez et al., 2004).

[4]Key words include induction, new teacher support, mentoring, and orientation.

Two other factors also make it difficult to make unequivocal statements about effective teacher induction. The wide variability of factors in programs of beginning teacher induction (e.g., elective vs. mandatory participation and one or two component vs. multiple component programs) thwarts researchers who attempt to gauge "impact" (Fideler & Haselkorn, 1999). Further, many researchers report that few teacher induction programs include a rigorous outcomes-based orientation that measures changes in teachers' practice or, even more significantly, gains in student achievement (Ingersoll & Kralik, 2004; Lopez et al., 2004; Wong, Britton, & Ganser, 2005).

Despite these fissures in the teacher induction knowledge base, and while further research is clearly and urgently needed on every aspect of teacher induction, the data that is available can provide program developers with useful insights into promising strategies and potential pitfalls. In the pages that follow, information culled from a widespread review of studies on various aspects of teacher induction is presented in four key areas:

1. Program components identified as effective
2. Conditions that help to support and sustain induction efforts
3. Potential benefits of induction programs
4. The role of induction in bridging system gaps

1. Program Components Identified as Effective

As is true of much of the teacher induction literature, existing studies do not conclusively establish the program components that have the greatest potential to affect the quality and retention of beginning teachers (Lopez et al., 2004). While more research is needed to

verify which aspects of programs are the most productive, some effective program components have begun to be identified (Lopez et al., 2004).

Two recent papers drawn from different sources—Recruiting New Teachers and the Alliance for Excellent Education (Alliance for Excellent Education, 2004; Fideler and Haselkorn, 1999)—identify and describe nearly identical criteria for establishing comprehensive programs of new teacher induction. They recommend that schools and districts incorporate the following components into their processes for inducting new teachers.

COMPONENT	FUNCTION/STRUCTURE
Orientation Program	• Address building and district norms. • Identify available resources.
Quality, Structured Mentoring	• Select mentors according to rigorous criteria. • Establish provisions for time, support, and stipends. • Assure that mentor/mentee matches have a common instructional focus.
Common Planning Time	• Focus on lesson design and curriculum. • Use student assessment data to guide planning. • Promote collaboration.
Intensive and Ongoing Professional Development	• Identify the teaching needs of the beginning teacher and the mentor. • Expand content knowledge. • Address diversity in learning and culture.
External Network of Teachers	• Enable mentors and novices to gather in like groups. • Encourage reflective dialogue.
Standards-Based Evaluation	• Match established standards to practices. • Support demonstrations of performance. • Encourage peer review.

Each report also includes case study investigations structured to illustrate the identified components. Both studies highlight a cross-section of state, district, and/or

partnership-sponsored programs and would, therefore, be instructive to legislators and educators pursuing a range of possible models of induction service.

Another report, written by Stansbury and Zimmerman (2000) for WestEd, recommends three types of support and two levels of intensity for new teacher induction. The three types of support the authors advocate are personal and emotional support, task or problem-focused support, and support with critical reflection on teaching practice**.** They also identify low- vs. high-intensity support strategies. Low-intensity levels might include orienting new teachers, matching beginning and veteran teachers, adjusting working conditions, and promoting collegial conversations. High-intensity supports might include selecting and training effective support providers, providing release time, developing mini-courses to address common challenges, examining evidence, networking and group observation, and providing advice.

Two additional reports offer a look at the programmatic elements of teacher induction in the United States within the international context (Britton, Raizen, Paine, & Huntley, 2000; Wong, Britton, & Ganser, 2005). Although the countries compared (China, France, Japan, New Zealand, and Switzerland) were unique in their methodology, researchers identified three commonly shared characteristics that were not found to be prevalent in teacher induction practices in the United States: a high degree of structure, a focus on professional learning, and an emphasis on collaboration.

Of the components significant to quality beginning teacher induction programs, mentoring has generated the most discussion, description, and research. Early literature on mentoring focused primarily on the mentor's function as a support to the transition

into and survival of a novice teacher's first year. The emphasis was on the practical, short-term, and often emotional needs of the beginning teacher (Feiman-Nemser, 1996).

In contrast, over the last decade, program developers and researchers have begun to explore the potential of mentoring to serve as a tool to strengthen teachers' capacity throughout their careers and advance reform agendas. Wang and Odell (2002) conducted a review of mentoring as it relates to learning to teach in reform-minded ways. They found that current mentoring assumptions for teachers (humanistic, situated apprentice, and critical constructivist) all have "limitations in developing teacher mentoring into a substantial and effective support for novices learning standards-based teaching" (p. 532). The authors suggest that a re-conceptualization of teacher mentoring may be required to meet the current reform agenda.

With these shifts in perceptions of the role of mentoring and the mentoring relationship, the expectations of and skills required by mentors have dramatically expanded. The corresponding literature (e.g., Lipton, Wellman, & Humbard, 2001) has shifted its focus to examine the needs of mentors, as well as protégés.

The importance of meeting the professional growth needs of mentors is underscored by researchers Ingersoll (2004) and Feiman-Nemser (2001), who separately raise the issue of mentoring experiences that, on the basis of poor and/or outdated models of practice held by some veteran teachers, actually impede new teacher growth and undermine the intended reform agenda. Similarly, Darling-Hammond (2005), in an article entitled "Educating the New Educator: Teacher Education and the Future of Democracy," paints a compelling picture of the complexity of what today's teachers are asked to know and demonstrate. Often, she asserts, we are asking teachers to practice in ways that are

substantially different from those that have been experienced before. Expecting that even veteran teachers will possess the knowledge and communication skills to articulate this new agenda is a concern.

The "Mentor Professional Development" brochure outlining the work of mentor development at the Santa Cruz New Teacher Project (SCNTP) (2004) suggests that mentors need the same kind of "supported induction and opportunities for ongoing learning" that new teachers do. The SCNTP model of mentor professional development includes professional development/training, a mentor learning community, and peer coaching.

The confluence of these same three components is examined in an induction research paper that describes a non-traditional beginning teacher induction program in Alabama that sought to cultivate the development of job-alike (mentor and mentor, new teacher and new teacher) communities (Good & Bennett, 2005). The program served novice teachers from 15 public school districts geographically adjacent to the University of Alabama, and the authors identify several factors that they believe contributed to the strong "learning community" that evolved. First, the neutral location of the program, the University of Alabama's in-service center, brought teachers together from sometimes politically/personality charged district environments. Quickly, the participants recognized the commonality of their concerns and felt less isolated and better understood. Second, the veteran mentors leading the monthly gatherings ended each session with an informal needs assessment, allowing the novice teachers at the table to make known their needs. These topics were then incorporated into the plan for the session in the following month, giving new teachers a sense of empowerment and fulfillment. Finally, Bennett identifies

the powerful implication of the university's role in pre and post service education. She served as an information link, sharing with her university colleagues—in both formal and informal ways—the topics raised and needs expressed by new teachers in their first year of teaching and their possible implications on the pre-service curriculum.

2. Conditions that Help to Support and Sustain Induction Efforts

The review of teacher induction research reveals another important reality: without some essential supporting conditions, the most comprehensive and complete program of new teacher support will yield few results. As with the program components, there is beginning to be a shared understanding of these conditions across the major studies and reports reviewed (Alliance for Excellent Education, 2004; Fideler & Haselkorn, 1999; Knapp et al., 2004; PEN, 2001; Stansbury & Zimmerman, 2000). Enabling conditions include:

- A view of induction that is multi-year and developmental
- Strong principal leaders who understand the needs of beginning teachers
- High-quality providers of the induction program with dedicated staff resources
- Additional support for new teachers with little preparation
- Incentives for novice and veteran teachers to participate in induction activities
- Alignment between induction, classroom needs, and professional standards
- Tight coordination of efforts and cooperation with unions
- Adequate and stable source of funding
- A commitment to an outcomes-rich evaluation model

There is evidence in the literature of beginning teacher induction that a small number of districts and states are providing, sometimes with a partner such as a university, research center, or federation, a population of their beginning teachers[5] with programs that meet many or most of the criteria established above. Several programs cited as model programs to watch are found in the Appendix to this review.

A significant contribution to the research on the conditions that enable programs of beginning teacher assistance to gain traction and to impact the experience of novice teachers has been made by the work of The Project on the Next Generation of Teachers. Led by Susan Moore Johnson and a cohort of colleagues and researchers at Harvard's Graduate School of Education, this series of studies concludes that neither the structures nor the cultures of our nation's schools are well suited to the specific needs of new teachers. Rather, the persistent patterns and policies in schools tend to favor the "retiring" generation of teachers. In looking at the experience of a sampling of teachers across four states, the researchers were successful in identifying three professional orientations, or cultures, that dramatically influenced the professional experience of the teachers within them. These cultures are identified as veteran-oriented, novice-oriented, or integrated professional (Johnson et al., 2005).

- Veteran-oriented: workplace norms are set by veteran teachers who protect individual autonomy; little exchange between new and experienced teachers
- Novice-oriented: values and work modes are determined by a predominantly novice faculty; new teachers' work is uninformed because

[5]Even some of these more comprehensive inductions programs operate on a voluntary basis, and many continue to serve only credentialed, full-time classroom teachers and do not lend support to alternately certified, part-time, or non-classroom personnel.

there are few opportunities for novices to interact with experienced teachers

- Integrated: ongoing professional exchange among all teachers across experience levels.

What is instructive from this research for the development of effective programs of support for beginning teachers is the examination by Johnson and her colleagues of what promotes an integrated professional culture in schools and the identification of the location where the "key factors influencing new teachers' experience converge," which is at the school level (Johnson et al., 2001, p. 2). According to Johnson (2004), "In integrated professional cultures, mentoring is organized to benefit both the novice and the experienced teachers, and structures are in place that further facilitate teacher interaction and reinforce interdependence" (p. 159). The "novice status" is held in high regard, and novices and experienced teachers share the responsibility for growth.

3. Potential Benefits of Induction Programs

The complexities of and gaps in the induction research base are laid bare when one seeks to examine the potential benefits of programs for new teachers. For example, the wide disparity of quality and scope tolerated for what is included in the term teacher induction poses a particular challenge to any researcher interested in evaluating the effects (e.g., on retention, on student achievement) of induction programs. Thus, when briefs and policy statements use language about the positive impact of new teacher induction, it can be misleading if there is no information regarding the comprehensiveness of the induction program being referenced and the methodology used to measure the impact.

Despite these limitations, a growing body of impact findings contained in teacher induction literature warrants closer examination and discussion. Analyzing the literature for themes yielded five areas of potential impact that are detailed in the pages that follow:

- reduction in teacher attrition from the profession
- reduction in the costs of attrition
- increased teacher satisfaction
- enhanced professional growth
- development of a tiered professional career model

Reduction in Attrition

The largest share of impact literature relates to the implications of new teachers' participation in induction on rates of attrition, which here refers to teachers who leave the teaching profession altogether. Britton (2000), citing from Education Week's "Quality Counts" reports the following findings: twenty-three percent of teachers leave the profession within their first three years of teaching; the brightest novice teachers, as measured by their college entrance exams, are the most likely to leave teaching; and beginning teachers who did not participate in an induction program were twice as likely to leave teaching.

In a review of 12 studies carefully selected from an extensive search for empirical evidence of the impact of beginning teacher induction on teacher retention, Lopez et al. (2004) uncovered few such studies that exhibited rigorous research. From the studies they chose to review, they found enough methodological weaknesses to lead them to write, "Taken together, although this research includes some positive findings, the studies are not strong enough for us to conclude that induction works—that it improves teacher

retention" (p. 33). The authors are careful to state that induction may work, but that current literature prevents making conclusions about the impact of beginning teacher induction on reducing attrition. Johnson et al. (2005), who conducted an extensive review of induction literature, drew similar conclusions.

At the same time that Ingersoll (2004) confirms the lack of statistically relevant evidence in new teacher induction studies, he has also found, in a review of 10 induction program studies conducted with colleagues, "empirical support for the claim that assistance for new teachers and in particular, mentoring programs, have a positive impact on teachers and their retention" (Ingersoll & Kralik, 2004). In one of the studies they reviewed, they report that retention data was collected for two groups of teachers: those participating in a year-long program for first year teachers within an unspecified district and retention data for all beginning teachers within the state studied. Four years after their mentoring experience, 88% of the participants in the program were located. While the statewide attrition data for beginning teachers averaged over 9% per year, the turnover rate for participants in the mentoring program was 4% for four years.

In another reviewed study of the Montana Beginning Teacher Support Program, researchers found significance in a two-year comparison of retention rates for mentored and non-mentored beginning teachers from year one to year two (92% of mentored remained as compared with 73% of non-mentored in year one; 100% of mentored remained as compared with 70% of non-mentored in year two) (Ingersoll & Kralik, 2004). In an NCES study (2000) that looked at new teachers in the first three years of teaching, the attrition rate of new teachers who received induction support was 15%,

compared with an attrition rate of 26% for novice teachers who had not participated in any induction program (Berry, 2004).

In a study specific to Washington State, researchers from the University of Washington collected data about teacher attrition and mobility rates in a study entitled "Teacher Retention and Mobility: A Look Inside and Across Districts and Schools in Washington State" (Plecki et al., 2005). Their findings show that Washington State's new teachers have lower attrition rates (25%) over a five-year period than the national norm (50%) (Alliance for Excellent Education, 2004, p. 1) but higher mobility rates (60-65%) compared with the national norm (44%). What is significant and possibly instructive for state and district policy makers when considering mentoring and induction programs is the range of attrition rates for districts within the sample: from 16% in Yakima to 42% in Bellevue (Plecki et al., 2005).

Reduction in the Costs of Attrition

Ingersoll and Smith (2003), who advocate attention to teacher retention, suggest that spending money to recruit new teachers to meet staffing shortages is a lot like putting water into a leaky bucket if these teachers leave in a few short years. At a time when there is a scarcity of resources in education, the drain of money spent on recruitment is a real concern (pp. 32–33). Berry (2004) writes, "With new teachers turning over at astronomical rates, school and district resources are withered away as more dollars have to be spent on preparing a constant new crop of novices who arrive with little teaching knowledge and leave before they become skilled" (p. 18).

In a discussion of why teacher retention matters, Johnson et al. (2005) describes three types of costs associated with turnover of new teachers, costs that compound in

conjunction with one another: instructional, organizational, and financial. Instructional costs are related to the general level of instruction that students experience when inexperienced teachers, who are generally acknowledged to need time to become competent in their practice and who tend to leave their schools more often than experienced teachers, are replaced by other novice teachers. Citing a study conducted by Neild, Useem, Travers and Lesnick (2003), Johnson et al. (2005) point to the organizational costs as the potential loss of "a coherent education program, institutional memory, and staff cohesion" (p. 13). Students, teachers, and administrators all pay these costs.

Methods and models vary widely for calculating the financial costs of new teacher turnover. One fairly conservative method estimates that the cost of recruiting, hiring, and training a new teacher is approximately 30% of the leaving teacher's salary (Alliance for Excellent Education, 2004, p. 64). Multiplying out the individual, unrecoverable cost by the number of new teachers hired each year due specifically to loss of teachers from the profession sets a compelling argument for strengthening efforts to retain teachers. A study of new teacher attrition conducted in the year 2000 in Texas identifies an *annual* state budgetary cost of between $329 million and $2.1 billion based on an annual, statewide 15.5 percent turnover rate and on the model selected for calculation (Berry, 2004; Johnson et al., 2005).

While quality, sustained professional development for novice and veteran teachers is costly, it also contrasts significantly and favorably to the costs outlined above. The average per teacher cost of three multi-component programs of new teacher support (Connecticut's BEST, Louisiana's LaTAAP, and LaFIRST, the

Toledo Plan) is $3500.00 (Alliance for Excellent Education, 2004). Even in Washington State, where attrition rates fall well below the national average, there are still about 500 new teachers replaced each year (Plecki et al., 2005, p. 27). Using the standard business calculation for employee replacement—150 percent of a new teacher's salary—it requires $42,000 of taxpayer money to replace every new teacher who leaves the profession. In Washington, that's $21 million lost every year. Providing the same 500 teachers with a quality, sustained professional development program would only cost $1.75 million, as well as provide an investment in the stability important to students and schools. Thus, policy makers and school leaders have the opportunity to fully realize a long-term combined benefit from making an investment in new teachers through quality induction services.

Increased Teacher Satisfaction

Johnson et al. (2005) distinguish mentoring programs (one-on-one support from an experienced colleague, ideally in the same field) from induction programs, which often include one-on-one mentoring accompanied by other supports such as seminars, release time, and peer observation. She suggests that it is often difficult to tell if mentoring and induction programs alone make a difference in teacher retention because schools and districts that have such programs often also support teachers in other ways that would make them more likely to retain teachers.

Surveys have been widely used to measure novice teachers' perceptions of the impact of mentoring or induction programs on their practice, job satisfaction, and decision to stay in the teaching profession. In a study of positive and negative influences

of such programs conducted by the Public Education Network (PEN) (PEN, 2003), mentoring and peer/support were rated among the top five positive influences on teaching satisfaction. Ingersoll and Smith (2004), in an analysis of the 1999–2000 Schools and Staffing Survey (SASS), found that almost 9 in 10 new teachers reported that their mentors were helpful (p. 690). In a review entitled, "Who Stays in Teaching and Why: A Review of the Literature on Teacher Retention," Johnson et al. (2005) reports that mentoring was particularly positive for new teachers who "taught the same grade and subject as their mentor and worked more often with him or her" (p. 88). The absence of support, especially during the first year of teaching, has been cited as a primary reason for leaving (over pay and job conditions) (Joftus et al., 2002).

In what Johnson et al. (2005) describes as a "recent and well-done study," Smith and Ingersoll (forthcoming) reveal that the number of components in new teacher induction programs correlates positively with a lower percentage of predicted probability of teacher turnover. For example, teachers who experience no induction are more likely to leave their school or teaching altogether than teachers who experience an induction program with seven components (p. 89). Johnson et al. (2005) sum up the research on the effectiveness of mentoring and induction: "Overall, the lesson to be learned is that, under certain conditions, mentoring and induction are associated with increased new teacher satisfaction and retention" (p. 89).

Kardos (2002) and her colleagues at the Project on the Next Generation of Teachers at Harvard's Graduate School of Education completed a study entitled "New Teachers' Experiences of Mentoring, Classroom Observations, and Teacher Meetings: Toward an Understanding of Professional Culture." She reports the results of "an

exploratory, quantitative survey study of…new teachers' experiences of certain formal structures of support" (p. 1). The study involved teachers from New Jersey in a follow up to a more qualitative study from the prior year that involved populations of beginning teachers in four states, including New Jersey. The two studies together are instructive in pointing to the significance of where beginning teacher supports need to be located to be effective. Beginning teacher responses in these studies clearly identified the importance of embedding the structures of new teacher support at the school level and within the context of work already underway.

Enhanced Professional Growth

Recent research is changing, or perhaps broadening, the focus of the national agenda regarding student outcomes. Whereas the spotlight once clearly illuminated the student within his/her family context, the spotlight now highlights the student within his/her teacher context. Higher levels of teacher preparation and certification are associated with higher levels of student achievement (Darling-Hammond, 2005). Several studies document the corresponding negative impact on student achievement in schools and districts with high levels of teacher turnover, uncertified staff, and/or teachers teaching out of subject (Berry, 2004; Lankford, Loeb, & Wykoff, 2002; Plecki et al., 2005).

No research was found on outcome-based studies that directly link levels of participation in teacher induction practices with a rising rate of student achievement among the students they serve. However, there are numerous papers, surveys, and articles that document the positive influence the mentor/mentee relationship has on the teaching practice of both participants in the equation. In a review of literature on selecting and retaining mentors, Mullinix (2002) cites Huling and Resta's (2001) research on the

outcomes, or benefits, experienced teachers receive: improved professional competency; reflective practice; "professional renewal; psychological benefits (enhanced self-esteem); collaboration and collegiality; contributions to teacher leadership; and pedagogical inquiry/teacher research" (p. 3). In a review of Connecticut's teaching policies, conducted by researchers from the Center for the Study of Teaching and Policy, both mentors and assessors identified gains in the development of their thinking in regard to the state-embraced teaching competencies—a standard to which all, not just new teachers, are held (Wilson et al., 2001).

In *Tapping the Potential* (2004), a report commissioned by the Alliance for Excellent Education (AEE), a study by Villar (2004) reveals that teachers participating in a comprehensive model of induction develop teaching skills and capacities more rapidly, minimizing "the time it takes for new teachers to perform at the same level as an experienced teacher" (p. 2). No studies were located that specifically evaluate the impact (as opposed to the content) of professional knowledge gained through induction programs. However, in the literature documenting the conditions common to highly effective schools, schools where achievement levels are significantly on the rise, collegial conversation occurs frequently, across levels, and about classroom practice, there is a tightly articulated vision for and strongly held beliefs about student *and* teacher capacity. It is evident that the conceivers and developers of beginning teacher induction models that move beyond orientation and mentoring are intentionally incorporating these enabling practices (assessment driven planning, reflection, etc.) into their work with novice teachers.

Tiered Professional Career Model

Several reports on beginning teacher induction programs highlight the development of a tiered professional career model as a potential benefit to addressing the needs, and the needs over time, of teacher development. The Career in Teaching Program of Rochester, NY serves as an example. It identifies the following four professional levels, or rungs, on a career ladder.

PROFESSIONAL LEVEL	REQUIREMENTS
Intern Teachers	Teachers who have completed a teacher preparation program with a practicum and are in their first full year of teaching within their certificate area.
Resident Teachers	Teachers who have successfully completed their intern year; they are evaluated by both a peer review and a supervisor; resident teachers who meet criteria within five years move to next level.
Professional Teachers	Teachers receiving tenure who are reviewed using a Performance Appraisal instrument that includes interviews, observations, and student data.
Lead Teachers	A voluntary leadership opportunity program open to highly qualified teachers with at least five years in the RCSD system; duties may include adjunct positions at schools of education, mentoring roles, or positions as demonstration teachers (Fideler and Haselkorn, 1999).

Unfortunately, research that explores the effectiveness of career ladders and differentiated roles as an incentive to remain in teaching and as an influence in teacher satisfaction is both dated and inconclusive. It is evident, however, that teachers, novice and veteran alike, articulate a preference for differentiated roles during their career (Johnson et al., 2005).

In addition to these roles identified and defined for career ladders, a new call for teachers to serve as “teacher leaders” has arisen. With the recent explosion of “coaching”

roles and conversions to “small schools,” and the increasing formalization of mentoring as an effective component of quality induction, new opportunities and newly defined roles for teacher leadership are developing at a rapid rate. Many educators and researchers interested in the development of teacher leadership (Darling-Hammond, 2003; Feiman-Nemser, 2001; Ingersoll & Smith, 2003; Swanson, 2000; Wang & Odell, 2002) write of their concern over the quality of current research efforts in this important issue. There are many studies that offer descriptors of teacher leadership and few that include measures of impact such opportunities have on teachers or clearly conceived theories of how teacher leaders lead others (Swanson, 2000).

4. The Role of Induction in Bridging System Gaps

The most quantifiable, compelling, and worrisome consistency in the literature dealing with beginning teacher induction emerges from the statistics that compare rates of retention, attrition, certification levels, teacher attendance rates, and, among other indicators, student performance in schools serving low-income students as compared with schools serving high-income students. Johnson (2004) and her colleagues studied hiring practices, relationships with colleagues, and curriculum and found evidence of what they term “the support gap.” They examined rates and quality of mentor-new teacher interaction and the appropriateness of mentor match (same grade, same school, etc.) and found a statistically disquieting variation for all three points. For example, in their study, 61% of teachers in high-income schools were matched with mentors at the same grade level as compared with only 28% in low-income schools. The evidence from the studies of Johnson et al. (2004, 2005) are clear: new teachers working in schools with large

numbers of low-income students often do not receive the support needed to do their jobs well. Given that research shows that new teachers are more likely to feel successful when they feel supported in their early years of teaching and thus to remain in their school and in the teaching profession, this "support gap" is cause for alarm.

Findings from an Education Trust study cited by Johnson et al. (2004) are similarly troubling: "No matter which study you examine, no matter which measure of teacher quality you use, the pattern is always the same—poor students, low-performing students, and students of color are far more likely than other students to have teachers who are inexperienced, uncertified, poorly educated, and under-performing. Many of those teachers demonstrate most or all those unfortunate qualities all at the same time" (Carey in Johnson et al., 2004, p. 2). Exacerbating the problem, according to Berry (2004), is the limited research on how to recruit, train, and retain teachers for hard to staff schools, and further, that what is known is not well used.

Closely related to the "support gap" described by Johnson et al. (2004) is a second well-documented gap identified by Zeichner (2003) in his study, "The Adequacies and Inadequacies of Three Current Strategies to Recruit, Prepare, and Retain the Best Teachers for All Students." He reports on the "growing disparity between the students who attend public schools in the United States and their teachers" (p. 492). Almost 90 percent of U. S. schoolteachers are white, monolingual, and middle class (Delpit, 1995; Melnick & Zeichner, 1998; Paccione, 2000). That percentage is not likely to change in the near future in the face of dropping participation and interest in the U. S. teaching force by people of color. At the same time, the student population in the United States is becoming increasingly multicultural, with nearly 40 percent of public schoolchildren

considered nonwhite at the turn of the twenty-first century. Paccione (2000) summarizes the situation, “As the K–12 student population grows increasingly more racially and culturally diverse, the nation’s teaching force is on track to maintain a profile that is overwhelmingly white” (p. 982).

Challenges emerge from this racial and cultural dichotomy, especially since many of the teachers and students affected are often located in hard to staff schools. Gay (1993) describes “a growing cultural and social distance between students and teachers that is creating an alarming schism in the instructional process” (p. 287). Most of the problems that have arisen from this cultural dichotomy stem from teachers’ lack of experience and inadequate preparation to relate to or work effectively with students whose experiences and values are different from their own. Melnick & Zeichner (1998) state, “Teacher candidates, for the most part, come to teacher education with limited direct interracial and intercultural experience, with erroneous assumptions about diverse youngsters, and with limited expectations for the success for all learners” (p. 5). The cultural gap between teachers and students is widened, Zeichner (2003) shows, by an inadequate response or inability on the part of many teacher educators to prepare culturally competent teachers.

The “balance” of white teachers and teachers of color is unlikely to shift soon as higher paying jobs attract graduates from ethnic minorities away from teaching. A comprehensive induction program for new teachers becomes critical in hard to staff schools where teachers need ongoing development in cultural competency, because teachers who are not prepared or well supported in their work with culturally and economically diverse schoolchildren are more likely to become teacher turnover statistics and add to weakened teaching practices (Johnson et al., 2005, p. 11).

CONCLUSION

It is clear that "the quality of our nation's schools depends on the quality of our nation's teachers" (Feiman-Nemser, 1996, p. 1013), and differences in teacher capability can account for great variation in student learning (National Commission on Teaching and America's Future, 1996, pp. 6, 8). Unfortunately, high-quality teachers do not materialize out of thin air or come ready-made.

Mastering the art of teaching is a process that takes time, and even new teachers with the best preparation require and respond to quality support. In the 21st century, the need to guide novice teachers in successfully navigating changes in their profession, in learning standards, and in the student population itself is greater than ever before.

Today's cadre of beginning teachers—whether freshly emerged from the world of academe, crossing over from careers in other disciplines, or first career entrants who intend to teach for a few years before pursuing their "real" career—are greeted by a world of keen expectations and challenging conditions different from those faced by their counterparts even a decade ago. The needs of these beginning teachers may vary based on their level of preparation and qualification, but all can benefit from comprehensive programs of induction.

In making a case for a multi-level induction program for teachers, Feiman-Nemser (1996) cites Bush (1983) to explain the importance of a teacher's early experiences in the classroom: "The conditions under which a person carries out the first years of teaching have a strong influence on the level of effectiveness which that teacher is able to achieve and sustain over the years; on the attitudes which govern teachers'

behavior over even a forty-year career; and, indeed on the decision whether or not to continue in the teaching profession" (Bush, 1983 in Feiman-Nemser, 1996, p. 1026).

All teachers need to refine their craft and reach their full potentials as educators, systemic change agents, and leaders. Feiman-Nemser (1996) writes, "Placing serious and sustained teacher learning at the center of school reform is a radical idea. It challenges dominant views of teaching and learning to teach. It calls for a major overhaul in provisions for teacher preparation, induction, and continuing development. It requires capacity building at all levels of the system" (p. 1014).

As an essential step in placing teacher learning squarely at the center of school reform, school districts need to assess beginning teachers' needs and design outcome-focused programs that borrow from the best of what is known about effective induction. Districts' innovative efforts must then be examined by carefully constructed studies that yield statistical data for analysis and provide research-based models that can be replicated nationwide. Only then will our schools obtain a stable, highly qualified teaching workforce, and only then will each child walk into a classroom and find a highly qualified teacher who is prepared to meet his or her unique needs.

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APPENDIX

Model Programs of Beginning Teacher Induction

- Connecticut's Beginning Educator Support and Training (BEST) Program http://ctbest.org/
- California's Beginning Teacher Support and Assessment (BTSA) http://www.btsa.ca.gov
- Texas's Beginning Educator Support System http://www3.baylor.edu/txbess/
- Ohio's Formative Induction Results in Strong Teaching (FIRST) Program Contact: Judith Monseur, judith.monsieur@ode.state.oh.us (614) 995-1987 (fax)
- The Santa Cruz New Teacher Project at the New Teacher Center at the University of California at Santa Cruz http://www.newteachercenter.org/
- The Louisiana Teacher Assistance and Assessment Program http://www.doe.state.la.us/lde/pd/623.html
- The Toledo Plan: Toledo School District and Toledo Federation of Teachers http://www.tft250.org/the_toledo_plan.htm

KEYWORDS: beginning teachers, induction program, teacher self-efficacy, new teacher. support, teacher attrition. William Jesse Bacon April 13, 2020.Â Teacher Attrition Literature Review. Every year beginning teachers enter classrooms across the United States with a passion and inspiration to make a significant difference in the lives of the students they serve. For many, these emotions quickly fade, as nearly half of beginning teachers leave the field within the first five years of teaching (Ingersol & Strong, 2011). Many districts create support systems in the form of induction programs. Even though the programs that are offered vary significantly, teachers seem to benefit from any level of support. Recommended Citation. Miao, Juan, "Beginning Teacher Induction at Three Elementary Schools in China: A Case Study" (2009). Seton Hall University Dissertations and Theses (ETDs). 308. https://scholarship.shu.edu/dissertations/308. Beginning teacher induction at three elementary schools in china: a case study by juan MIA0. Dissertation Committee Elaine M. Walker, Ph. D., Mentor.Â Limitations and Delimitations There were limitationsin this research in the areas of literature review, research methods, and writing. However, in every step of this study, the researcher took considerable deliberation and effort to make sure that the research was conducted thoroughly and appropriatelyin order to present results with validity and reliability. a Beginning Teachersâ€™ Conference that the ATA organized in the fall of 2007. The sample was representative of the provincial teacher population in terms not only of gender (83 per cent of participants were female and 17 per cent were male) but also of geography (all convention areas were represented as well as urban, rural, remote and semirural settings).Â In conjunction with the study, the researchers reviewed the literature on early-career attrition, the experiences of new teachers and the efficacy of various induction practices. This review yielded the following findings: â€¢ Early-career attrition rates are difficult to measure. â€¢ Among the major causes of early-career attrition.