

Do Teacher Induction and Mentoring Matter?

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In recent years there has been a growing interest in support, guidance, and orientation programs—collectively known as induction—for beginning elementary and secondary teachers during the transition into their first teaching jobs. This study examines whether such supports have a positive effect on the retention of beginning teachers. The study also focuses on different types and components of induction, including mentoring programs, collective group activities, and the provision of extra resources and reduced workloads. The results indicate that beginning teachers who were provided with multiple supports, were less likely to move to other schools and less likely to leave the teaching occupation altogether after their first year. Some forms of assistance and support, however, did not appear to increase beginners' retention.

In recent years there has been a growing interest in support, guidance and orientation programs—collectively known as induction—for beginning elementary and secondary teachers during the transition into their first teaching jobs. Historically, the teaching occupation has not had the kind of structured induction and initiation processes common to many white-collar occupations and characteristic of many of the traditional professions (Lortie, 1975; Tyack, 1974; Waller, 1932). Although elementary and secondary teaching involves intensive interaction with youngsters, ironically the work of teachers is largely done in isolation from colleagues. This is especially consequential for new entrants, who, on accepting a teaching position in a school, are often left on their own to succeed or fail within the confines of their own classrooms—an experience likened by some to being “lost at sea” (e.g., Ingersoll, 2003b; Johnson, 1990; Johnson & Birkeland, 2003; Sizer, 1992). Indeed, critics have long assailed teaching as an occupation that “cannibalizes its young” and in which the initiation of new teachers is akin to a sink or swim, trial by fire, or boot camp experience.

Perhaps not surprisingly, teaching has also traditionally been characterized as an occupation with high levels of attrition, especially among beginners (Grissmer & Kirby, 1987, 1997; Lortie, 1975; Veenman, 1985). All occupations, of course, experience some loss of new entrants, either voluntarily because newcomers decide not to remain, or involuntarily because employers deem

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them to be unsuitable. But, teaching has long had alarmingly high rates of attrition among newcomers. A number of studies have found as many as 50% of new teachers leave within the first 5 years of entry into the occupation (e.g., Huling-Austin, 1990; Ingersoll & Smith, 2003; Murnane, Singer, Willett, Kemple, & Olsen, 1991). Moreover, several studies have found a significant correlation between teacher's likelihood of retention and their scores on exams, such as the SAT. The best and the brightest among the newcomers appear to be those most likely to leave (Henke, Geis, & Chen, 2000; Murnane et al., 1991; Schlechty & Vance, 1981).

In addition, recent research has documented what many educators have long suspected—a strong link between the perennially high rates of beginning teacher attrition and the perennial teacher shortages that plague teaching. In analyses of national data, we have shown that school staffing problems are not solely, or even primarily, due to teacher shortages, in the conventional sense of too few teachers being recruited and trained. In contrast, the data indicate that school staffing problems are to a significant extent a result of a “revolving door,” where large numbers of teachers depart teaching long before retirement (Ingersoll, 2001, 2003a; Ingersoll & Smith, 2003).

These are the kinds of occupational ills that effective organizational induction programs are supposed to cure and, accordingly, in recent decades a growing number of states and school districts have developed and implemented a variety of such programs (for reviews of theory, policy, and research on teacher induction see, e.g., Arends & Rigazio-DiGilio, 2000; Feiman-Nemser, Schwille, Carver, & Yusko, 1999; Fideler & Haselkorn, 1999; Scherer, 1999). The federal No Child Left Behind Act, passed in 2002, has also emphasized the importance of new teacher induction and these programs could receive substantial support from this legislation as it is implemented over the next few years.

It is important to clarify that teacher induction is distinct from both pre-service and inservice teacher training programs. Theoretically, induction programs are not additional training but are designed for those who have already completed basic training. These programs are often conceived as a bridge from student of teaching to teacher of students. Of course, these analytic distinctions can easily become blurred in real situations. Like the induction processes common to other occupations, there are a number of different, and sometimes conflicting, purposes behind teacher induction programs. Moreover, teacher induction can refer to a variety of different activities such as classes, workshops, orientations, seminars, and especially, mentoring. The latter refers to the personal guidance provided, usually by seasoned veterans, to beginning teachers in schools. During the past 20 years teacher mentoring programs have become the dominant form of teacher induction; indeed, the two terms are currently often used interchangeably.

The overall objective of teacher mentoring programs is to provide newcomers with a local guide, but the particulars in regard to character and content of these programs themselves widely vary. Duration and intensity are one set of variables; mentoring programs can vary from a single meeting between mentor and protégés at the beginning of a school year, to a highly structured program involving frequent meetings over a couple of years between mentors and protégés who are provided with time away from their normal teaching schedules. Programs vary according to the numbers of new teachers they serve. Some include anyone new to a particular school, even those with previous teaching experience, whereas others focus solely on inexperienced candidates new to teaching. Programs vary according to their purpose. Some, for instance, are primarily developmental and designed to foster growth on the part of newcomers. Others are also designed to assess, and perhaps weed out, those deemed ill-suited for the job. Finally, mentoring programs also vary as to whether they include training for the mentors and how much attention they devote to the match between mentor and mentee. Although some programs strive to see that new secondary math teachers, for instance, are provided with mentors who have had actual experience teaching secondary level math, other programs do not.

What kinds of induction programs and experiences exist, and under what circumstances they help, are clearly important questions for education policy-makers and school administrators faced with decisions about supporting such programs. Accordingly, with the growth of induction programs there has also been a growing interest in empirical research on the variety and effects of these initiatives. During the past 20 years, numerous studies have been completed on a variety of different types of programs, several studies seem to provide support for the hypothesis that well-conceived and well-implemented teacher mentoring and induction programs are successful in increasing the job satisfaction, efficacy, and retention of new teachers. In turn, educational advocates and reformers frequently cite examples drawn from this research to secure additional funding, garner political support, or confirm a particular educational perspective.

There are, however, important limitations to the existing empirical research on the effects of teacher induction and mentoring programs. For instance, often studies of the effects of mentoring do not include a control group of the nonmentored—they only examine outcomes for those in mentor programs—and hence, are unable to suggest what might have happened had the individuals not participated in mentoring or induction. Other studies do not control for other possible factors that might account for the effects of induction, such as the characteristics of schools. Many studies focus only on attitudinal outcomes, such as teachers' feelings of the benefits of induction programs and do not include data on more tangible

outcomes such as actual teacher retention or teacher effectiveness. In most cases, studies focus on specific types of programs in particular school districts, making generalizability difficult. All of these factors limit the conclusions that can be drawn from existing empirical research about the effectiveness of teacher induction and mentoring (for a critical review of this empirical research, see Ingersoll & Kralik, 2003).

To begin to address this gap in research, we undertook a study using nationally representative data to examine how widespread induction programs are across the nation; whether their prevalence has increased over the past decade; what kinds of activities, supports, and components the induction experience usually includes; and, most importantly, what are the effects of receiving these different kinds of supports on the likelihood that beginning teachers remain with or depart their jobs. In this article, we summarize the results of this study. Prior to presenting the results, the theoretical approach that guided our research and provides more detail on our data source will be described.

Theoretical Perspective

Underlying the study is a set of related premises drawn from the sociology of organizations, occupations, and work, and the literature on employee turnover. Among those who study industry, organizations, occupations, and work, employee turnover is an important topic (e.g., Hom & Griffeth, 1995; Mobley, 1982; Price, 1977, 1989; Steers & Momday, 1981). Indeed, there are literally thousands of studies of employee quits, attrition, and separations. There is a general consensus in this literature that a low level of employee turnover is normal and efficacious in a well-managed organization. Too little turnover of employees is tied to stagnancy in organizations. Effective organizations usually both promote and benefit from a limited degree of turnover by eliminating low-caliber performers and bringing in new blood to facilitate innovation. Moreover, some degree of job and career changes are, of course, normal and inevitable in any occupation. And, in many occupations, there exists a certain amount of temporary attrition—individuals who leave for a few years and then return.

Conversely, a central finding in this literature is that high levels of employee turnover are both cause and effect of ineffectiveness and low performance in organizations. There are a number of different costs and consequences. But, in contrast to the industrial and corporate sectors, there has been virtually no work on this issue in education. One notable exception was a recent attempt to quantify the costs of teacher turnover in Texas. This study concluded these costs run into the hundreds of millions of dollars each year to the state (Texas Center for Educational Research, 2000). The analysis has

some limitations, but it is a first step and suggests that ignoring high levels of teacher turnover is not fiscally responsible.

Some costs and consequences of turnover are more obvious and more easily measured than others. One type of cost that is less easily quantified includes the negative consequences of high turnover for organizational stability, coherence, and morale. This is especially true for those types of organizations in which the production process requires extensive interaction among participants and, hence, is more dependent on continuity, cohesiveness, and coherence. Schools are one such setting. Decades of educational research have documented that the presence of a sense of community and cohesion among families, teachers, and students is important for the success of schools (e.g., Bryk et al., 1990; Coleman & Hoffer, 1987; Grant, 1988; Waller, 1932). High rates of teacher turnover can inhibit the development and maintenance of a learning community. In turn, a lack of community in a school may have a negative effect on teacher retention, thus creating a vicious cycle. Hence, the premise underlying this analysis is that high rates of beginning teacher turnover are of concern not only because they contribute to school staffing problems and perennial shortages but also because this form of organizational instability is likely to be related to organizational effectiveness.

Data Source

The data come from the National Center for Education Statistics' (NCES) *Schools and Staffing Survey* (SASS) along with its supplement, the *Teacher Follow-up Survey* (TFS). SASS is the largest and most comprehensive data source available on the staffing, occupational, and organizational aspects of elementary and secondary schools, and was specifically designed to remedy the lack of nationally representative data on these issues. To date, four independent cycles of SASS have been completed: 1987–1988, 1990–1991, 1993–1994, and 1999–2000. The U.S. Census Bureau collects the SASS data for NCES from a random sample of schools stratified by state, public/private sector, and school level. Each cycle of SASS included separate, but linked, questionnaires for administrators and for a random sample of teachers in each school. In addition, after 12 months, the same schools were again contacted and all those in the original teacher sample who had moved from or left their teaching jobs were given a second questionnaire to obtain information on their departures. The TFS comprises the latter group, along with a representative sample of those who stayed in their teaching jobs. Unlike many other data sources, the TFS includes all teacher turnover or departures, including both those who move to teaching jobs in other schools (teacher migration, often referred to as “movers”) and those who leave the occupation altogether (teacher attrition, often referred to as “leavers”). We assessed these two types of flows both separately and together.

Our analysis primarily used data from the 1999–2000 SASS linked with preliminary data from the 2000–2001 TFS. (As of fall 2003, the most recent TFS had not yet been entirely released.) The 1999–2000 SASS sample is comprised of about 52,000 elementary and secondary teachers. Our analysis focused on beginning teachers, which we defined as those in their first year of teaching in 1999–2000, which produced a sample of 3,235.

The 1990–1991 and 1993–1994 SASS each asked teachers if they had “participated in a formal teacher induction program, i.e., a program to help beginning teachers by assigning them to master or mentor teachers.” To this general question, the 1999–2000 SASS added a new and expanded battery of items designed to elicit information on the range of kinds of possible induction and mentoring supports received by beginning teachers, in or out of a formal program. These included:

- Provided with a mentor and whether the mentor was in the same subject area
- Degree of helpfulness of the mentor provided
- Participated in seminars or classes for beginning teachers
- Had common planning time with other teachers in their subject area
- Had regularly scheduled collaboration with other teachers on issues of instruction
- Participated in a network of teachers (e.g., one organized by an outside agency or over the internet)
- Had regular supportive communication with their principal, other administrators, or department chair
- Reduced teaching schedule
- Reduced number of preparations
- Extra classroom assistance (e.g., teacher aides).

The next section presents the results of our analysis of these data. We first summarized how widespread induction and mentoring programs have been over the past decade across the nation and the percentage of beginning teachers receiving the above kinds of supports and components. We then turned to the effects of these various induction experiences on the turnover of beginning teachers.

Participation in Induction and Mentoring Programs

The data clearly demonstrate that the number of teachers who receive some kind of formal induction and mentorship has dramatically expanded in

recent years. Currently, the majority of newcomers in the teaching occupation participate in some program (see Figure 1). In the 1990–1991 school year, about 4 in 10 beginning teachers said they had participated in a formal teacher induction program. By 1993–1994, this increased to just over half of beginning teachers. By the 1999–2000 school year, participation rates in induction programs rose to 8 out of 10.

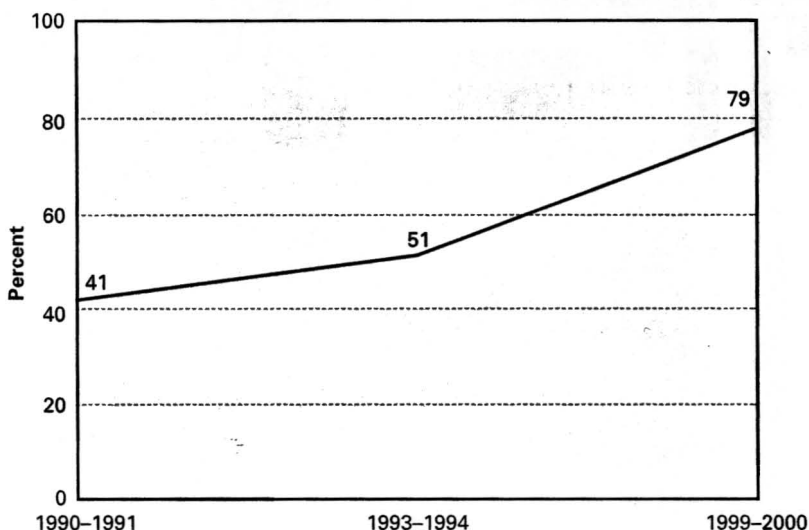
However, although most beginning teachers now participate in some kind of formal induction program, the particular kinds of supports that schools provide to them vary. In the 1999–2000 school year, about two-thirds of beginning teachers said that they worked closely with a mentor (see Figure 2). In about 7 out of 10 of these cases, new teachers were matched with mentors in the same field and the vast majority of mentees (nearly 9 out of 10) found their mentor helpful. With the exception of participation in an external teacher network, large proportions of beginning teachers reported they participated in the various group and collective induction activities we examined. For example, 45% of beginning teachers said that they had common planning time with other teachers in the same subject area and 56% said that they had participated in regularly scheduled collaboration with other teachers on issues of instruction. Yet, far fewer beginning teachers reported receiving a reduced teaching schedule, a reduced number of preparations, or extra classroom assistance to ease their transition.

The Effects of Induction on Turnover

Does receiving any of these supports matter to teacher retention? To answer this question, we undertook a series of multinomial logistic regression analyses of the association between receiving these supports and the likelihood of beginning teachers' moving or leaving at the end of their first year on the job. In order to rule out other possible factors that might account for the effects of induction, we included controls for numerous characteristics of teachers and their schools. These controls included each teacher's race, gender, age, whether or not they are a regular full-time teacher (as opposed to a part-time regular, itinerant, or long-term substitute teacher), their subject/field of teaching, and their school-related earnings. For school characteristics, we included whether a school was elementary, middle, or secondary; the urbanicity of the community (urban, suburban, rural); school sector (public noncharter, public charter, and private); and the poverty level of the student population in the school (see Smith & Ingersoll, 2003 for a detailed presentation of this analysis).

After controlling for these background characteristics of teachers and schools, we found an association between whether beginning teachers received induction and mentoring support and their likelihood of turnover. But, we also found that the strength of the association depended on which

Figure 1. Trends in beginning teachers' participation in induction/mentoring programs.

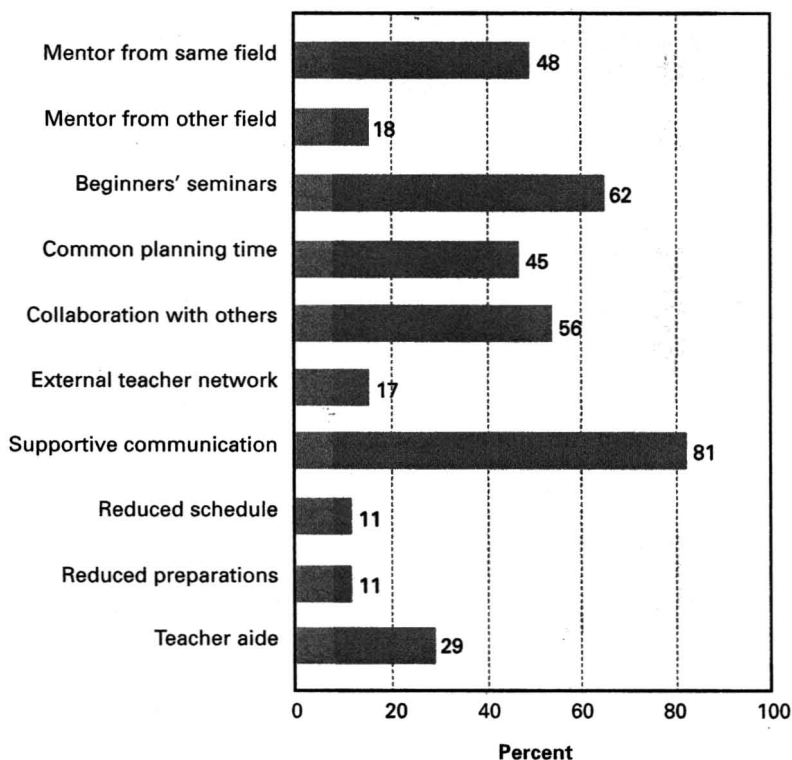


Source: Schools and Staffing Survey.

types of, and how many, supports the beginning teachers had. Some types of support in the first year were associated more than others with a reduced level of turnover. The strongest factors were having a mentor from the same field, having common planning time with other teachers in the same subject, having regularly scheduled collaboration with other teachers, and being part of an external network of teachers. That is, teachers who received these supports were significantly less likely to depart their school at the end of their first year. The weakest factors were a reduced teaching schedule, a reduced number of preparations, and extra classroom assistance.

The data also revealed that the above induction supports, activities, or practices rarely exist in isolation. In other words, of those beginning teachers who had some kind of induction, most got several different types of support. To look at the collective impact of receiving more than one support, we tested the effects of packages or bundles of supports on the likelihood of a new teacher leaving the profession or changing schools at the end of their first year. We created several packages each with progressively more supports. We found that, collectively, getting multiple induction components had strong and statistically significant effects on teacher turnover. Moreover, we found that as the number of components in the packages increased, both the number of teachers receiving the package and the probability of their turnover decreased.

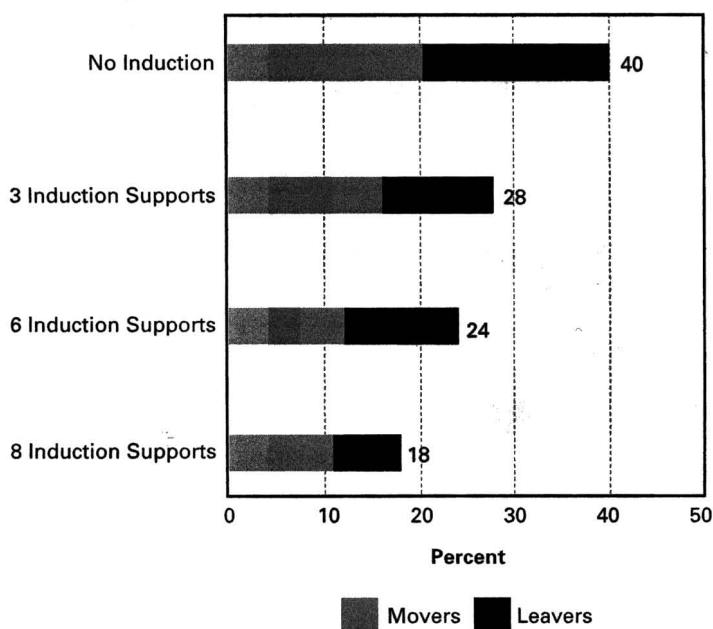
Figure 2. Percentage of beginning teachers who received various induction supports: 1999–2000.



Source: Schools and Staffing Survey.

Overall, 29% of first-time teachers who entered teaching in the 1999–2000 school year either moved to another school at the end of the year (15%) or left teaching altogether (14%). Of all beginners who entered teaching in the 1999–2000 school year, 16% received none of the aforementioned induction or mentoring supports in their first year. Their predicted probability of turnover at the end of the first year was 40% (see Figure 3). Twenty-two percent of beginning teachers received three induction components: a helpful mentor from their same field, common planning time with other teachers in their subject area, and regularly scheduled collaboration with other teachers on issues of instruction. Their turnover probability was 28%. Thirteen percent of beginning teachers received six induction components. In addition to the three previously mentioned, these included the following: participated in a general induction program; participated in a seminar for beginning teachers;

Figure 3. Percentage of beginning teacher turnover after the first year, according to amount of induction support: 2000–2001.



Source: Schools and Staffing Survey.

and had regular or supportive communication with their principal, other administrators, or department chair. Their turnover probability was 24%. Finally, a very small number (less than 1% of beginning teachers in 1999–2000) experienced a full induction experience that included the six components already mentioned, plus two more: participated in an external network and had a reduced number of course preparations. Participation in these activities, collectively, had a very large effect. The probability of a departure at the end of their first year for those getting this package was less than half of those who participated in no induction activities.

Implications

Nearly 3 out of 10 new teachers move to a different school or leave teaching altogether at the end of their first year. Some of this turnover is, of course, normal, inevitable, and even beneficial. Not all of those who enter the teaching occupation should or will remain. Moreover, some do return later. But, high levels of turnover are costly in both obvious and less visible ways. Among these costs is the current teacher shortage. In our recent research, we have documented that the staffing problems plaguing schools are to a significant

extent a result of a revolving door, where large numbers of teachers move from or leave their schools long before retirement (Ingersoll, 2001, 2003b; Ingersoll & Smith, 2003). For just these reasons, induction programs have been increasingly instituted to assist new teachers in coping with the practicalities of teaching, managing groups of students, and adjusting to the school environment. Over the past decade, the proportion of beginning teachers participating in school induction programs has dramatically increased. But the kinds and number of supports provided by schools to beginners vary, as does their effect on the retention of the recipients.

From a practical viewpoint, these data suggest several lessons for school administrators. First, they suggest that the most effective induction programs offer bundles or packages of supports and, in particular, provide to beginning teachers a mentor from the same field and the opportunity to participate in group or collective planning and collaborative activities. Less effective, from the viewpoint of retention, is the provision of assistance to beginners, such as a reduced teaching schedule, a reduced number of preparations, or extra classroom assistance.

The advantage of using a large-scale data source such as SASS to address this kind of issue is its breadth. Large-scale survey data represent a wide range of teachers and schools across the nation and allow the analysis to control for a wide range of other factors that might conceivably affect beginning teacher retention. However, it is important to recognize the limits of this study. The disadvantage of using this kind of data and analysis is its lack of depth and specificity. Items from survey questionnaires can usually only provide limited depth and detail on the content and character of teacher induction and mentoring. For example, although the survey did ask teachers to indicate which kinds of supports were provided by their schools, little information was obtained on the intensity, duration, and cost of the various induction and mentoring supports and activities. Such information is of vital importance to policymakers and administrators who must decide among many alternative models. The analysis shows, for example, that beginning teachers with mentors from the same field were less likely to leave after their first year; but, there was no doubt much variety among the respondents' mentoring programs. Some of these programs are probably highly effective, some are probably moderately effective, and others probably not effective at all. This analysis, unfortunately, cannot tell us which are which. Similarly, although SASS did ask teacher protégés to evaluate the helpfulness of their mentors, there was little else obtained on the characteristics of the mentors. Some observers have argued that the mere presence of a mentor is not enough. The mentor's knowledge of how to support new teachers and skill at providing guidance are also crucial (e.g., Evertson & Smithey, 2000). Finally, our finding that collaboration with other teachers on instructional matters reduces the likelihood of beginning teacher turnover

presupposes that these types of collaborative efforts are possible in all schools. Unfortunately, it is in those schools where teacher turnover is most prevalent that it would be most difficult to establish stable and effective teacher collaboratives. Further, our analysis does not address how the effectiveness of induction and mentorship programs interacts with other characteristics of effective schools, such as principal leadership, academic orientation of the curriculum, and an organizational climate conducive to instruction. These are important issues for which further research is needed. ♣

References

- Arends, R. I., & Rigazio-DiGilio, A. J. (2000). *Beginning teacher induction: Research and examples of contemporary practice*. Paper presented at the annual meeting of the Japan-United States Teacher Education Consortium. (ERIC Document Reproduction Service No. ED450074)
- Evertson, C., & Smithey, M. (2000). Mentoring effects on protégés' classroom practice: An experimental field study. *Journal of Educational Research*, 93(5), 294-304.
- Fideler E., & Haselkorn, D. (1999). *Learning the ropes: Urban teacher induction programs and practices in the United States*. Belmont, MA: Recruiting New Teachers.
- Feiman-Nemser, S., Schulle, S., Carver, C., & Yusko, B. (1999). *A conceptual review of literature on new teacher induction*. Washington, DC: National Partnership for Excellence and Accountability in Teaching.
- Grissmer, D., & Kirby, S. (1987). *Teacher attrition: The uphill climb to staff the nation's schools*. Santa Monica, CA: RAND.
- Grissmer, D., & Kirby, S. (1997). Teacher turnover and teacher quality. *Teachers College Record*, 99, 45-56.
- Henke, R. R., Chen, X., & Geis, S. (2000). *Progress through the teacher pipeline: 1992-93 college graduates and elementary/secondary school teaching as of 1997*. Washington, DC: National Center for Educational Statistics.
- Hom, P., & Griffeth, R. (1995). *Employee turnover*. Cincinnati, OH: South-Western Publishing.
- Huling-Austin, L. (1990). Teacher induction programs and internships. In W. R. Houston (Ed.), *Handbook of research on teacher education* (pp. 535-548). Reston, VA: Association of Teacher Educators.
- Ingersoll, R. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38, (3), 499-534.
- Ingersoll, R. (2003a). *Is there really a teacher shortage?* Seattle, WA: Center for the Study of Teaching and Policy, University of Washington.

- Ingersoll, R. (2003b) *Who controls teachers' work?: Power and accountability in America's schools*. Cambridge, MA: Harvard University Press.
- Ingersoll, R., & Kralik, J. (2003). *A review of empirical research on the effects of teacher mentoring programs in elementary and secondary schools*. Denver, CO: The Education Commission of the States.
- Ingersoll, R., & Smith, T. (2003). The wrong solution to the teacher shortage. *Educational Leadership*, 60(8), 30-33.
- Johnson, S. M. (1990). *Teachers at work: Achieving success in our schools*. New York: Basic Books.
- Johnson, S., & Birkeland, S. (2003). Pursuing a "sense of success": New teacher explain their career decisions. *American Educational Research Journal*, 40(3), 581-617.
- Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.
- Mobley, W. (1982). *Employee turnover: Causes, consequences, and control*. Reading, MA: Addison-Wesley.
- Murnane, R., Singer, J., Willett, J., Kemple, J., & Olsen, R. (Eds.). (1991). *Who will teach?: Policies that matter*. Cambridge, MA: Harvard University Press.
- No Child Left Behind Act of 2001 (H.R. 1), 107 Cong., 110 (2002) (enacted).
- Price, J. (1977). *The study of turnover*. Ames, IA: Iowa State University Press.
- Price, J. (1989). The impact of turnover on the organization. *Work and Occupations*, 16, 461-473.
- Scherer, M. (Ed.). (1999). *A better beginning: Supporting and mentoring new teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Schlechy, P., & Vance, V. (1981). Do academically able teachers leave education? The North Carolina case. *Phi Delta Kappan*, 63, 105-112.
- Smith, T., & Ingersoll, R. (2003, April). *Reducing teacher turnover: What are the components of effective induction?* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Texas Center for Educational Research. (2000). *The cost of teacher turnover*. Austin, TX: Texas State Board for Educator Certification.
- Tyack, D. (1974). *The one best system*. Cambridge, MA: Harvard University Press.
- Veenman, S. (1985). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143-178.