
Induction Into Learning Communities

**Prepared for the National Commission
on Teaching and America's Future**
Thomas G. Carroll, President
By Kathleen Fulton, Irene Yoon, and Christine Lee



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Executive Summary

If America is to meet the needs of 21st century learners, we must move away from the norms that governed factory-era schools. The most persistent norm that stands in the way of 21st century learning is isolated teaching in stand-alone classrooms. Transforming schools into 21st century learning communities means recognizing that teachers must become members of a growing network of shared expertise.

Today's teachers must transform their personal knowledge into a collectively built, widely shared, and cohesive professional knowledge base. This is not an impossible dream; indeed, it is the norm in induction programs in several other countries. In these school cultures, open doors, observations of both exemplary teaching and teaching that needs improvement, candid conversations about lessons, and opportunities for reflection and discussion are the hallmarks of sustained programs that introduce novices to the valued norms of the teaching community.

This view of teaching requires an approach to new teacher induction that is different in scope and design from much of what currently passes for induction in this country: one-to-one mentoring of a novice teacher by a more experienced colleague whose primary goal is to help the novice survive the first year. Unless we move beyond the traditional one-to-one mentoring model, we will continue to reinforce the industrial-era practice of stand-alone teaching in isolated classrooms.

The need for a strong start with good support is clear: the United States loses too many teachers after just one, two, or three years of teaching. Almost one out of every two new teachers has left the classroom by the end of the fifth year. In some districts, the teacher dropout rate is higher than the student dropout rate. As chaotic as this is for schools and districts, it is the students who suffer the most when they are left with inexperienced, unseasoned teachers year after year. Teachers cite many reasons for leaving, but school culture and professional working conditions are always high on the list.

In this paper, the National Commission on Teaching and America's Future (NCTAF) reviews induction programs in the U.S. and abroad, viewing induction through the lens of its role in supporting 21st century learning communities. The paper discusses the following key findings:

- **Induction should be a stage in a continuum of teacher development.**
- **Induction should support entry into a learning community.**
- **Mentoring is a useful component of induction, but only one element of a comprehensive induction system.**
- **External networks supported by online technologies can add value.**
- **Induction is a good investment.**

NCTAF presents recommendations to leaders of states, districts, schools, and higher education systems for supporting comprehensive induction systems that are based on four central goals:

- **Building and deepening teacher knowledge;**
- **Integrating new practitioners into a teaching community and school culture that support the continuous professional growth of all teachers;**
- **Supporting the constant development of the teaching community in the school; and**
- **Encouraging a professional dialogue that articulates the goals, values, and best practices of a community.**

Quality teaching is the responsibility of the entire school community. Fostering a supportive community that helps new teachers become good teachers – and good teachers become great teachers – is critical to providing a rewarding career path for educators and a quality learning environment for students.

Background

The National Commission on Teaching and America's Future (NCTAF) believes that it is time to develop a 21st century approach to induction that is different in scope and design from much of what currently passes for induction in this country. This belief evolves from our report [No Dream Denied: A Pledge to America's Children](#).¹ As we sought a deeper understanding of the root causes of teacher turnover, we concluded that the nation needs strategies that will ensure not just greater rates of teacher retention, but also retention of great teachers.

The need for a strong start with good support is clear: the United States loses too many teachers after just one, two, or three years of teaching. Almost one out of every two new teachers has left the classroom by the end of five years (see Figure 1, page 3). In some districts, a third of all new teachers leave after their first year.² As chaotic as this is for schools and districts, it is the students who suffer the most when they are left with inexperienced, unseasoned teachers year after year. Research confirms what we know from experience: students who have an ineffective teacher during any given year may test as much as one year behind peers taught by a more effective teacher. Those unfortunate enough to have weak teachers for three or more years in a row may never catch up.³

In 2003, *No Dream Denied* put the spotlight on teacher retention as a

national crisis. Over the next two years, NCTAF convened three invitational summits to work with leading experts on what it would take to ensure that all students have the benefit of highly qualified teachers in schools organized for success. The summits focused on teaching conditions, teacher preparation, and teaching as a profession. The summit on "[The First Three Years of Teaching](#)" focused on the critical entry period when teachers first take responsibility for their own classes. This was closely followed by a summit on "[Strong Learning Communities](#)." It became obvious that the two topics were interwoven. One participant summed up the relationship by speculating, "If all schools were truly learning communities, would we even need to talk about mentoring?"⁴ The summit participants concluded that effective induction must incorporate new teachers into a professional learning community, emphasizing from the start relationships with colleagues and establishing support for continued learning and growth.

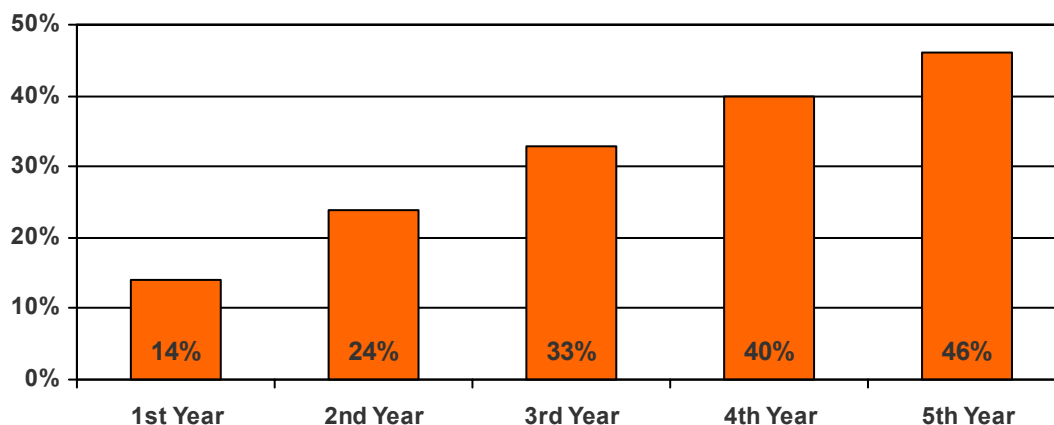
An essential element of this community is the expectation that *all* members share responsibility for each other's success and for the success of all students in the school. This is very different from the model of induction found in most schools today: one-to-one mentoring of a novice teacher by a more experienced colleague whose primary goal is to help the novice survive the initial year of solo teaching. This model is often faulted for its poor execution, e.g., mentors who are selected for convenience, rather than for instructional coaching capabilities; mentors who are not trained; mentors who are not given time to work with mentees; and a lack of formal organization or oversight of mentoring programs. But there is another, more basic, issue: unless we go beyond a reliance on the one-to-one

¹National Commission on Teaching and America's Future. (2003). *No dream denied: A pledge to America's children*. Washington, DC: Author. Retrieved July 25, 2005, from www.nctaf.org.

²Hagen, M. B. (2005, May 17). Durham schools lost over 17% of teachers last year. *The Herald-Sun*, p. B1. In *NCTAF News Digest* (2005, May 19). Retrieved July 25, 2005, from <http://www.nctaf.org/article/index.php?g=0&c=8&sc=29&ssc=&a=360&navs=>

³Sanders, W. I. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville, TN: University of Tennessee Value-Added Research & Assessment Center. See also, J. Archer. (1998, February 18). Students' fortunes rest with assigned teacher. *Education Week*. Retrieved July 25, 2005, from <http://www.edweek.org>.

⁴National Commission on Teaching and America's Future. (2003, September). *Summary of NCTAF national summit: The first three years of teaching*. Washington, DC: Author. Retrieved July 27, 2005, from <http://www.nctaf.org/documents/nctaf/Summit1summary.doc>.

Figure I: Beginning Teacher Attrition is a Serious Problem

Source: National Commission on Teaching and America's Future. (2003). *No Dream Denied: A Pledge to America's Children*. Washington, DC: Author, p. 26.

mentoring model, we will continue to reinforce the factory-era model of stand-alone teaching in isolated classrooms. This industrial-era practice must be replaced with teaching in strong professional communities to meet the needs of 21st century learners.

NCTAF's summit participants envisioned a school culture in which experienced and novice teachers work together on shared inquiry into effective practices to improve student achievement. This vision represents a major change from standard practice in American schools today. Making it happen requires leaders committed to changing the culture of schooling to support regular, sustained collaboration among teachers, principals, and students.

This is not an impossible dream; indeed, it is the norm in induction programs in several other countries. In these school cultures, open doors, observations of both exemplary teaching and teaching that needs improvement, candid conversations about lessons, and opportunities for reflection and discussion are the hallmarks of sustained programs that introduce novices to the

valued norms of the teaching community.⁵ These systems work on the assumption that the development of teacher proficiency is acquired not through solo study but via collegial deliberation. The goal of these programs goes beyond improved retention rates of new teachers. They seek to guide and facilitate the learning paths of novice teachers as they become rooted in the professional culture of a school and in their academic discipline. Induction is seen as a stage of learning that continues throughout the evolution of a teaching career.

This vision for teaching and learning through a community of practice can only take root if the seed is planted and nurtured in the programs that prepare new teachers. NCTAF's third summit, "[High Quality Teacher Preparation](#)," carried this message to college and

⁵See, for example, Britton, E., Paine, L., Pimm, D., & Raizen, S. (2003). *Comprehensive teacher induction: Systems for early career learning*. Dordrecht, Netherlands: Kluwer Academic Publishers. See also, E. Britton, S. Raizen, L. Paine, & M. Huntley. (2000, March 6-7). *More swimming, less sinking: Perspectives from abroad on U.S. teacher induction*. Paper presented to the National Commission on Mathematics and Science Teaching in the 21st Century. Washington, DC: WestEd. Retrieved July 25, 2005, from http://www.wested.org/online_pubs/teacherinduction/.

university presidents, provosts, deans of arts and sciences, and deans of education. We maintain that new teacher success is the shared responsibility of both the programs that prepare teachers and the districts that hire them.

Understanding Induction

The term “mentoring” often is used interchangeably with induction, as mentoring has been the dominant form of teacher induction in this country over the last two decades.⁶ Nevertheless, the two terms are *not* synonymous. Mentoring describes a process by which a more experienced or knowledgeable individual offers assistance to a less expert individual. The support may or may not be structured in a full- or (as is most often the case) part-time capacity. A good mentor can be of real help to a new teacher as a “safety net” and source of emotional support at times of great stress and many challenges. But a poorly prepared or over-extended mentor can be of little assistance, and, in some situations where mentor selection is haphazard, mentors may even reinforce bad practice. In short, mentoring alone is not enough. Mentoring, when done well, can provide an important component of induction, but it is only one piece of what should be a *system* of induction.

A system of induction should include a network of supports, people, and processes that are all focused on assuring that novices become effective in their work. An induction system is both a phase – a set period of time – and a network of relationships and supports with well defined roles, activities, and outcomes.

NCTAF first began to study induction for its contribution to reducing teacher attrition, but we soon found that this view of induction focuses too narrowly on survival support for new teachers. Instead, building on the work

⁶Fideler, E. F., & Haselkorn, D. (1999). *Learning the ropes: Urban teacher induction programs and practices in the United States*. Belmont, MA: Recruiting New Teachers, Inc.

of the summits described above, we came to recognize that an induction system must have the following key goals:

- **Building and deepening teacher knowledge;**
- **Integrating new practitioners into a teaching community and school culture that support the continuous professional growth of all teachers;**
- **Supporting the constant development of the teaching community in the school; and**
- **Encouraging a professional dialogue that articulates the goals, values, and best practices of a community.**

Induction should become the foundation for building and sustaining 21st century learning communities.

Efforts to build a comprehensive 21st century system of induction are stymied by the fact that the nation finds it difficult to move beyond the factory-era schools of the last century. The culture of today’s traditional schools reinforces the practice of solo teaching in isolated classrooms. Good teachers have little opportunity and few incentives to share their expertise with their colleagues. Classroom doors are closed. As one new teacher lamented, “I never sat in anyone else’s classroom even once. Mine is the only teaching style I know.”⁷

It is time to end the practice of solo teaching in isolated classrooms. Teacher induction and professional development in 21st century schools must move beyond honing one’s craft and personal repertoire of skills. “Today’s teachers must transform their personal knowledge into a collectively built, widely shared, and cohesive professional knowledge base.”⁸

⁷Breaux, A. & Wong, H. (2003). *New teacher induction: How to train, support, and retain new teachers*. Mountain View, CA: Harry K. Wong Publications.

⁸Chokshi, S. & Fernandez, C. (2004, March). Challenges to importing Japanese lesson study: Concerns, misconceptions, and nuances. *Phi Delta Kappan*, 85(7), 520-525.

Table 1: Systemic Teacher Induction and the Evolution of 21st Century Learning Communities

	19 th Century Factory Model	20 th Century Solo Teaching Model	21 st Century Learning Community Model
OVERALL DESIGN	<ul style="list-style-type: none"> Teachers enter the job ready to teach as solo practitioners in a stand-alone setting, with little or no expectation for continuous growth. 	<ul style="list-style-type: none"> Beginning teachers are oriented to district and school policies and procedures through an informal buddy system that provides emotional/survival support. 	<ul style="list-style-type: none"> Beginning teachers are oriented to the district, school, and community. Emotional supports are provided by the community. New teachers are contributors to the school’s learning community. Focus on developing teaching skills/expertise of both new teachers and veteran teachers
THEORETICAL FRAMEWORK	<ul style="list-style-type: none"> Sink-or-swim, survival of the fittest: “Only those who survive the entry period should be teaching.” 	<ul style="list-style-type: none"> Deficit model and solo practice: “Novice teachers have gaps in skills and knowledge to be filled by random acts of professional development that lead to a personal teaching style.” 	<ul style="list-style-type: none"> Professional community with shared expertise: “Novice teachers have gaps in skills and knowledge, but also areas of expertise; they learn alongside experienced teachers in a community of learners that is continually evolving.”
LENGTH OF INDUCTION PROGRAM	<ul style="list-style-type: none"> No induction 	<ul style="list-style-type: none"> 1 year 	<ul style="list-style-type: none"> Throughout probationary period (2-3 years) as initial stage of a multi-tiered licensing system
RESPONSIBLE PARTIES	<ul style="list-style-type: none"> Each teacher is on his/her own 	<ul style="list-style-type: none"> School District (sometimes) State (rarely) 	<ul style="list-style-type: none"> State and district policies support school initiatives Partnerships between unions, districts, and teacher preparation programs
MENTORING FRAMEWORK	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Mentoring is the only induction activity Informal one-to-one buddy system Mentors volunteer or are selected for matching responsibilities (sometimes) Little or no training for mentors Limited incentives for mentors No accountability for mentors 	<ul style="list-style-type: none"> Mentoring is just one part of full induction system Mentors and novices work in teams. Mentors are selected for skill in content, pedagogy, and ability to coach and work with other teachers. Extensive, continuous training for mentors Structured time and incentives for mentors (e.g., stipends, release time, professional credits and advancement) Clear expectations and accountability of mentors and new teachers
TEACHING OBSERVATIONS	<ul style="list-style-type: none"> None Closed-door teaching 	<ul style="list-style-type: none"> Not required May be used for evaluation only Hands-off classroom autonomy 	<ul style="list-style-type: none"> Built-in time and multiple opportunities for new teachers to observe and be observed by other teachers Opportunities for guided reflection and self-assessment of practice
ASSESSMENT and EVALUATION	<ul style="list-style-type: none"> None Single-level teaching license 	<ul style="list-style-type: none"> Summative Conducted by principal or external evaluator once in first year of teaching, limited numbers of visits/evaluations every following 5-10 years as required for license renewal 	<ul style="list-style-type: none"> Formative, ongoing process Multiple self-assessment and reflection opportunities Peer coaching/critical friends groups Component in tiered licensure Beginning of path to National Board certification Guidance out of teaching for those not suited for profession
WORKLOAD	<ul style="list-style-type: none"> New teachers have same load as veteran teachers. New teachers are often given extracurricular duties in addition to a full teaching load. 	<ul style="list-style-type: none"> New teachers have same load as veteran teachers. New teachers are often given extracurricular duties in addition to a full teaching load. 	<ul style="list-style-type: none"> Reduced workload for new teachers (and mentors) to allow time for observations, planning, learning, and reflection No extra duties for new teachers during induction period
TEACHING ASSIGNMENTS	<ul style="list-style-type: none"> Wherever vacancies occur Often toughest schools and classes 	<ul style="list-style-type: none"> Wherever vacancies occur Often toughest schools and classes 	<ul style="list-style-type: none"> New teachers placed in less challenging teaching assignments and/or in team teaching assignments
EXTERNAL SUPPORTS	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Few or none (largely informal or social) 	<ul style="list-style-type: none"> Professional guided networks as well as informal social networks Involvement of teacher preparation institutions Online networks for internal and external communities provide resources, learning, support
IMPACT	<ul style="list-style-type: none"> High teacher turnover is considered normal. Teachers are viewed as interchangeable and easily replaced. 	<ul style="list-style-type: none"> High teacher turnover Inexperienced, underprepared teachers concentrated in low-income schools Loss of large numbers of teachers before they become proficient educators 	<ul style="list-style-type: none"> Improved teacher retention contributes to continuous teacher growth and improved teaching quality. Teacher learning at all levels in a 21st century learning community Each community and its network of expertise grows in strength and quality.

In Table I (see page 5), we present induction viewed from the perspective of its role in the dominant culture of teaching and learning, from the 19th century “factory era” to the 20th century culture of solo teaching, to a transformative 21st century model in which new teachers become part of a community of learners.

Are States and School Districts Ready to Support Comprehensive Induction Programs?

Despite their responsibility for the certification of new teachers, only a third of the states have policies that require, guide, and finance any kind of new teacher induction. While it is encouraging that some states have taken a leadership role in this area, the policies and programs they offer are far from the “transformational” approaches to teacher induction that are the hallmarks of a 21st century learning community. Based on a survey of states conducted by *Education Week* in 2004 for their 2005 *Quality Counts* report, 30 states reported having some form of an induction program for new teachers on the books, but only 17 states required *and* financed mentoring for *all* novice teachers (see Figure 2, page 7).⁹ Only five of these 30 states provided a minimum of two or more years of state-financed mentoring (Delaware has a three-year minimum of mentoring required by the state).¹⁰

According to a more detailed survey reported by *Education Week* in 2003:

- 9 states specified a required minimum amount of time for mentors and their assigned new teachers to meet (e.g., a meeting each week, six meetings per year, or 30 hours per year);

⁹Education Week. (2005, January 6). Quality counts 2005: No small change [Special issue]. *Education Week*, 24(17), 94. Retrieved July 25, 2005, from <http://www.edweek.org/ew/toc/2005/01/06/index.html>. (Note: Wisconsin reported that induction would be required and funded as of 2005-06).

¹⁰*Ibid.*

- 9 required mentors to be compensated for their work;
- 7 required release time for mentors; and
- 8 required mentors and teachers to be matched by school, subject and/or grade level.¹¹

A more current survey by researcher Janice Hall (2005) found slightly higher levels of statewide teacher induction in 2004: 33 states reported mandated new-teacher mentoring programs and 22 reported state funding for those programs. This survey also found that 23 states required mentor training.¹²

Hall noted that her data represent an almost 25% increase in mandated new-teacher mentoring programs, with proportional increases in funding, since a 1998 American Federation of Teachers survey of state mentoring programs.¹³ Nonetheless, state-mandated programs remain in precarious situations due to funding difficulties. One state official’s response to Hall’s survey was illustrative: “We encourage it, but cannot fund it[;] therefore we do not mandate it.”¹⁴ State programs are subject to the vagaries of budgeting and perceptions of teacher shortages. Some state-financed induction programs are dependent upon external grants from foundations or federal programs (e.g., U.S. Department of Education Title II teacher quality grants). This approach, while creative, does not signal long-term policy support for induction.

¹¹Education Week. (2003, January 9). Quality counts 2003: If I can't learn from you [Special issue]. *Education Week*, 22(17), 68. Retrieved July 25, 2005, from <http://counts.edweek.org/sreports/qc03/index.cfm>.

¹²Hall, J. L. (2005). Promoting quality programs through state-school relationships. In H. Portner (Ed.), *Teacher Mentoring and Induction* (pp. 213-223). Thousand Oaks, CA: Corwin Press.

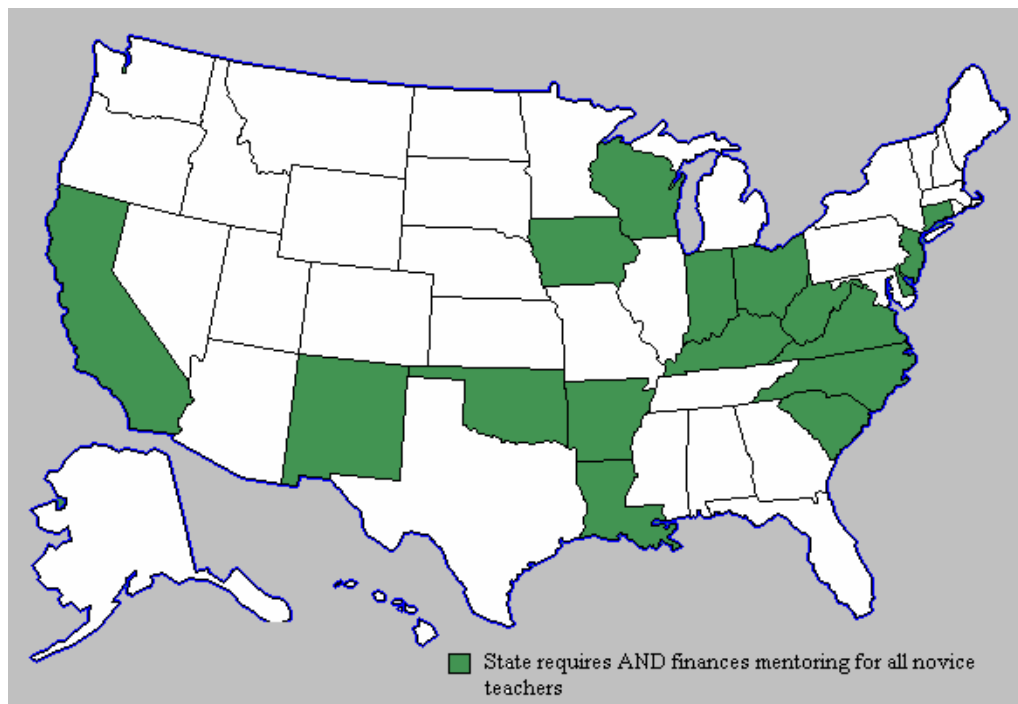
¹³American Federation of Teachers. (1998). Mentor teacher programs in the states. *Educational Issues Policy Brief*, 5. Washington, DC: Author. Retrieved July 25, 2005, from <http://www.aft.org/pubs-reports/downloads/teachers/Policy5.pdf>.

¹⁴Hall, *op. cit.*, p. 214.

State support varies widely because induction is typically viewed as a district or school responsibility. Districts have tried to find ways to meet this responsibility, and induction programs have become far more common in the U.S. in recent years. In the ten-year period from 1990-91 to 1999-2000, the percentage of beginning public school teachers participating in some form of induction rose from 51% to 83%. Among private school teachers, the growth was even more dramatic, with an increase from 25% to 60% of teachers who reported participation in induction activities over the same ten-year period.¹⁵ However, the components of these induction programs can vary substantially. In the 1999-2000 Schools and Staffing Survey (SASS) administered by the

National Center for Educational Statistics, about two thirds of beginning teachers reported working with a mentor; 70% of these had a mentor in the same field.¹⁶ Nearly nine in ten found their mentors helpful. New teachers also reported participating in other elements of induction, such as supportive communication with a principal, other administrator, or department chair (82% of teachers reported this); common planning time or scheduled collaboration with other teachers in the same field (68%); or special seminars (61%). Far less frequently reported practices were extra classroom assistance in the form of teacher aides (29%), participation in a teacher network (17%), reduced teaching schedules (11%), and reduced numbers of preparations (11%).¹⁷

Figure 2: States that Require and Finance Mentoring for All New Teachers, 2004-2005



Source: Figure based on Education Week. (2005, January 6). Quality counts 2005: No small change [Special issue]. *Education Week*, 24(17), 94. (Note: Wisconsin reported that mentoring requirement and financing would take effect 2005-06.)

¹⁵Smith, T. M. & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal*, 41(3), 690, 691.

¹⁶*Ibid.*, p. 692.

¹⁷*Ibid.*

What Are the Costs and Consequences of Failing to Develop Systemic Induction Programs?

Researchers are beginning to collect evidence regarding the correlation between induction and student achievement. The U.S. Department of Education is conducting a comprehensive study of two programs – the Educational Testing Service’s (ETS) Pathwise Program and the New Teacher Center model – in multiple districts to assess their impacts on student achievement. In an earlier research study conducted by ETS, improved student achievement was correlated with teacher participation in California Beginning Teacher Support and Assessment (BTSA) programs using the California Formative Assessment and Support System for Teachers (CFASST).¹⁸

Until these newer studies, the impact of induction traditionally had been measured by its effect on teacher retention. Data on the relationship between induction and teacher turnover make it clear that a comprehensive induction system greatly improves the likelihood of a teacher’s staying in his or her school and/or of not leaving the profession at the end of the school year. Researchers Smith and Ingersoll (2004) took the SASS data and correlated a beginning teacher’s participation in various forms of induction support with teacher turnover rates.¹⁹ In the 1999-2000 year, overall, 29% of first-time teachers had either changed schools at the end of that year (15%) or left teaching altogether (14%).²⁰ Although only 3% of all beginning teachers in that year had no induction or mentoring support at all,

their predicted rate of turnover was much greater – 41%.²¹

What is most telling about this data, however, is the importance to teacher retention of the “package” of induction support that new teachers received. Smith and Ingersoll’s analysis indicates that fewer than one percent of beginning teachers in the 1999-2000 SASS survey experienced a complete and comprehensive “package” of induction components (defined as having a mentor; supportive communication from principal, other administrator, or department chair; common planning or collaboration time with other teachers in the field; reduced preparations (course load) and help from a teacher’s aide; and participation in an external network of teachers). As shown in Figure 3 (see page 9), teachers with this comprehensive induction package are *half as likely to leave* at the end of their first year of teaching when compared with new teachers who participate in no induction activities.²²

Too often induction is seen as an expensive extra, something that is “nice but not necessary,” an additional cost for already overburdened school districts. However, it is becoming clear that the costs of *not* giving teachers a strong start are substantial. Just how much does it cost to lose almost one of every two new teachers within five years of their entering the classroom? NCTAF has estimated that, every year, America’s schools lose approximately \$2.6 billion to teacher attrition. This figure is based on multiplying the number of teachers who leave (for non-retirement reasons) by the U.S. Department of Commerce’s estimate that it costs \$12,500 for each lost full-time employee.

We believe this is a low estimate. The cost calculations for teacher turnover vary based on the factors one considers and the industry model that is used. For example, one formula developed by human resource specialists in industry suggests that turnover costs a company nearly 2.5 times the employee’s

¹⁸Thompson, M., Paek, P., Goe, L., & Ponte, E. (2005, April 13). *The impact of new teacher induction on teacher practices and student learning*. Paper presented at the annual meeting of the American Educational Research Association. Montreal, Canada: Educational Testing Service. Retrieved July 29, 2005, from http://www.ets.org/research/dload/AERA_2005_Thompson.pdf.

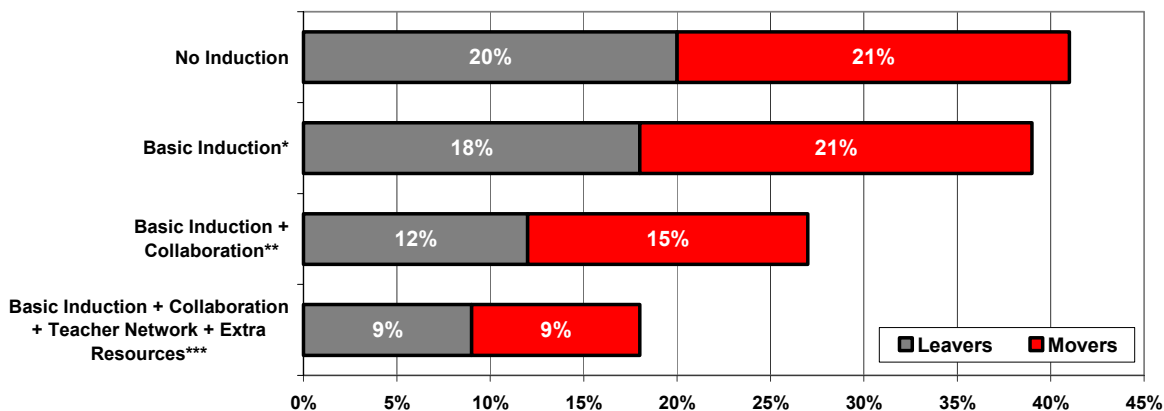
¹⁹Smith and Ingersoll, *op. cit.*, pp. 681-714.

²⁰*Ibid.*, p. 693.

²¹*Ibid.*, p. 705.

²²*Ibid.*

Figure 3: Predicted Probability of Turnover After the First Year of Teaching by Various Induction Experiences



* Refers to a mentor from teacher's own or another field *and* supportive communication from an administrator

** Refers to a mentor from teacher's own field *and* supportive communication from administrator *and* common planning time or regularly scheduled collaboration time with other teachers in field *and* participation in a seminar for beginning teachers

*** Refers to all components included in "basic induction + collaboration" (***) *and* participation in an external network of teachers *and* having a reduced number of preparations (course load) *and* being assigned a teacher's aide.

Source: Smith, T. M. & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal* 41(3), 705.

initial salary in recruitment, personnel costs, and lost productivity. Using this model, Wong and Breaux estimate that each teacher who leaves the profession during the induction years costs taxpayers in excess of \$50,000.²³ Using other industry model estimates, the Texas Center for Educational Research found that the cost of teacher turnover in Texas is \$329 million per year, if conservative numbers are used.²⁴ Alternate industry models for these costs yield a far higher price tag: as high as \$2.1 billion each year for teacher turnover in Texas alone.²⁵

NCTAF is conducting the Cost of Teacher Turnover project in several

²³Wong, H. & Breaux, A. (2003, November). Save millions – train and support new teachers. *School Business Affairs Magazine*, 69(10), 19-22. Retrieved July 27, 2005, from http://www.newteacher.com/pdf/SBAffair_Nov03_wong.pdf.

²⁴Texas Center for Education Research. (2000). *The Cost of Teacher Turnover*. Austin, TX: Texas State Board for Educator Certification, p. 2.

²⁵*Ibid.*

districts around the country to help them measure the full costs of turnover on a more scientific basis, with the goal of producing a technical assistance toolkit that can help other school systems analyze and control their teacher turnover costs.²⁶

Teacher turnover is not just about numbers, and the costs go far beyond the impact of lost dollars. The organizational and human toll, while harder to quantify, is devastating to struggling districts, schools, parents, and students. Districts lose the momentum of reform initiatives when their teachers leave. Schools lose the continuity and consistency that are essential to the fabric of their communities. Students are forced to adapt to a passing parade of teachers,

²⁶In this study, NCTAF researchers will measure teacher turnover costs at the school and district levels in urban districts Chicago, IL, and Milwaukee, WI; and in rural districts in New Mexico and North Carolina. Data collected by the research teams will be used to calculate and analyze the components of turnover costs, establish cost benchmarks, and identify strategies for reducing these costs.

severing the emotional bonds formed with some of the most important adults in their daily lives.

Steps Toward Building Systemic Induction Programs: Components and Policies

Recognizing the importance of giving teachers a strong start, a number of states, districts, and universities have taken initial steps toward more systemic induction of new teachers. We feature a sampling of these induction programs in Table 2 (see page 11). Each of these programs combines several of the induction components from the Smith and Ingersoll analysis noted above. Although several have begun to integrate transformational elements of the “21st Century Learning Community Model” described in Table 1 (see page 5), most are still dependent on one-to-one mentoring as the core component of their induction programs. Creating a supportive community within or across schools is rare, as is providing a reduced workload for new teachers. Although some offer teachers and mentors common planning time, in general there are limited opportunities for new teachers to observe other teachers’ various teaching approaches. Some, like the New Teacher Center at the University of California, Santa Cruz, have begun to explore how online networks might extend the vision and opportunities for communication among new teachers and others in their school communities.

None of the programs profiled in Table 2 has created an extended community of support involving schools and colleges of education in a continuum of learning that bridges the preservice/ internship experience. However, this may change, as states increasingly are holding their teacher preparation programs accountable for the success of new teachers. Some states, like Georgia, require that preparation programs follow their new teachers for two years with some form of support. What that support should be, however, is left to the universities and districts.

Such policies provide an opportunity to bridge the current disconnect between a teacher’s preservice training – generally provided by a college or university teacher preparation program – and the support provided to new teachers by the state, district, or school as part of an induction program. Some projects and programs have begun to address this segregation. The Teachers for a New Era (TNE) Project, funded by the Carnegie Corporation of New York, brings greater attention to teacher preparation and district linkages through grants to eleven higher education institutions. TNE programs focus on how teacher preparation can be enhanced through extended clinical and residency experiences with local districts, and on tracking the effectiveness of preparation program graduates once they are in the classroom.

For a description of three programs that are building a teaching continuum from preservice through the early years of teaching, see Box 1: *Pathways to Effective Teaching Through Communities of Support in Georgia* (page 13); Box 2: *Strengthening and Sustaining Teachers Project* (page 15); and Box 3: *Teachers Learning in Networked Communities* (page 20).

Moving from a Stand-Alone Teaching Culture to Induction Programs that Support Strong Learning Communities

Researchers have found that induction programs often “mean little to new teachers because they [are] usually not school-based, nor [are] they sufficient, efficient, or continuous.... [I]t is not enough that formal structures for support of new teachers exist in schools ... they must be embedded in an integrated professional culture.”²⁷

²⁷Kardos, S. M., Johnson, S. M., Peske, H. G., Kauffman, D., & Liu, E. (2001). Counting on colleagues: New teachers encounter the professional cultures of their schools. *Educational Administration Quarterly*, 37(2), 250-290. See also, S.M. Johnson. (2004). *Finders keepers: Helping new teachers survive and thrive in our schools*. San Francisco, CA: Jossey-Bass.

Table 2: Sampling of Existing Induction Models/Programs in the U.S.

	New Teacher Center (NTC) at the University of California, Santa Cruz, Model	California Beginning Teacher Support and Assessment (BTSA)	Connecticut Beginning Educator Support and Training (BEST)	Louisiana Teacher Assistance and Assessment Program (LaTAAP)	The Toledo Plan
PROGRAM DESIGN	<ul style="list-style-type: none"> • Mentors each work with 15 novices. • Mentoring is a three-year position. • Mentors conduct monthly seminars for new teachers. 	<ul style="list-style-type: none"> • Mandatory for new teachers • Currently 148 programs across the state, variations across programs • All BTSA programs must meet California’s Standards of Quality and Effectiveness for Professional Teacher Induction Programs. 	<ul style="list-style-type: none"> • School- or district-based mentors or support teams • State-sponsored training for new teachers via content-specific seminars offered regionally and online 	<ul style="list-style-type: none"> • Required by legislation • 30 hours of contact between mentor and new teacher per year • Mentors matched by grade level and content area, if possible 	<ul style="list-style-type: none"> • “Consultants” are mentors who spend an average of 20 hours per semester with each intern (three-year position) • “Interns” are teachers new to Toledo • One-week orientation for interns, mainly spent with consultants • 10-12 interns per consultant
LENGTH OF INDUCTION PROGRAM	<ul style="list-style-type: none"> • Two years 	<ul style="list-style-type: none"> • Normally two years, but legislation allows exceptional candidates to complete induction in one year 	<ul style="list-style-type: none"> • Two years (second year of mentoring optional); third year available if needed to pass portfolio assessment 	<ul style="list-style-type: none"> • Two years (four semesters) 	<ul style="list-style-type: none"> • Two semesters for interns • No time limit on interventions for veteran teachers with performance problems, as identified at school by union committee, principals, or both
RESPONSIBLE PARTIES	<ul style="list-style-type: none"> • NTC’s Santa Cruz New Teacher Project is a university/school district partnership • Nationally, NTC programs include various stakeholders: schools, districts, universities, unions, and foundations 	<ul style="list-style-type: none"> • State runs BTSA, but local programs are coordinated regionally with schools, districts, and local university involvement 	<ul style="list-style-type: none"> • State, regional service centers, districts, and schools 	<ul style="list-style-type: none"> • State, districts, universities, and schools 	<ul style="list-style-type: none"> • Union, district, and schools
MENTOR INCENTIVES	<ul style="list-style-type: none"> • Full-time release to work with new teachers • Professional development and career growth 	<ul style="list-style-type: none"> • Some programs have full-time release for mentors (“support providers”), some offer partial release, and some use full-time classroom teachers with a stipend and a few release days per year to work with 1-2 teachers. 	<ul style="list-style-type: none"> • Stipend at district’s discretion • Release time • Professional development and career growth • Continuing education units for participation in BEST training and for service as a mentor or assessor 	<ul style="list-style-type: none"> • Stipend provided by state, amount determined by district • Release time • Professional development and career growth • Continuing Learning Units 	<ul style="list-style-type: none"> • Paid for full-time mentoring • Professional development and career growth
MENTOR TRAINING	<ul style="list-style-type: none"> • Five days of training in coaching, observation, and use of NTC Formative Assessment System (FAS) tools • Weekly half-day forums for mentors 	<ul style="list-style-type: none"> • Support providers are trained in the formative assessment system used by their programs, cognitive coaching, and other support resources. • Models vary from five days of training before school begins with two days of follow-up, to training spread out over the year. 	<ul style="list-style-type: none"> • 20 hours in teaching standards, portfolio assessment, and coaching • Delivered through regional service centers 	<ul style="list-style-type: none"> • Three days of assessor training (observation and portfolio assessment) provided by state • Mentor training (teacher development and focused coaching) provided by district 	<ul style="list-style-type: none"> • Three-day summer training workshop

Table 2, continued

	New Teacher Center (NTC) at the University of California, Santa Cruz, Model	California Beginning Teacher Support and Assessment (BTSA)	Connecticut Beginning Educator Support and Training (BEST)	Louisiana Teacher Assistance and Assessment Program (LaTAAP)	The Toledo Plan
OBSERVATIONS/ ASSESSMENT and EVALUATION	<ul style="list-style-type: none"> Mentors work individually with new teachers 1-2 hours per week in their classrooms. At the beginning of the year, mentors/new teachers use professional standards to collaboratively assess teaching practice and set goals. Mentors/new teachers use FAS tools to guide interactions throughout the year and formally assess progress at mid-year and year's end. 	<ul style="list-style-type: none"> New teachers are given release time to observe mentors. 100% of BTSA new teachers had a mentor visit/observe during instruction and follow-up discussions. Beginning teacher's performance-based assessment required to pass from preliminary to professional credential 	<ul style="list-style-type: none"> Mandated release time for beginning teachers and mentors to observe each others' classrooms Minimum of 30 hours of contact with mentor, support team, other teachers in content area, principal, and/or district facilitators 	<ul style="list-style-type: none"> Release time for mentors to observe new teachers and for new teachers to observe mentors Advisory observations conducted during first, second, and third semesters (as needed or requested by new teacher) Mentor's role is not as assessor of new teacher 	<ul style="list-style-type: none"> One formal evaluation per semester After second semester evaluation, PAR panel votes to accept or reject the recommendation of the consultant about further employment of novice
NEW TEACHER WORKLOAD and ASSIGNMENTS	<ul style="list-style-type: none"> Same as veterans 	<ul style="list-style-type: none"> Depends on BTSA program (some new teachers in BTSA have a reduced workload) 	<ul style="list-style-type: none"> Same as veterans 	<ul style="list-style-type: none"> Same as veterans 	<ul style="list-style-type: none"> Same as veterans
EXTERNAL NETWORK	<ul style="list-style-type: none"> Yes (NTC Online available, used in several sites) 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> No
SCOPE	<ul style="list-style-type: none"> NTC Formative Assessment System adopted by 125 California districts Programs in 31 other states based on NTC model 	<ul style="list-style-type: none"> 22,940 new teachers in 2004-05 10,459 support providers (mentors) in 2004-05 	<ul style="list-style-type: none"> All public school teachers with initial educator certificate eligible to receive BEST support 64% of educator workforce participated in BEST training as beginning teachers, mentors, or assessors. 	<ul style="list-style-type: none"> LaTAAP required for all new teachers (approximately 3,000 in 2004-05) 	<ul style="list-style-type: none"> Districtwide
COST	<ul style="list-style-type: none"> Approximately \$6,000 per teacher per year, for two years 	<ul style="list-style-type: none"> \$87.85 million (total investment by state) in 2005-06 \$5,675 per teacher per year, for two years 	<ul style="list-style-type: none"> State's share: \$760 per beginning teacher District's share: \$900-\$2,800 per beginning teacher per year 	<ul style="list-style-type: none"> Budget determined by legislative session 	<ul style="list-style-type: none"> \$3,395 per new teacher as of March 6, 2004
RETENTION	<ul style="list-style-type: none"> Varies with adaptation, but retention rate for NTC's regional BTSA program, the Santa Cruz New Teacher Project, estimated at 89% after six years. 	<ul style="list-style-type: none"> Mean retention rate of BTSA participants five years after completing the program is 84% 	<ul style="list-style-type: none"> 94.3% estimated annual beginning teacher retention 	<ul style="list-style-type: none"> Statewide data not available 	<ul style="list-style-type: none"> Since inception of program, retention has increased 15%.

Box 1: Pathways to Effective Teaching Through Communities of Support in Georgia

Georgia's higher education institutions have developed a number of resources to support the transition of preservice teachers into their early years of teaching. With support from the Wachovia Foundation, NCTAF is working with a collaboration of institutions to help unify them in a comprehensive model called Pathways to Effective Teaching Through Communities of Support (PETTCOS). The starting point is the *Georgia Systemic Teacher Education Program (GSTEP)*, founded in 2000 by the University of Georgia, Albany State University, and Valdosta State University with the support of a five-year U.S. Department of Education grant, the Georgia governor's office, and the University System of Georgia Board of Regents. Statewide focus groups developed the *Principles and Framework for Accomplished Teaching and Learning*, which are at the heart of GSTEP. The *Principles and Framework* define the knowledge, skills, and other attributes of accomplished teaching in six areas and provide agreed-upon standards and language for university courses and programs – both for teachers to use as they build and reflect on a productive and rewarding career, and for school districts and state agencies as they support both teachers and professors in this important collaborative endeavor.

A second component is called the BRIDGE (Building Resources: Induction and Development of Georgia Educators). Created through the GSTEP grant, the BRIDGE is a peer-reviewed, interactive online resource and mentoring site for teachers. It was developed and is managed by an editorial board of seven editors and technology specialists. Beginning teachers submit questions to the BRIDGE and can find answers aligned with the GSTEP *Framework* among lessons, materials, and websites submitted by other teachers. With over 200 vetted resources available so far, the BRIDGE will provide a major support mechanism for Georgia teachers. During 2005-2006, new learning community components of the BRIDGE are being developed and tested.

In collaboration with NCTAF, Georgia educators and district representatives will explore how a third component, critical friends groups, can provide both face-to-face and online support for new teachers. Each beginning teacher will be supported by a critical friends group. BRIDGE online communities will allow preservice and inservice teachers and their professors and mentors to meet regularly to improve classroom practice. Teachers at various stages in their careers, district/school leaders, mentor teachers, and university content experts will work together with novice teachers; and focus on a content area, grade level, or area of shared professional need. With the assistance of this team, the beginning teacher will develop a two-year professional growth plan based on the GSTEP *Framework* and a self-assessment rubric.

The self-assessment rubric was designed for use by beginning teachers from preservice through their early careers. It was developed by the GSTEP team at Valdosta State University and currently is being validated at the state level by the University of Georgia. The rubric is directly linked to the BRIDGE and allows mentors to recommend resources that relate to goals of beginning teachers. With support from professors, mentors, and critical friends groups, beginning teachers complete the self-assessment rubric, using it as the basis for developing their individual professional growth plans.

The professional growth plans (PGP) also correspond to the GSTEP *Framework*. They outline goals for the beginning teacher, development opportunities to support continuous learning, and benchmarks to track progress at various points over the first two years of the new teacher's career. Based on the beginning teacher's progress (or lack thereof) on the PGP, the teams will identify a set of interventions to support the individual.

Finally, a new teacher's performance can be evaluated using the accomplished teacher observation instrument. Developed by GSTEP partners at Valdosta State University with several K-12 school partners, this observation guide is for mentors and supervisors to use with beginning teachers. Taken together, these resources will be used to create a seamless continuum of learning and support for novice teachers as they progress from preservice through their early years of teaching.

One of the most positive aspects of induction is the spotlight it puts on the school culture that a new teacher enters. In cultures where teachers are expected to work as solo practitioners, teaching with the door closed and with little opportunity for interaction among peers, a new teacher's isolation is profound. In these school cultures, novices learn quickly that they are on their own. Even if the school provides a mentor and some form of orientation and professional development, these formal support systems are likely to reinforce the isolated teacher culture of that school. These schools draw their culture from the factory model of schooling, in which each teacher is considered an

independent, interchangeable cog, a technician working on a production line supervised by management, with the foreman (principal) as overseer rather than guide (see Table 1, page 5).

One variation on the solo teaching environment offers what has been called a "veteran-oriented" culture.²⁸ These are schools where veteran teachers, while often personally welcoming and friendly,

²⁸*Ibid.* See also S. M. Johnson & S. E. Birkeland. (2003). Pursuing 'a sense of success': New teachers explain their career decisions. *American Educational Research Journal*, 40(3), 581-617. Retrieved July 25, 2005, from http://www.gse.harvard.edu/~ngt/johnson-Birkeland_AERjournal_Fall03.pdf.

Table 3: Contrasting Teacher Behaviors in Schools Where Isolated Teaching is the Norm vs. in Learning Communities

In “Solo Practice” Schools, Teachers...	In Learning Communities, Teachers...
<ul style="list-style-type: none"> - are isolated in their individual classrooms and do not collaborate on strategies to improve student learning. Whether they consider themselves “technicians” or “artisans,” they work alone. 	<ul style="list-style-type: none"> - work collaboratively on problems that focus on student learning; - feel a collective responsibility for the growth and learning of all teachers and all students in the school; and - understand that no individual has all the answers, but that each has important knowledge to contribute.
<ul style="list-style-type: none"> - teach to a set of externally fixed curricular standards that remain static over time. 	<ul style="list-style-type: none"> - focus on jointly creating new knowledge and see their own and their students’ learning as an ongoing process.
<ul style="list-style-type: none"> - work individually with large groups of students in restrictive time periods. 	<ul style="list-style-type: none"> - work in cohorts of colleagues and with groups of students, whom they get to know well over time.
<ul style="list-style-type: none"> - are given little or no time to work collaboratively with their colleagues. 	<ul style="list-style-type: none"> - have structured time to observe and reflect on each others’ work and to serve as critical friends in support of each other.
<ul style="list-style-type: none"> - perform according to externally determined professional standards; and - identify their personal teaching norms as individuals; these norms may or may not be the same as those of their colleagues. 	<ul style="list-style-type: none"> - commit to shared norms, with shared responsibility for growth in learning of all teachers and students in the school; and - build understanding of each others’ styles and techniques so they can learn from one another and complement each others’ work with students.
<ul style="list-style-type: none"> - often fail to build professional relationships and communication, as well as trust, among their colleagues and with students / parents / community, due to a lack of shared goals, norms, and understandings. 	<ul style="list-style-type: none"> - value open and regular communications that are the foundation of trust, shared goals, and professional norms among teachers, administrators, students, parents, and community members.

operate independently as professionals. Once certified, they have little oversight or interaction with peers. Each teacher is considered an artisan with a unique approach to teaching that is crafted and honed over the years; a teacher’s “signature style” is his or her own. But unlike expert artisans in other professions, teachers have little opportunity to learn from other experts in the field. Colleagues may not be aware of what each other’s teaching looks like; professionalism in this culture values privacy. In such an environment, new teachers are left on their own, without guidance from the school to help them understand what or how to teach. Those who can conform to such a culture remain; those who cannot, leave.

Another solo teaching environment is the “novice-oriented” culture.²⁹ This is

the culture found in many reconstituted, urban, or newly formed charter schools, filled with eager, inexperienced novices. Or they may be troubled high-need schools that experienced teachers have abandoned for schools with better teaching conditions. Here, too, though for different reasons, there is no modeling of effective, experienced practice. A building full of new teachers is at a disadvantage when challenges arise because new teachers have few tools, strategies, or proven practices to apply to meet these challenges. Novice-oriented school cultures must reinvent everything each year because they have no historical perspective and no mechanism for passing along professional wisdom. A school full of new teachers also has few relationships on which to build – teachers don’t know one another, nor do they know the administration, parents, or students. Much energy goes into building these connections, but the following year, the process begins all over again with a new crew of novice teachers.

²⁹Johnson, S. M. & Birkeland, S. E. (2003). Pursuing ‘a sense of success’: New teachers explain their career decisions. *American Educational Research Journal*, 40(3), 581-617. Retrieved July 25, 2005, from http://www.gse.harvard.edu/~ngt/Johnson-Birkeland_AERjournal_Fall03.pdf.

Box 2: Strengthening and Sustaining Teachers (SST) Project

The Strengthening and Sustaining Teachers (SST) Project seeks to support new teachers from preservice through their first years of teaching in the classroom. The long-term goal is to provide better teacher retention and better teaching, especially in high-need schools. SST was created through a partnership composed of Bank Street College of Education, the Institute for Educational Inquiry, the National Commission on Teaching and America's Future, and the Teachers Union Reform Network, and is led by the University of Washington. Funding partners are the Carnegie Corporation of New York, the Ford Foundation, the Bill & Melinda Gates Foundation, and the GE Foundation. SST believes that better teaching and higher teacher retention require strong regional/local partnerships between higher education, teachers' unions, and hiring districts, with all parties committed to building a continuum of teacher learning that spans teachers' preparation to their experiences as veteran teachers. The project has been at work over the past four years in Seattle, Washington, and Portland, Maine.

Seattle's partnership comprises the College of Education and College of Arts and Sciences at the University of Washington, the Seattle Public Schools (SPS), and the Seattle Education Association. They aim to produce qualified math and science teachers for high-need middle schools. The Seattle SST program has several features that make it different from the traditional Master's in Teaching program:

- Focus on preparation specifically for teaching in Seattle, the state's largest urban district, using the SPS math and science curricula;
- Recruiting mid-career changers with at least five years of work experience;
- Integrating coursework and field experiences in the internship year;
- Subject-matter-intensive courses taught by arts and sciences faculty;
- Completion of program in 4 quarters (the Master's in Teaching degree requires 5 quarters);
- Mentoring provided by entire math and science departments in partner schools, in addition to one-on-one mentoring by cooperating teachers in those schools; and
- Professional development opportunities that can be attended by both preservice teachers and their mentors.

The Seattle project is expanding its reach by building on the partnership opportunities provided by the Teachers for a New Era grant and the Teachers Learning in Networked Communities project in partnership with NCTAF (see Box 3, page 20).

The Portland SST project creates a formal induction program with an emphasis on new teachers, rather than on preservice students. It also uses the tri-partite model of collaboration among university (University of Southern Maine), district (Portland Public Schools), and union (Portland Education Association). The partnership creates a unique school-based structure that oversees the induction program in each participating school. In these schools, a building steering committee of two teacher leaders and the principal is responsible for recruiting mentors, monitoring the performance of the mentor, and assisting with mentoring/new-teacher issues that arise. Portland articulated the following benefits from its SST partnerships:

- Greater university presence in schools;
- University courses more aligned with district instructional philosophy, language, and standards;
- Intern assessment process (carried out by a university faculty member, district coordinator, and mentor) that mirrors the observation and goal-setting process used by new teachers in the district;
- Networks between the district, teachers association, and college of education respond authentically and quickly to the needs of new teachers;
- More open discussions between mentors, mentees, and administrators, resulting from the model of building steering committees;
- More teachers sharing practice through a variety of professional collaborations in learning teams; and
- More avenues for teacher leadership and decision-making through mentoring, positions as university adjust faculty, or serving on building steering committees.

Research from the first two SST sites indicates that, despite the challenges of building and sustaining strong university/district/union partnerships, the continuum approach to teaching benefits all parties. In July 2005, five additional teams met at the Johnson Foundation's Wingspread Conference Center to begin the process of adopting the SST collaborative model in their districts. These union/district/higher education teams came from the Addison/Rutland Consortium in Vermont; Denver, Colorado; Memphis, Tennessee; Newark, New Jersey; and Hawaii.

In both veteran-oriented and novice-oriented cultures, beginning teachers must operate without access to professional wisdom or experience. Contrast this with what is experienced by teachers who enter schools that are integrated professional cultures – what we call 21st century learning communities. These are schools (or departments within a school) where there is frequent formal and informal interaction among colleagues across all levels of experience. Teachers

maintain a sense of shared responsibility for the success of all students, not just of those in their own classrooms. No one assumes that novices are “fully cooked” when they leave their teacher preparation program. Novices and experienced teachers share the expectation that new teachers will learn from all the other teachers in a school. Experienced teachers are ready to help both because it is expected and because it is the right thing to do. Teachers in these settings

experience the formal components of induction (mentoring, observations, and teacher meetings), as well as informal, supportive collegiality (see Table 3, page 14). Novice teachers in these environments are more likely to feel supported in their work and, as a result, are more likely to stay and contribute to the professional community in their schools.³⁰

What We Can Learn from New Teacher Induction Abroad

The United States is not the only country in which a “sink-or-swim” mode of teacher induction predominates. Many countries participating in the Third International Mathematics and Science Study (TIMSS) in 1997 reported “weak or no induction programs in their countries,” but many were beginning to plan how they might create better programs of learning for their beginning teachers.³¹ This increasing interest in induction generated a new TIMSS-like cross-national comparison of teacher preparation and induction, scheduled to run from 2005-2011. Called the Teacher Education and Development Study, the research will be conducted by the International Association for the Evaluation of Educational Achievement.³²

A recent study funded by the National Science Foundation (NSF) provides a detailed portrait of five nations that provide comprehensive induction programs for their new teachers. From a pool of twenty countries, the programs in Switzerland, China, New Zealand, Japan, and France were selected by NSF as exemplars for in-depth analysis, based on their induction programs’ components, scope, and longevity of activity.

The three-year study was based on visits to schools throughout each country and extensive interviews with new teachers, supporting teachers and school

leaders, the broader induction support communities, and local and national administrators and leaders. The programs reflect the particular situation of the culture and education system in each of the profiled countries, and there are many differences across the five sites. Nonetheless, one clear finding stands out across all five cases: **induction is viewed not as a tool for teacher retention, but as a means to help beginning teachers reach their potential.** As the researchers note, “These countries perceive teacher induction as an investment that will enhance the learning of hundreds and thousands of students during a teacher’s career.”³³ Three common elements stand out across the five countries:

1. Induction is **highly structured**, with clear roles for administrators, staff developers, mentors, and others responsible for the development on new teachers.
2. Induction is focused on **professional growth and structured learning** that are viewed as the entry into a lifelong professional growth process.
3. **Community and collaboration** are central to the induction process, using observation, demonstration, discussion, and friendly critique as ways of ensuring that teachers share the language, tools, and practices valued by the profession.

An overview of key features and more details of the induction programs in these five countries is shown in Table 4 (see page 17) and Table 5 (see page 18).

³⁰*Ibid.*

³¹Britton, T. & Paine, L. (2005). Applying ideas from other countries. In H. Portner (Ed.), *Teacher mentoring and induction* (pp. 225-239). Thousand Oaks, CA: Corwin Press.

³²*Ibid.*, p. 229.

³³*Ibid.*, p. 228.

Table 4: Key Elements of Comprehensive Induction Programs Overseas³⁴

China (Shanghai)	France
<ul style="list-style-type: none"> • Culture of joint work to support teacher and student learning (teaching viewed as community property to be shared by all) • Districts conduct workshops, mentoring, and teaching competitions for novices and mentors with awards for outstanding work – winning lessons are archived for future use. • District hotlines connect new teachers with subject matter specialists. • New teachers attend half-day training sessions each week. • Teachers (new and experienced) participate in extensive peer observations: <ul style="list-style-type: none"> • Public, or “open,” lessons with debriefings • New teachers present “report lessons” and “talk lessons” describing and justifying a proposed lesson design with follow-up critique discussions • Lesson preparation and teaching research groups involve new and experienced teachers. • Schools host welcome ceremonies and end-of-year celebrations of teacher collaboration. 	<ul style="list-style-type: none"> • New secondary school teachers must pass a highly competitive, national, specifically secondary recruitment exam with oral and written components. • Successful applicants (called <i>stagiaires</i>, “one undertaking a stage of development”) receive a pedagogical advisor appointed by regional pedagogical inspectors. • <i>Stagiaires</i> teach part-time, observe each others’ classes, and attend sessions several days a week at the nearest Institut Universitaire de Formation des Maitres (IUFM), institutions created in 1991 to increase intellectual status of teacher education and professionalism. • <i>Stagiaires</i> move between a number of settings with multiple guiding teachers and advisors. • <i>Stagiaires</i> build a community (a “tribe” of same-subject teachers working together) at their IUFM with common tools, language, practice, and experiences. • Every <i>stagiaire</i> (either singly or in a team) prepares a year-long professional memoir (a report on some aspect of their teaching practice or academics).
Japan	New Zealand
<ul style="list-style-type: none"> • Considered a high-status occupation, teaching is a public activity; all schools are organized to allow open observations. • Each new teacher has a guiding teacher – this is a highly honored position. • New teachers have a reduced teaching load to allow regular opportunities to observe peers, guiding teachers, and other teachers (in their own schools and at other schools). • Each new teacher presents a demonstration or “study teaching” lesson, a formal public lesson observed and critiqued by peers and administrators, in his/her first year. • New teachers must submit culminating “action research” projects (30-40 pages in length) based on a classroom lesson they want to investigate. • Rather than individual isolated offices, all teachers occupy large team rooms where new and veteran teachers work with and assist each other. 	<ul style="list-style-type: none"> • Induction program called Advice and Guidance (AG); every beginning teacher receives 20% release time to participate • National Ministry of Education provides limited regional professional development for beginning teachers (e.g., a handbook outlining goals of AG). • Every school is required to provide AG for new teachers with involvement by department heads, “buddy teachers,” and other staff members. • Local variety in AG programs, but most convene all beginning teachers every two weeks throughout year and involve considerable observation time • Observation of teaching and facilitated peer support are central components. • Multiple and varied sources of support; not hinged on a single mentor • After two years, administrators must document AG support when beginning teachers apply for permanent certificates.
Switzerland (Bern, Lucerne, and Zurich)	
<ul style="list-style-type: none"> • Induction begins during student teaching; teams of three students network together. • Seamless movement from preservice through novice and professional learning • Beginning teachers work in practice groups of approximately six teachers from different schools: <ul style="list-style-type: none"> • Observe each others’ classrooms and those of more experienced colleagues • Led by trained practice-group leaders who are relieved of some teaching duties, given additional pay, and provided support from a central team. • <i>Standortbestimmung</i>: self-evaluation of first year of teaching by the practice groups working together • Counseling is available to all teachers, can involve one-on-one mentoring, and is mandatory for new teachers in some places. • Courses for new teachers range from “impulse courses” to longer workshops and courses; voluntary, some required 	

³⁴Summary data from Wong, H.K., Britton, T. & Ganser, T. (2005, January). What the world can teach us about new teacher induction. *Phi Delta Kappan*, 86(5), 379-384. Retrieved July 27, 2005, from http://www.newteacher.com/pdf/PDK_Article_Jan05.pdf. For a fuller description, see E. Britton, et al. (Eds.), (2003), *op. cit.*

Table 5: Comparison of Overseas Induction Models³⁵

	Switzerland (Bern, Lucerne, and Zurich)	Japan	China (Shanghai)	New Zealand	France
OVERALL GOAL	<ul style="list-style-type: none"> Teachers' lifelong learning is seamless evolution from preparation through induction and professional learning 	<ul style="list-style-type: none"> Introduce new teachers to the culture of teaching and to practical instructional skills Focused on improving teaching 	<ul style="list-style-type: none"> Impart understanding of education and professional ethics, teaching theory, and practical instructional skills 	<ul style="list-style-type: none"> Advice and Guidance (AG) program for knowledge and skill development 	<ul style="list-style-type: none"> <i>Stagiaire</i> (beginning teachers) in <i>formation</i> (developmental stage) are rooted in focused discipline
CULTURAL CONTEXT	<ul style="list-style-type: none"> All teachers receive high salaries and a heavy workload (42 hours a week/47 weeks a year) Many teach part-time to get a "foot in the door" of the profession 	<ul style="list-style-type: none"> Teacher learning seen as a continual process of studying and improving teaching throughout career 	<ul style="list-style-type: none"> Guidance and training form a culture of joint work to support teaching and learning Public conversations and scrutiny of teaching 	<ul style="list-style-type: none"> Free marketplace means schools compete for best teachers and pupils Schools use multiple components of AG program as recruiting tool for best candidates 	<ul style="list-style-type: none"> Collaborative identity within a cohort engendered through first-year work at IUFM (University Institute for the Formation of Teachers), professional training arm of the Ministry of Education
LENGTH OF INDUCTION PROGRAM	<ul style="list-style-type: none"> 1-2 years 	<ul style="list-style-type: none"> 1 year 	<ul style="list-style-type: none"> 1 year of probationary status 	<ul style="list-style-type: none"> 2 years in AG program; most attention to first-year teacher 	<ul style="list-style-type: none"> 1 year
RESPONSIBLE PARTIES	<ul style="list-style-type: none"> Shared responsibility across schools, preservice institutions, and professional development centers in cantons 	<ul style="list-style-type: none"> Limited practicum during teacher preparation Multiple support providers once they begin teaching Centralized in-service centers provide out-of-school training one day per week (minimum 30 days per year) 	<ul style="list-style-type: none"> Limited practicum during teacher preparation Colleges of education offer half-day classes per week during induction program Districts also provide training Schools provide mentors 	<ul style="list-style-type: none"> Colleges of education do intense screening prior to accepting candidates and provide extensive practicum Also provide one day of professional development for graduates Multiple support providers during induction period 	<ul style="list-style-type: none"> IUFMs direct activity in schools and local academies Beginning teachers spend 1½ days per week at IUFM during induction year for classes and research
MENTORING COMPONENTS	<ul style="list-style-type: none"> One-on-one mentoring, often by same teacher who supervised practice teaching Practice group leaders, mentors, and counselors can earn equivalent of \$4,500 above regular salary Extensive training for mentors; e.g., five days in the fall and two days later in year (Lucerne); or 3-4 hours per week for two semesters, and 1-2 day workshop (Bern) Beginning teachers can request assistance for up to two years 	<ul style="list-style-type: none"> Guiding teacher role is critical – work with novice teacher about two days per week, minimum 60 days per year Principal and guiding teacher use regional and local guidelines to devise year-long plan for new teacher Matched by subject matter and guiding teacher's experience/reputation No financial benefits for guiding teachers, but high honor, reduced teaching responsibilities Three meetings per year for guiding teachers in Tokyo or at local inservice centers. 	<ul style="list-style-type: none"> Mentors chosen by school from among teachers in school Limited financial reward, but high status and important for promotion to senior status Guided by handbook, but local variations 	<ul style="list-style-type: none"> Variety of sources of support are built into induction programs No one mentor assigned, but "help is all around" 	<ul style="list-style-type: none"> Pedagogic advisor role has national specifications High prestige but little extra pay (equivalent of \$750) Guidelines on general role of mentor, but not on how to mentor

³⁵Based on Britton, et al. (Eds.), (2003), *op. cit.* See also, Wong, et al., (2005, January), *op. cit.*

Table 5, continued

	Switzerland (Bern, Lucerne, and Zurich)	Japan	China (Shanghai)	New Zealand	France
OBSERVATIONS	<ul style="list-style-type: none"> • Key component of induction • Form basis for counseling and reflective practice with group • Mentors observe as often as one lesson each week (two per year for formal post-lesson discussion) 	<ul style="list-style-type: none"> • Two or more demonstration lessons viewed by prefecture administrators, mentor, principal, and other teachers. • Feedback given to new teacher orally and in writing. 	<ul style="list-style-type: none"> • Weekly observations of one or two classes (each other's and other teachers') by mentor/novice teams 	<ul style="list-style-type: none"> • Observed multiple times per year by AG coordinator 	<ul style="list-style-type: none"> • Novices regularly observe their pedagogic advisors' classes and are observed by them
ASSESSMENT and EVALUATION	<ul style="list-style-type: none"> • Separate support from evaluation • <i>Standortbestimmung</i>: Self-evaluation 	<ul style="list-style-type: none"> • Action research project during first year – results presented on a periodic basis or at the end of the year 	<ul style="list-style-type: none"> • Assessment distributed across multiple parties: <ul style="list-style-type: none"> • <i>Ethics</i>: school administrators and mentors • <i>Pedagogy and teaching practice</i>: district • <i>General pedagogy and psychology</i>: municipal test 	<ul style="list-style-type: none"> • School principals have authority to recommend a beginning teacher for permanent registration • Based on professional knowledge, practice, relationships, and leadership 	<ul style="list-style-type: none"> • Professional memoir: written text with oral presentation to jury at end of first year; reflection on elements of one's teaching practice
NEW TEACHER WORKLOAD	<ul style="list-style-type: none"> • Same as veteran teachers, but new teachers are expected to spend a certain percentage of paid time on induction activities 	<ul style="list-style-type: none"> • Usually 75% of a normal teaching load: <ul style="list-style-type: none"> • Normal upper secondary load—16-17 hours per week • Normal lower secondary load—20-23 hours per week 	<ul style="list-style-type: none"> • Reduced to allow for approximately half-day each week for participation in training activities 	<ul style="list-style-type: none"> • 20% release time for all beginning teachers paid by Ministry of Education (teach four, rather than five, classes per day) • 10% paid release time for second-year teachers 	<ul style="list-style-type: none"> • Teach one third of regular schedule; fully paid by state (18 hours of teaching per week)
IMPACT/ OUTCOMES	<ul style="list-style-type: none"> • Focus is teacher learning, not retention 	<ul style="list-style-type: none"> • Focus is teacher learning, not retention 	<ul style="list-style-type: none"> • Focus is teacher learning, not retention 	<ul style="list-style-type: none"> • Focus is teacher learning, not retention 	<ul style="list-style-type: none"> • Focus is teacher learning, not retention

Sustaining a Professional Community with a Network of Expertise that Extends Beyond School Walls

The effectiveness of most induction programs today is limited by their reliance on face-to-face interactions. Observations are constrained by the distance between observers and those being observed. Seminars, courses, and informal learning are only as good as the providers available within a reasonable distance and the time and flexibility of teachers to travel to participate. It is difficult to find mentor teachers with appropriate grade and content level matches within a particular school or from among schools in close proximity. The most experienced teachers and experts in a school or district are often rare and overburdened resources. Even when good mentor/mentee matches have been made, multiple demands on time make it difficult for new teachers to spend adequate time with their mentors. Thus, constraints of funding, time, and distance restrict face-to-face interaction,

thwarting communication, collaboration, and access to resources.

Furthermore, unlike those noted in Boxes 1, 2, and 3 (see pages 13, 15, and 20), most induction programs run by districts and schools are self-contained and fail to provide new teachers with access to external resources such as faculty at institutions of higher education that prepare new teachers. Small, rural schools and highly stressed urban schools too often lack the resources necessary to offer new teachers the skilled collegial support they need.

Smith and Ingersoll's data indicate that participation in an external network is an important element in improving the chances of teachers' remaining after the first year of teaching, finding that "participation in an external network of teachers . . . reduced the likelihood of leaving teaching at the end of the first year by about 44 percent" (see Figure 3, page 9). Technology is increasingly seen as an important resource for creating and supporting these external networks.

Box 3: Teachers Learning in Networked Communities (TLINC)

NCTAF and its Design Partners (a group of five organizations and leaders with expertise in teacher preparation, new teacher induction, and online learning communities), developed TLINC (Teachers Learning in Online Communities) with support from a planning grant from the AT&T Foundation. The Design Partners were the International Society for Technology in Education, SRI International, Pepperdine University, and the Education Development Center's Center for Children and Technology and Center for Online Professional Development. Additional support came from Judi Harris at the College of William and Mary and Metiri Group. TLINC aims to improve new teacher retention and support teacher learning by addressing three categories of need expressed by novice teachers and cited in teacher retention literature: access to high quality teaching resources, frequent access to experts (mentors and coaches), and ongoing peer support. The model builds upon research on teacher learning, communities of practice, and online learning to create a learner-centered, flexible, and interactive approach to meeting the needs of new teachers. The ultimate goals are more effective teaching and faster development of novice teachers into skilled educators.

The TLINC model seeks to develop novice teachers' reflective practice in a professional community. Rather than providing a "one size fits all" solution, the Design Team agreed that district involvement, including teachers across the spectrum of experience, was critical for district-level design and buy-in. Thus, TLINC helps districts explore ways to build collegial support and skilled guidance that use innovative strategies and technologies to "think outside the proximity boxes" of time and geographic location. A key component of the project design is close collaboration between a higher education institution that prepares new teachers and the school district it serves.

Four districts participated in the first year of TLINC planning activities. District planning meetings, typically lasting one to two days, involved key personnel from the school district, school administrators, mentors and new teachers, and representatives of the local higher education teacher preparation providers. At each site, the local educators shared their concerns about how new teachers were supported in their district and offered suggestions for changes to enhance their induction and mentoring programs. The Design Team also provided a demonstration of current online tools that support communication and community. Following these demonstrations and discussions, the district teams ranked the kinds of tools they believed would be most valuable for meeting their needs.

With support from Microsoft, NCTAF will take the TLINC concept into additional districts. Targeting those districts that showed readiness for a collaborative teaching continuum through the SST project (See Box 2), the Microsoft grant will make it possible to expand TLINC in Seattle, Washington (working with the University of Washington), and to begin activities in Memphis, Tennessee (with the University of Memphis), and Denver and Jefferson County, Colorado (with the University of Colorado at Denver).

“Distributed learning” is a term that describes “educational experiences distributed across a variety of geographic settings, across time, and across various interactive media.”³⁶ Modern information technologies can provide distributed learning opportunities to communicate and learn in alternative ways. For example, opportunities to interact in an asynchronous fashion (e.g., threaded discussions that do not require real-time postings but can be entered at any time) enhance participation as well as opportunities for reflection; while synchronous interactions (e.g., chat rooms or live discussions that occur in real time) make it easier to work in small groups and to get to know colleagues located at a distance. These and other capabilities of online networks offer real advantages for breaking down the isolation experienced by new teachers. They make it possible to create a professional community that extends beyond the boundaries of a teacher’s school or local colleagues.

NCTAF’s TLINC Project is just one example of investigations into online support to build a community of learners among new teachers. Several other projects explore ways in which online networks support new teachers.

- The *Milwaukee Public Schools' Professional Support Portal* (http://www.milwaukee.k12.wi.us/html/MPSTeachers_Staff/Tech_Tools/Portal/) uses online networking to support teacher induction, retention, and continued professional growth with online tools, resources, and expertise.
- WINGS (<http://wings.utexas.org>), at the University of Texas at Austin, and *Illinois' Novice Teacher Support Project's Electronic Mentoring* (<http://ementorillinois.ed.uiuc.edu/>) are

university-based networks providing online support for student teachers and new teachers. Each currently serves only the institution’s graduates.

- SRI’s *Tapped In* (<http://tappedin.org/tappedin/>), funded by the National Science Foundation, has hosted many activities for teachers online over the years.
- *e-Mentoring for Student Success* (<http://newteachercenter.org/eMSS/index.php>) was created through a grant from NSF. Developed jointly by the National Science Teachers Association, the New Teacher Center at the University of California, Santa Cruz, and Montana State University, eMSS has established online networks for beginning and experienced science teachers.

Participation in a strong professional learning community helps build strong teaching practices that lead to greater effectiveness by all teachers in a school. Working together, PK-12 educators and their higher education partners can use teacher preparation, induction, and continual professional development to establish a new culture: a collaborative community of practice. Today’s modern technologies can support effective strategies for establishing and extending the reach of such communities.

Systemic Induction Into Strong Learning Communities: Lessons Learned

The programs cited in this paper contribute to a growing body of research on how the entry period can be structured so that novice teachers become effective teachers most expeditiously. Some of the more important findings from these various programs are the following:

³⁶Dede, C. (2003, November). *Enabling distributed-learning communities for educators via emerging technologies*. Paper prepared for the National Commission on Teaching and America’s Future. Washington, DC: NCTAF. Retrieved July 25, 2005, from <http://www.nctaf.org/article/?c=1&sc=1>.

1. Induction should be a stage in a continuum of teacher development.

The work of preservice learning and the learning of intern or novice teachers should be part of a seamless continuum in which content knowledge and pedagogical skills move in tandem through teaching, observation, dialogue, and reflection. This requires the involvement of many players and stakeholders: teacher preparation programs, hiring districts, certification boards, schools, and professional organizations. New teachers' responsibilities should be phased in as skills, experience, and expertise grow.

2. Induction should support entry into a learning community.

Induction should introduce novices to learning communities in which teachers take collective responsibility for the growth and learning of all students and all teachers within a school. Open doors, shared norms, and regular communication and collaboration are vehicles for jointly creating knowledge and supporting continuous improvement.

3. Mentoring is a useful component of induction, but it is only one element of a comprehensive induction system.

High quality mentors should be selected for their ability to help other teachers reflect on their skills and progress. More than "buddies," mentors must be good teachers and reflective practitioners, as comfortable working with a team as with individual teachers. They need training in observation and need to master skills such as portfolio evaluation and effective means of structuring constructive criticism in a "critical friend" role. This expertise should be rewarded through an incentive structure that recognizes the special roles that mentors play within a learning community.

4. External networks supported by online technologies can add value.

Professional online networks make it possible for mentors, induction facilitators, curriculum specialists, and new teachers to work with each other across barriers of time and place. They help bridge the gap that occurs when interns leave their teacher preparation programs and move into classroom responsibilities, and provide opportunities for new teachers to observe other teachers' lessons, reflect on and discuss their own work, and access best practices and resources beyond the boundaries of a particular school or district.

5. Induction is a good investment.

We know that comprehensive induction can cut attrition rates in half. This alone is a strong argument for greater investment in such programs. One recent study found that induction creates a payoff of \$1.50 for every \$1 invested.³⁷ Teachers don't really begin to "hit their stride" until they have been teaching for several years. Comprehensive induction programs produce a high return on investment when novice teachers stay long enough to develop into high quality professionals who help students meet their full academic potentials.

Policy Recommendations

There are important roles for leaders at all levels to make certain that new teachers are inducted into strong learning communities that support their continuing growth. In *No Dream Denied*, we called these "links in the chain of accountability." We break the links into discrete areas in the section below, but many of the responsibilities in this web overlap. States, districts, schools, and higher education all have a stake in

³⁷Villar, A. (2004). *Measuring the benefits and costs of mentor-based induction: A value-added assessment of new teacher effectiveness linked to student achievement*. Santa Cruz, CA: New Teacher Center.

ensuring that every new teacher becomes a great teacher.

State leaders should:

- Create and support comprehensive mentored induction programs for new teachers. Funding is critical. States also can set guidelines, offer training, provide guidance, and encourage districts to design innovative programs.³⁸
- Adopt standards for teaching and learning for schools in which these standards can be met.
- Provide additional resources to schools and teacher preparation programs that work together in a professional development school.
- Encourage and provide support for teacher preparation programs and districts that develop extended intern/residency models.
- Develop a tiered teacher licensing/certification system that enables the state to monitor the effectiveness of induction programs in each district and the outcomes of each teacher education program in the state.
- Develop a P-16 council that focuses on the collaborative relationships among various education institutions involved in the state's teacher quality initiatives, including induction.
- Set up incentives for districts to staff vacancies in high-need schools with the most experienced teachers, rather than with new teachers. New teachers should only be assigned to these schools with extra supports (e.g., in a team teaching assignment

with a master teacher) and special training.

District leaders should:

- Stop placing novice teachers in high-need schools and leaving them to “sink or swim.” Develop incentives for teams of experienced teachers to work in challenging schools, and, if new teachers are assigned to these schools, pair them with experienced teachers.
- Identify highly qualified principals who are best equipped to lead learning communities and create incentives to attract them to high-need schools.
- Work with local teacher preparation providers to establish model induction programs for newly minted teachers that can benefit the entire school community.
- Adopt and maintain standards within districts for comprehensive induction programs, with clearly defined expectations and structured time for novices and mentors to spend in observation, reflection, and collaborative lesson design and analysis.
- Provide policies and incentives that expand opportunities for linking new teachers with experienced teachers or groups of new teachers with teams of experienced teachers in learning groups.
- Work with teacher preparation institutions to develop online networks for new teachers that provide anytime, anywhere support and opportunities for facilitated discussion and reflection.
- Establish clear rubrics tied to state standards for evaluating novice teachers.
- Maintain school-by-school data on teacher turnover and costs, along with new teacher induction investments and outcomes, and use these data to target future teacher quality investments.

³⁸One such model can be seen in a document being developed in Washington State by the Center for Strengthening the Teaching Profession, with support from the Paul G. Allen Family Foundation. This document, *Effective Support for New Teachers in Washington State: Standards for Beginning Teacher Induction*, was created in May 2005 and is currently under review. Retrieved July 25, 2005, from http://www.cstp-wa.org/Navigational/Policies_practices/Teacher_induction/Complete_Guideline.pdf.

School leaders should:

- Set up school structures and release time that enable new teachers, mentors, and colleagues to work together, observe teachers in classrooms, and provide feedback.
- Pair new teachers (one-to-one or in groups) with experienced teachers who have the relevant skills, content knowledge, and expertise to serve as coaches or mentors.
- Cultivate a professional culture that recognizes the needs and skills of new teachers and promotes ongoing interactions of teachers across experience levels.
- Make sure that mentors receive appropriate training (especially on how to share their expertise in pedagogy and curriculum development), meaningful incentives, and time to do their work well.
- Minimize non-teaching responsibilities for novice teachers so that they have time for a full range of induction activities.

Higher education leaders and other providers of teacher preparation should:

- Prepare new teachers for working in learning communities by setting up field experiences for teacher candidates that involve working in teams or cohorts.
- Study the experiences of new teachers in order to improve the quality of teacher preparation.
- Recognize and reward the service of faculty who work with novice teachers in PK-12 schools.
- Commit the funds necessary to create and maintain strong relationships with PK-12 schools, including extensive clinical internships, induction, and follow-up activities.
- Establish PK-12 teacher faculty positions in university programs.

- Facilitate online connections between cohorts of students and graduates.
- Link classroom educators with university resources that enhance their personal/professional learning and the learning of their students.
- Work with districts and schools to certify master teachers as clinical instructors, mentors, and evaluators of novice teachers.

Conclusion

During the first few years of their careers, beginning teachers need support as they make the transition from being a student of teaching to being a teacher of students. Teachers need much more, however, than a life preserver thrown out to remedy the sink-or-swim approach. Learning the ropes – the policies and procedures of a school and district, working with curricula and testing requirements, fitting in with the culture of the school, getting to know the community – is a huge professional learning challenge. Added to this is, of course, the heart of a teacher's job: responsibility for teaching a group of students and inspiring them to learn and to want to continue learning.

Quality teaching is the responsibility of the entire school community. Fostering a supportive environment that helps new teachers become good teachers – and good teachers become great teachers – is critical to providing a rewarding career path for educators and a quality learning environment for students.

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