THE NEA FOUNDATION FOR THE IMPROVEMENT *of* EDUCATION
Establishing High-Quality Professional Development

Using Data to Improve Teacher Induction Programs

Introduction: Teacher Retention and Quality Schools

Public schools in the United States face a serious dropout crisis. Nearly forty percent of teachers leave the profession within their first five years on the job.[1] These losses are troubling for those who care about having a highly qualified teacher in every classroom. In the next few years, moreover, large numbers of teachers will retire while student enrollments expand. Recruiting and retaining qualified teachers will be a challenge everywhere, especially in urban districts. This will make it difficult to achieve tougher standards for entry into the profession, a major objective of the 2001 Elementary and Secondary Education Act (ESEA).

Researcher Richard Ingersoll notes that attempts to boost new teacher recruitment will fall short of meeting future staffing needs if the current exodus continues.[2] Schools, especially those with traditionally underserved students, simply cannot afford to lose talented, well-trained teachers to other professions. Retention, as much as recruitment, must be central to any strategy to maintain a high standard of K–12 instructional practice.

Many studies show that well-designed teacher induction programs reduce turnover rates and increase teacher effectiveness during the early career.[3] Such programs provide an array of assistance to new teachers, ranging from help with policies and procedures, to guidance on classroom management, to feedback on instructional strategies and other aspects of professional practice. They also connect new teachers to a network of colleagues and resources, and reduce the isolation that too often characterizes teachers' early professional experiences. In some instances, induction programs also help veteran teachers to adjust to a new school or even a new assignment.

This issue brief outlines an essential, yet often overlooked, aspect of teacher induction programs: data collection and analysis to determine results. It also examines the roles that teacher unions, together with school districts and their partners, can play to improve induction programs through better use of data and other strategies.

Part of a larger, three-year research project undertaken by The NEA Foundation, the findings described here are based on a study of teacher induction programs in Bellevue and Edmonds, Washington; Hayward, Long Beach, and Union City, California; Phoenix, Arizona; and Missouri. This study

[1] Richard M. Ingersoll, *Teacher Turnover, Teacher Shortages, and the Organization of Schools*. Center for the Study of Teaching and Policy, 2001.
[2] Ibid.
[3] Eileen Mary Weiss and Stephen Gary Weiss, *Beginning Teacher Induction*. ERIC Clearinghouse on Teaching and Teacher Education, 1999.

About The NEA Foundation

Think BIG!
THE NEA FOUNDATION

The NEA Foundation for the Improvement of Education (NFIE) was created by the members of the National Education Association (NEA) in 1969 and is sustained by their continuing support. The big ideas of teachers, education support professionals, and higher education faculty and staff become reality with resources, technical assistance, and funding from the foundation. Together, The NEA Foundation and America's educators **Think Big!**

shows how the quality of teacher induction programs is affected by (1) the nature of data collection and analysis, and (2) policies and practices of union affiliates.

Induction Models

As Barry Sweeny has shown, new teacher induction programs can be grouped into three types: Basic Orientation, Instructional Practice, and School Transformation *(Figure 1)*.[4]

Basic Orientation Model

Most school districts maintain a simple version of the basic orientation model. This approach helps new teachers learn school procedures and district policies. It also helps new teachers understand their responsibilities and address classroom management issues. Basic orientation programs are usually structured around a series of workshops. New teachers may be assigned a mentor. When mentors are assigned, they typically serve in an informal capacity, with little attention given to modeling effective instructional practice.

Instructional Practice Model

The instructional practice model likewise covers policies, procedures, and classroom management issues. More importantly, it links induction efforts to existing state or local standards for accomplished teaching. Skilled, well-trained mentors help new teachers bridge theory and practice by using research-based classroom strategies. Such programs ideally last two or more years and offer new teachers sustained, content-rich learning.

School Transformation Model

The school transformation model is rare. It incorporates attributes of the other two models, while connecting induction programs to systemic, school-wide renewal efforts that promote continuous improvement. In this case, the school uses research and data to assess and change its teacher evaluation system, professional development practices, and curriculum. This model helps new teachers to engage in school reform and connect their professional growth to challenging goals for student learning. It focuses on the development of teachers as a "community of learners" and enables faculty to work together on all aspects of their job. The school transformation model best represents The NEA Foundation's definition of high-quality professional development *(Figure 2)*.[5]

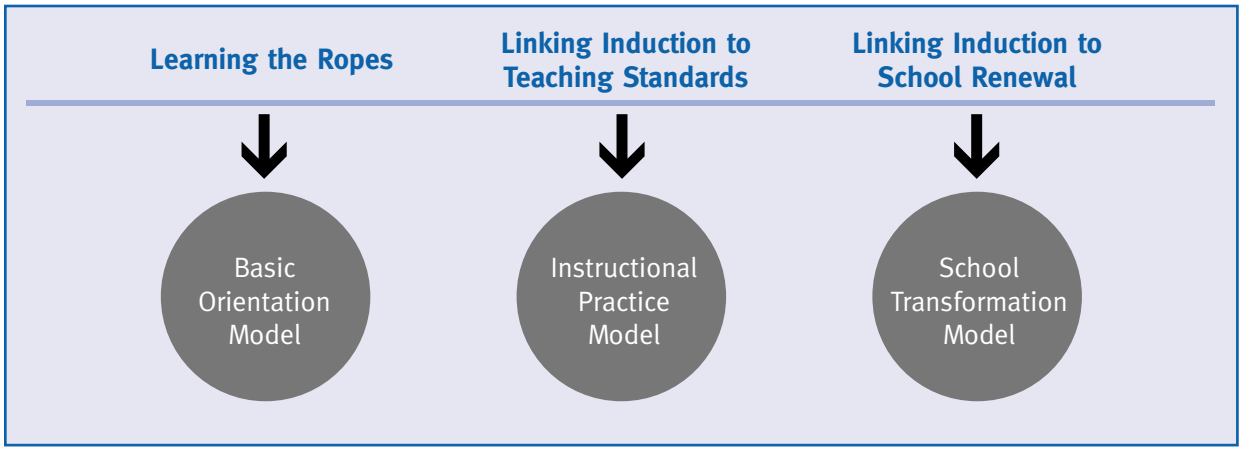

Figure 1: Induction Models

[4] See www.teachermentors.com.
[5] Judith Rényi, *Teachers Take Charge of Their Learning: Transforming Professional Development for Student Success*. The NEA Foundation for the Improvement of Education, 1996.

High-Quality Professional Development . . .

- improves student learning;
- helps educators meet the needs of students who learn in different ways and come from diverse backgrounds;
- allows enough time for inquiry, reflection, and mentoring and is part of the normal working day;
- is sustained, rigorous, and adequate to the long-term change of practice;
- is directed toward teachers' intellectual development and leadership;
- fosters better subject-matter knowledge, greater understanding of learning, and full appreciation of students' needs;
- is designed and directed by teachers, and includes the best principles of adult learning;
- balances individual priorities with school and district needs, and advances the profession as a whole;
- makes best use of new technologies; and
- is site based and supportive of a clear vision for student achievement.

Figure 2

Collecting Data to Determine Program Quality: The Current Status

As the number of teacher induction programs has grown in recent years, so have efforts to determine if the programs are achieving the desired results. Districts are collecting — or are planning to collect — five types of data: program satisfaction, teacher retention, job satisfaction, teacher learning, and student impact *(Figure 3)*. Program satisfaction data tend to be compiled for all types of induction programs. Teacher retention, job satisfaction, and teacher learning data are gathered for the instructional practice model. Data that link student learning to teachers' participation in induction programs, though rare, are central to the school transformation model *(Figure 4)*.

Most districts find it difficult to collect and analyze all but program satisfaction data. The problems stem largely from inappropriate infrastructure. Statistics on program participation are typically compiled by one office, while data about teacher retention, job satisfaction, and teacher and student learning are tallied in another. Often there is no clear way to link the relevant databases, and student achievement data are rarely disaggregated by race, ethnicity, and income. Many districts lack the tools to analyze the data and determine differences in the progress of teachers who do and do not participate in induction programs. Districts, however, need all five types of data to move toward more effective programs that benefit students from every background.

Types of Induction Program Data

- **Program Satisfaction:** Are participants content with the induction program and the level of support offered?
- **Teacher Retention:** Does the induction program help to retain new teachers?
- **Job Satisfaction:** Does the induction program increase confidence and job satisfaction among new teachers?
- **Teacher Learning:** Does the induction program improve new teachers' skills and knowledge?
- **Student Impact:** Does participation in the induction program result in improved student learning?

Figure 3

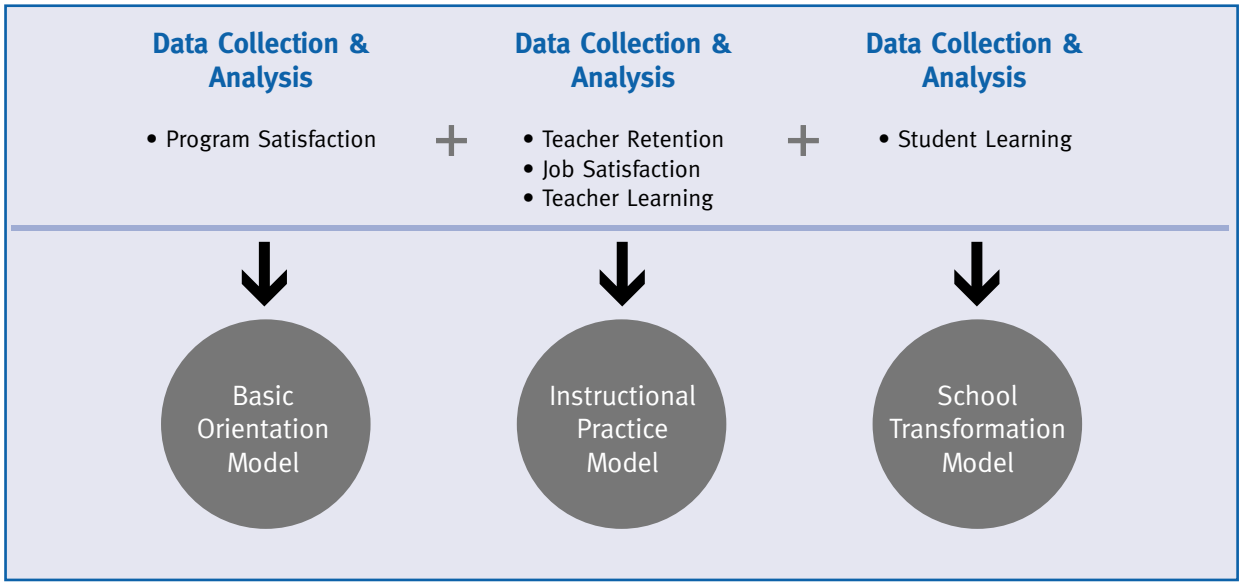

Figure 4: Data Collection for Induction Models

Program Satisfaction Data

Satisfaction with induction programs and the level of support provided is most often measured by end-of-session and end-of-year surveys of new teachers and support providers. Some districts conduct focus groups. In one district participating in The NEA Foundation's study, for example, the superintendent holds an annual forum for new teachers. While participant feedback does help to refine programs and better meet new teachers' needs and expectations, this type of information offers limited value. It does not measure the programs' effect on retention and overall job satisfaction, nor does it explain how participants change their instructional practices and improve their students' learning.

Teacher Retention Data

It can be hard for school districts to correlate data on teacher retention with participation in induction activities because the information is often non-existent, inconsistently recorded, or gathered in separate offices or databases. In some cases, though, human resources departments are working with professional development staff to combine data and determine if a link exists between certain types of induction experiences and longevity. Such efforts often require districts to allocate resources for archival research and data entry.

Job Satisfaction Data

Districts often measure confidence and overall job satisfaction among new teachers through surveys, as well as formal and informal conversations with new teachers, mentors, and induction program staff. In Bellevue, Washington, the district assessed job satisfaction with a school climate survey that sorted the data by years of teaching experience, teaching level, and assignment. As part of the California Beginning Teacher Support and Assessment Program, Long Beach gauged new teachers' views of self-efficacy and confidence levels as they relate to the six domains of teaching identified in statewide instructional standards. In most instances, however, analysis of such information is hampered by unreliable comparison data for teachers who have not participated in induction programs.

Teacher Learning Data

Direct observations of teaching practice are among the more useful types of data to help educators understand the connection between accomplished pedagogy and participation in induction activities. Such observations reveal how new knowledge is actually applied in different instructional settings. In Long Beach, for example, teachers participating in the Beginning Teacher Support and Assessment Program are observed by trained coaches three times per year. The coaches organize their comments according to key indicators for each of the district's instructional standards. Data from 1998–1999 show gradual growth in skills from the first to second to third observations. As with other statistical categories, comparison with a control sample would be beneficial.

Student Learning Data

Few districts have collected data linking improved student learning to teachers' participation in induction activities. Fewer still can quantify the benefits to students of different socioeconomic and cultural backgrounds. This may be one reason why the school transformation model, which relies heavily on such data, is so rare. The situation is only now beginning to change. For example, the Long Beach School District, working with California State University–Long Beach, began to study the effects of a mathematics institute for second-year teachers on teachers' content knowledge and student outcomes. Preliminary student achievement data will be available in 2003. Here, as elsewhere, connecting teacher induction to student outcomes is almost always limited to occasional, one-time studies. Ideally, districts should include this type of data collection in their long-term, formative process for program evaluation.

Creating a Data Collection and Analysis Infrastructure

Structures and methods for long-term data collection should be integrated into every induction initiative. Such systems are essential ingredients for developing and maintaining a strong learning community, and for facilitating efforts to establish more rigorous and effective support programs for new teachers. They also allow districts to move beyond the basic orientation model toward the more sophisticated instructional practice and school transformation models.

Database Design

State agencies and districts must establish databases that make it easier to access, correlate, and analyze specific categories of information over time. This includes data pertaining to:

- participation in induction activities
- program quality
- teacher retention
- reasons for leaving the profession
- job satisfaction
- classroom observation
- student progress

Such data should be compared to a control sample of teachers who have not engaged in induction activities. The databases must sort information by a variety of factors, including years of teaching experience, teaching level (elementary, middle, high school), type of assignment, and student characteristics. The databases must also accommodate different formats, such as written surveys, focus groups, exit interviews, student work samples, test scores, performance evaluations, and notes from classroom observations.

Assigning Responsibilities

It is essential that district superintendents designate staff to manage the collection, coordination, and analysis of the types of data described in this issue brief. Districts that fail to do so usually lack a consistent process for storing and managing data over time, as well as for transferring information when there are changes in key leadership positions. Some districts collect data, but do not provide the time or staff to coordinate reporting and help practitioners make use of findings.

Capacity and Reporting

Three duties are essential for those coordinating data collection. These individuals must (1) ensure that teachers and principals have the skills, authority, and time to interpret data and take action to improve programs based on their analyses, (2) provide data in an accessible, consistent format and (3) act at a time when major proposals to improve induction programs are on the table.

Partnerships

Cooperation between district departments — for example, between the human resources department and the curriculum and instruction office — vastly improves collection of reliable induction data, as do partnerships with a variety of outside organizations, including state education agencies, universities, and union affiliates. Often such partners can share expertise in database design, statistical analysis, and program evaluation. Below are examples of the kinds of expertise the institutions can bring to such a partnership.

- **State Education Agencies:** Many state departments of education (for example, Missouri and Washington) have conducted teacher supply and demand studies. These lend valuable support to induction programs by identifying areas of teacher shortage, describing workforce demographics, and pinpointing factors that affect recruitment and retention. Also, states often maintain intermediate education service agencies that have the capacity to help schools with statistical reporting.
- **Universities:** Some induction programs (particularly those consistent with the instructional practice model) are, in fact, joint ventures between a school district and the major college of education in the region. Universities have an obvious interest in ensuring that their graduates make a smooth transition to full-time teaching, as well as an obligation to help districts understand what strategies contribute to a new teacher's success on the job. Universities typically house superior technology, a statistics department, and a social science faculty knowledgeable in measurement and evaluation. All of these assets should form the basis of a university–district partnership to assist new teachers.
- **Unions:** At both the state and local levels, unions sustain induction programs in many essential ways, including data collection and analysis *(Figure 5)*. They represent the majority of teachers in most school districts, and have effective methods of surveying teachers' professional development needs and priorities at every career stage. Unions can measure what teachers want, what they need, and what they find most useful in enhancing their skills and knowledge. They can also advocate, bargain, broker, and deliver services. They are, therefore, districts' most important partners in improving new teacher retention and effectiveness. Independent research on The NEA Foundation's demonstration programs strongly suggests that union–district collaboration is one of the most important elements in assuring instructional quality at the local level.[6] Such collaboration also establishes a supportive climate for new teachers, and eliminates the "sink or swim" approach to induction in which new teachers get the toughest schedules, the neediest students, and the most onerous committee assignments.

[6] Beverly Parsons, et al., *Vision into Action: Insights from A Change of Course*. InSites, 2000.

Focus & Facilitation	Design	Management
Needs Identification: Unions often survey their members about the need for mentoring and other forms of professional development during different stages of the career.	**Teacher Involvement:** Unions can ensure that new teacher participation in induction programs is a contractual obligation. They also ensure that teachers have a voice in shaping programs.	**Program Governance:** Together with school administrators, union representatives serve on joint committees to provide overall leadership for programs that help beginning teachers.
Standards Development: Unions work with state agencies and local districts to establish guidelines for quality induction programs.	**Compensation:** Agreements negotiated by unions often stipulate class load, stipends, and other forms of compensation for mentors.	**Capacity-Building:** Unions often provide essential training for those who fill key induction roles, such as mentors and peer reviewers.
Cooperative Agreements: In many locations, unions and their districts establish formal, cooperative agreements that enable better services for new teachers.	**Time and Funding:** Local unions frequently take the lead on negotiating time and funds necessary for quality programs. In many cases, they contribute their own funds to the program.	**Data Analysis and Policy Formation:** In some districts, union leaders work with school administrators to study data and create new union and district induction policies based on this analysis.

Figure 5: Union Roles in Induction Programs

A sustained union–district partnership — with formal agreements and collaborative mechanisms — can be the basis for an effective data-collection infrastructure. Unions and districts have a shared interest in helping new teachers succeed. Working together, they enhance their ability to leverage funds, shape policy, and engage additional partners.

Conclusion

The basic orientation model for induction now used in many districts nationwide is insufficient for ensuring a quality teacher in every classroom. If induction programs are to help meet school staffing needs and raise the quality of teaching, they must provide comprehensive school-based support consistent with the instructional practice and school transformation models.[7] The first and subsequent steps along this path involve better collection, management, and analysis of data, so that decisions about new teacher assistance are no longer based only on theory and assumptions. These tasks are best managed by partnerships between school districts and unions, with participation by active universities and state education agencies. As with all professional development, effective induction programs must be based on good data used wisely by the practitioners who have a daily responsibility for student progress.

[7] Susan Moore Johnson, et al., "Retaining the Next Generation of Teachers: The Importance of School-Based Support." *Harvard Education Letter*, July/August 2001.

Sample Data Collection Instruments

Beginning Teacher Assistance Programs: Survey of School Districts. Washington State Institute for Public Policy, 1998.

Beginning Teacher Support and Assessment Program Evaluation Survey: Beginning Teacher Form. California Educational Research Cooperative, 2000.

Beginning Teacher Survey. Washington State Teacher Assistance Program, 2001. www.k12.wa.us/profed/tap/bt2001.pdf

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Principals' Evaluation of Beginning Teacher Preparation and Development. The Washington State Institute for Public Policy, 1999. www.wa.gov/wsipp/education/pdf/prcplsurvey.pdf

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Resources

Beginning Teacher Induction. Eileen Mary Weiss and Stephen Gary Weiss. ERIC Clearinghouse on Teaching and Teacher Education, 1999. www.ed.gov/databases/ERIC_Digests/ed436487.html

Creating a Teacher Mentoring Program. The NEA Foundation for the Improvement of Education, 1999. www.nfie.org/publications/mentoring.htm

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Teachers Take Charge of Their Learning: Transforming Professional Development for Student Success. Judith Rényi. The NEA Foundation for the Improvement of Education, 1996. www.nfie.org/publications/takecharge.htm

This issue brief summarizes a study by Beverly Parsons, Carolyn Lupe, and Carol Bosserman of InSites, a non-profit organization that conducts research and evaluation, and provides technical assistance to educational and social organizations and policymakers (www.InSites.org). This study is part of work done under contract with The NEA Foundation through a grant (R215U990007) received from the Office of Educational Research and Improvement of the U.S. Department of Education. The information and opinions provided herein do not necessarily represent agreement or positions of the project participants or funding agents.