New Teacher Induction in Special Education

Prepared for the Center on Personnel Studies in Special Education

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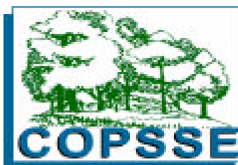

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COPSSE research is focused on the preparation of special education professionals and its impact on beginning teacher quality and student outcomes. Our research is intended to inform scholars and policymakers about advantages and disadvantages of preparation alternatives and the effective use of public funds in addressing personnel shortages.

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INTRODUCTION

Decades of research concerning the experiences of novice general educators have documented the difficult and stressful nature of the beginning years of teaching (Kagan, 1992; Ryan, 1986; Veenman, 1984). New professionals in other fields (e.g., engineering, medicine, and law) and new teachers in other countries (e.g., Japan and New Zealand) are recognized as capable when they enter the world of work and assume roles and responsibilities commensurate with their skills and experiences (Darling-Hammond, Berry, Haselkorn, & Fideler, 1999; Moskowitz & Stephens, 1996). Unfortunately, a common practice in the U. S. is to assign beginning teachers to the most challenging classrooms and expect them to perform like more experienced teachers (Moskowitz & Stephens, 1996; National Commission on Teaching and America's Future, 1996; Serpell, 2000). Furthermore, a new teacher often faces that challenging classroom without assistance from a more experienced practitioner. This lack of professional support is often cited as the primary reason why teachers leave the field (Billingsley & Cross, 1991; Darling-Hammond, 1984; Gold, 1996; Gold & Roth, 1993). Descriptions of difficult working conditions and stopgap ways of dealing with these problems, which are prominent in the teacher education literature, indicate the seriousness of the difficulties faced by new teachers and the districts that hire them.

LITERATURE REVIEW

We examined the general education literature from the past decade. After a careful search of ERIC and PsychLit sources, five reviews were identified. The earliest was by Huling-Austin in the *Handbook of Research on Teacher Education* (1990). Others included Gold (1996); Feiman-Nemser, Schwille, Carver, and Yusko (1999); Arends and Rigazio (2000); and Serpell (2000). We also explored the policies and practices of teacher induction in 11 Asia-Pacific Economic Cooperation (APEC) countries, including Australia, Canada, Japan, New Zealand, and the U. S. (Moskowitz & Stephens, 1996). APEC is an organization of 18 economies that border the Pacific Ocean. Although not a review, *From Students of Teaching to Teachers of Students: Teacher Induction around the Pacific Rim* is the 250-page product of an extensive collaborative effort between APEC, the U. S. Department of Education (USDOE), and the Pelavin Research Institute; its insightful findings and recommendations could not be overlooked.

This paper describes the critical concerns confronting special education regarding new teacher induction and various definitions of induction. A literature review included: (a) the school and classroom conditions under which new special education teachers must perform and (b) induction for special education teachers. Given what we have learned about new teacher induction in special education, the paper draws implications from our findings and identifies needs for additional research.

CRITICAL CONCERNS

These issues and others provide a rationale for the need to review the literature on new teacher induction in special education. In particular, four critical concerns suggest the importance of examining what is known about teacher induction, including: (1) the high attrition rate in special education, (2) the potential for inadequate services to children and youth with disabilities by beginning teachers who struggle in adverse situations, (3) the current reliance on alternative routes to certification in many school districts, and (4) the unique conditions within which special educators work.

Attrition

Special education teachers, in particular, leave the profession at a high rate. Researchers have described a multitude of variables contributing to the high attrition rate in special education, including role conflict (Zabel & Zabel, 2001), dissatisfaction with professional growth opportunities (Billingsley & Cross, 1991; Zabel & Zabel, 2001), inadequate administrative support (Platt & Olson, 1990; Miller, Brownell, & Smith, 1999), lack of collegiality (Miller et al., 1999; Zabel & Zabel, 2001), and poor school climate (Miller et al., 1999, Zabel & Zabel, 2001). The high attrition rate of special education teachers directly impacts the quality of education provided students with disabilities by limiting the expertise that develops with experience.

Inadequate Services

According to a recent report:

> By the year 2005, the United States will need over 200,000 new special educators. Four out of every ten special educators entering the field leave special education before their fifth year of teaching. Not only does the field of special education lack the professional capacity to provide the quantity of services that are required for the millions of identified students with disabilities, but the quality of services being offered, under many of the prevailing conditions, often falls significantly short of what is required to prepare students with exceptionalities to face the demanding complexities of life in the 21st century (Council of Exceptional Children [CEC], 2000, p. 1).

Alternative Routes to Certification

No doubt the growing reliance on alternative routes to certification is driven by this nationwide need for teachers (Rosenberg & Sindelar, 2001). There is continued controversy regarding the success of alternative route certification programs in both general and special education (e.g., Banks & Necco, 1987; Rosenberg & Sindelar, 2001; Sindelar & Marks, 1993; Zeichner & Schulte, 2001) and concerns about the limited research on their effectiveness (e.g., Buck, Polloway, & Motorff-Robb, 1995; Rosenberg & Sindelar, 2001; Sindelar & Marks, 1993). The reality is, however, that many special education teachers, particularly in urban and rural districts, are being prepared for and inducted into the field through alternative routes.

Working Conditions

The conditions under which special education teachers work can be stressful for beginning teachers (e.g., Billingsley & Tomchin, 1992; Carter & Scruggs, 2001; Griffin, Kilgore, Winn, & Otis-Wilborn, 1999; Kilgore, Griffin, Otis-Wilborn, & Winn, 2000; Winn, Otis-Wilborn, Kilgore, & Griffin, 1999). The constellation of factors contributing to their problems include: role ambiguity, students posing complex behavioral and academic challenges, large case loads, insufficient curricular and technical resources, inadequate administrative support, inadequate time for planning, few opportunities for collaboration and professional development, and excessive procedural demands.

Providing teachers with opportunities for support, guidance, and feedback during the beginning years appears to be an important aspect of their early professional development, if not an ethical responsibility. However, what does the research literature reveal about the impact of induction on new teachers in general and special education? What factors make induction an effective and powerful approach for buttressing teachers at a time when they are most vulnerable?

TEACHER INDUCTION IN GENERAL EDUCATION

Definitions of Induction

Most reviews in the general education literature translate induction in an applied sense, that is, as a *program*. Some reviews conceptualize induction broadly; others include details for the design of programs. Serpell (2000) offered a broad-based view of *induction* as “a helping mechanism for beginning teachers…a process that begins with the signing of a teaching contract, continues through orientation, and moves toward establishing the teacher as a professional” (p. 2). Somewhat related is Huling-Austin’s (1990) definition of *induction* as “*systematic and sustained assistance* [emphasis retained] and not merely a series of orientation meetings or a formal evaluation process used for teachers new to the profession.” (p. 536). Continuing with the notions of helping and assistance is Gold’s (1996) suggestion that *induction* is *instructional and psychological support that should be provided to novice teachers*. In addition, this support can be given on either an individual level (e.g., including a mentor teacher) or group level (e.g., led by professionals with counseling and group facilitation skills). Others who view induction as a program detail their implementations at state or district levels, including those that are union-supported (Arends & Rigazio-DiGilio, 2000) and those that are defined and categorized by levels of formality and types of approaches employed (Moskowitz & Stephens, 1996).

Feimen-Nemser, Schwille, Carver, & Yusko’s review (1999) suggested that induction can be defined as having one of three primary meanings: (a) a phase in teacher development that occurs during the first year of teaching and focuses on novices’ concerns and problems of practice; (b) a time of movement from teacher preparation to practicing teacher that emphasizes the people and the place where the new teacher is inducted, a meaning that is steeped in the socialization literature (Lacey, 1977; Lortie, 1975); and (c) a formal program.

The definitions of induction in these five reviews can be summed up with these key terms: *planned*, *process*, and *support*. Implicitly, the definitions suggest that induction: (a) is responsive to all parties, (b) includes a host of approaches, and (c) is maintained over time. In schools that are responsive to students, that foster relationships, and that support teacher learning (Darling-Hammond, 1997), induction has a greater chance of succeeding.

Features of Effective Induction Programs

What does the general education literature suggest as essential features of effective induction programs for new teachers? In general, research suggests that induction programs can: (a) improve instructional effectiveness and promote a sense of satisfaction in novices, (b) fulfill state mandates to provide induction experiences in school districts and to certify teachers, (c) provide a way to share the culture of the school setting and district with beginning teachers, and (d) increase short-term retention rates (usually into the second year). There is little available evidence that induction programs improve long-term retention of teachers (Arends & Ragazio-DiGilio, 2000; Huling-Austin, 1990). Clearly, longitudinal studies of the effectiveness of induction programs to retain teachers are indicated. Although much remains to be learned about

environment, have been criticized. Serpell (2000) suggests using formative assessment that individualizes assistance to beginning teachers. Not only should beginning teachers be appropriately assessed, but Arends & Ragazio-DiGilio (2000) also recommended that the induction program should be assessed periodically to ensure its effectiveness. This may include the use of a consumer satisfaction instrument that asks teachers about the value of the program.

Explicit intentions. All reviews included in this paper support the development of, and adherence to, clearly articulated induction program goals and purposes. The primary goals and purposes of induction are: (a) to improve student achievement by improving teacher performance, (b) to increase the retention of beginning teachers, (c) to transmit the culture of the school and school system, and (d) to promote the personal and professional well-being of beginning teachers.

Diversified content. The most beneficial content of induction programs addresses the needs of new teachers. When considering the nature of the *instructional* content shared with beginning teachers, Gold (1996) suggests four areas: (1) new teachers should understand not simply the content taught, but also the structure of that knowledge, (2) they should develop clear ideas about pedagogical content knowledge and be able to implement these ideas in ways that are comprehensible to their students, (3) new teachers must be comfortable with subject area knowledge and with a variety of instructional materials, (4) instructional content in induction programs should help teachers become reflective and critical of their practices with the paramount goal to improve their practice continually. *Psychological* support efforts address stress reduction techniques, strategies to change negative thinking and behavior, and the personalized plans for any needed change. The nature of this kind of support suggests that highly trained professionals are used to guide beginning teachers, not necessarily teachers but other professionals trained in counseling and group facilitation.

Arends & Ragazio-DiGilio (2000) suggested that the content of induction programs should be based on beginning teachers' problems and concerns. Consequently, programs should address research-identified problems—new teachers' problems with classroom management; instruction; workload and stress; time management; and relationships with students, families, colleagues, and administrators (e.g., Veenman, 1984).

Mentoring. Mentoring is considered an effective component of new teacher induction programs. Arends & Ragazio-DiGilio (2000) and Serpell (2000) suggest that the careful training of mentors (usually veteran teachers) results in higher effectiveness. The content of mentor training programs may include adult development and learning, supervision and conferencing skills, and relationship and communication skills. In addition, mentors should be matched to mentees on personality, grade level, and subject area, and also receive release time and/or load reduction for their role as mentors. Regretfully, relatively few state-mandated induction programs provide funding for trained mentors (Darling-Hammond, 1997).

Fiscal and political support. Implementation of well-designed induction programs for new teachers relies to a great extent on adequate funding. Serpell (2000) argues convincingly for ensuring compensation to mentor teachers in the form of money, status, release time, or graduate credit. However, unless the profession and the public are adequately educated about the

importance and ultimate benefits of teacher induction (Huling-Austin, 1990), poor fiscal and political support will remain the standard.

Summary. Much induction research has been conducted by general education teacher educators. What we know about induction is enhanced when connections can be drawn between induction in general education and induction for beginning teachers who serve students with disabilities. Discussing the conditions under which special educators teach and the challenges beginning special educators' experience highlights similarities and differences between the early years of general and special educators.

SPECIAL EDUCATION INDUCTION

Researchers in special education (Billingsley & Tomchin, 1992; Boyer & Lee, 2001; Busch, Pederson, Espin, & Weissenburger, 2001; Carter & Scruggs, 2001; Conderman & Stephens, 2000; Griffin, Kilgore, Otis-Wilborn, & Winn, 1998; Griffin et al., 1999; Kilgore & Griffin, 1998; Kilgore et al., 2000; Lovingfoss, Molloy, Harris, & Graham, 2001; MacDonald & Speece, 2001; Mastropieri, 2001; Winn et al., 1999) have investigated the first year of special education teaching and revealed stresses for novice special educators similar to those encountered by their general education peers. These and other studies conducted in special education (CEC, 2000; Miller et al., 1999; Wisniewski & Gargiulo, 1997), however, have also documented conditions in special education classrooms that pose additional, complex challenges for novice and experienced special educators alike. A description of the conditions encountered in special education classrooms that contribute to the stressful nature of the first year of special education teaching follows.

Conditions of Teaching in Special Education

Conditions of special education teaching are shaped by contextual factors in classrooms and schools determined, in part, by local, state, and federal policies on special education. The constellation of factors contributing to the stresses of the first year of special education teaching include: role ambiguity, students posing complex behavioral and academic challenges, large case loads, insufficient curricular and technical resources, inadequate administrative support, inadequate time for planning, few opportunities for collaboration and professional development, and excessive procedural demands. Additionally, many novice teachers are inadequately prepared for the challenges of this first year.

Role ambiguity. Novice teachers often enter the field of special education believing they will teach small groups of children using specialized instructional strategies: a traditional view of special education often shared by colleagues, administrators, and parents (CEC, 2000). The field of special education, however, is changing rapidly. IDEA 1997 mandates placement opportunities for students with disabilities within regular education classrooms and emphasizes these students' participation in the general education curriculum. Confusion and sometimes resistance to the aims of more inclusive educational opportunities for students with disabilities have created additional challenges for novice teachers (Billingsley & Tomchin, 1992; Boyer & Lee, 2001; Busch et al., 2001; Carter & Scruggs, 2001; Conderman & Stephens, 2000; Kilgore et al., 2000; Mastropieri, 2001; Otis-Wilborn, Winn, Kilgore, & Griffin, 2000). Novice special educators are expected to collaborate and co-teach with their general education colleagues as well as provide intensive, individualized instruction. As novice special educators assume positions in schools, they frequently face ambiguous, conflicting, and fragmented expectations from their colleagues, supervisors, and families of children that they serve. As described by Crane and Iwanicki (1986), teachers experiencing conflicts between their own and others' expectations often become stressed and less satisfied with their positions. Juggling these varied, often competing responsibilities is a particularly difficult task for a beginning teacher.

Students posing complex challenges coupled with high case loads. Novice special educators face the enormous challenge of developing and implementing effective instructional and management strategies for students with severe academic deficits and high rates of inappropriate behaviors (Billingsley & Tomchin, 1992; Busch et al., 2001; Carter and Scruggs, 2001; Conderman & Stephens, 2000; Kilgore et al., 2000; MacDonald & Speece, 2001; Mastropieri, 2001; Rosenberg, Griffin, Kilgore, & Carpenter, 1997). Assigned case loads rarely take into account the special needs of students with disabilities. Novice (e.g., Carter & Scruggs, 2001; Griffin et al., 1999; Kilgore & Griffin, 1998) and experienced (CEC, 2000; Wisniewski & Gargiulo, 1997; Zabel & Zabel, 2001) special educators have consistently noted that excessive case loads create barriers to effective instruction, curriculum, and behavior management. As Miller et al. (1999) noted, "High student case loads combined with the challenges of managing the diverse learning and behavioral needs of students with disabilities . . . and working with insufficient resources may cause many special education teachers to feel overloaded, stressed, and ineffective in their relationships with students" (p. 204).

Insufficient resources. Novice special educators frequently complain that they have insufficient curricular and technical resources (Billingsley & Tomchin, 1992; Boyer & Lee, 2001; Carter & Scruggs, 2001; Kilgore et al., 2000; MacDonald & Speece, 2001; Mastropieri, 2001). Novice teachers face the challenge of creating curricula appropriate for students with exceedingly diverse and complex needs. Their curricular responsibilities frequently exceed those of their general education peers—teaching more subject areas to a broader range of ages and ability levels—but with fewer curricular resources. Experienced special educators share this concern (CEC, 2000).

Inadequate administrative support. Novice special educators often perceive their administrators as uninterested in the education of students with disabilities (Billingsley & Tomchin, 1992; Griffin et al., 1999; Kilgore et al., 2000; Westling & Whitten, 1996). Too often, administrators do not have the background knowledge or skills to understand and support special education services (CEC, 2000). Administrators are in a unique position to influence novice teachers, through the material and professional support that they provide or fail to provide (Brock & Grady, 1997). Unsupportive environments without administrator or collegial support reduce teacher efficacy and commitment to the work place (Rosenholz, 1989).

Insufficient time. Novice special education teachers say that they do not have the time to plan for the diverse needs of their students and that they have difficulty organizing their numerous, varied tasks (Billingsley & Tomchin, 1992; MacDonald & Speece, 2001; Mastropieri, 2001). Feeling overwhelmed with too little time to meet teaching demands often results in increased stress levels for novice teachers (Billingsley & Tomchin, 1992).

Lack of opportunities to collaborate. Novice special educators complain that they do not have the opportunities to collaborate with their general education peers to provide more inclusive settings for their students (Billingsley & Tomchin, 1992; Boyer & Lee, 2001; Busch et al., 2001; Carter & Scruggs, 2001; Conderman & Stephens, 2000; Kilgore et al., 2000; Mastropieri, 2001; Otis-Wilborn et al., 2000). Many schools do not have effective methods of communication or joint planning time for special and general educators (CEC, 2000). Veteran special educators have described themselves as "outside the mainstream . . . [and] given few opportunities to

collaborate with [other] educators" (CEC, 2000, p. 5). Moreover, novice teachers also lacked time to plan with other special educators or paraprofessionals with whom they worked (Billingsley & Tomchin, 1992; Carter & Scruggs, 2001; Mastropieri, 2001). Lack of collegiality increases the feelings of isolation and stress levels of novice teachers (Mastropieri, 2001; Otis-Wilborn et al., 2000).

Lack of opportunities for professional development. The demands of teaching require ongoing professional growth opportunities, yet novice special educators say that they rarely have access to professional development related to teaching students with disabilities (MacDonald & Speece, 2001; Mastropieri, 2001). Teachers who have opportunities to improve their skills are less likely to feel overwhelmed and see themselves as more capable of affecting student learning (Brownell & Smith, 1993). Too often, novice teachers feel ill equipped to meet the needs of their students and deprived of opportunities to learn ways to meet those needs.

Procedural demands and excessive paper work. Federal, state, and local policies regarding implementation of IDEA resulted in more paper work and meetings. Novice teachers often complain that completing special education paper work is confusing and burdensome (Billingsley & Tomchin, 1992; Boyer & Lee, 2001; Mastropieri, 2001). Experienced teachers also report feeling overwhelmed with the responsibilities of meeting the procedural demands of the special education bureaucracy (Miller et al., 1999). In fact, one of the most commonly expressed complaints of special education teachers is related to the increase in bureaucratic tasks (Platt & Olson, 1990; Westling & Whitten, 1996; Zabel & Zabel, 2001).

Inadequate preparation. First-year special educators face a broad range of challenges in varied settings (Billingsley & Tomchin, 1992; Boyer & Lee, 2001; Busch et al., 2001; Carter & Scruggs, 2001; Conderman & Stephens, 2000; Lovingfoss et al., 2001; Kilgore & Griffin, 1998; MacDonald & Speece, 2001; Mastropieri, 2001). Some new teachers have completed teacher-preparation programs with experiences that have prepared them for their roles; others have not. For a variety of reasons, some assume positions that do not match the particular focus of concentration in their preparation programs. Other novice special educators have few or no prior experiences teaching students with disabilities.

Summary. Clearly, a multitude of factors contribute to the stressful and difficult nature of the first year of special education teaching. As the National Commission on Teaching and America's Future (1996) pointed out, beginning teachers are often given the most difficult teaching assignments.

PROGRAM DESCRIPTIONS

Many induction programs and activities include but are not specifically designed for special education teachers. However, some programs at national, state, and local levels have been developed to consider the unique needs of special educators, and mentoring plays a significant role in these programs.

In April 1997, CEC's Professional Standards and Practice Subcommittee adopted guidelines for developing a mentoring program (CEC, 1997). These guidelines are consistent with Standard IV of the Standards for Entry into Special Education adopted at the 1989 CEC Delegate Assembly. Standard IV states:

> Each new professional in special education should receive a minimum of a 1-year mentorship during the first year of his or her professional special education practice in a new role. The mentor should be an experienced professional in the same or a similar role, who can provide expertise and support on a continuing basis. (p. 8)

The guidelines delineate the purposes of a mentorship program and the features of successful mentorship. This work has been expanded by the Mentoring Induction Project (MIP) (White & Mason, 2001; White, Schelble, & Warren, 2002), which was formed to develop guidelines and support for beginning special education teacher mentoring throughout the country. The guidelines are consistent with CEC special education standards for teachers, Interstate New Teacher Assessment and Support Consortium (INTASC) standards, research on beginning special education teachers, and research on mentoring and mentoring programs. Many professional groups (Teacher Education Division of the CEC, Council for Administrators in Special Education, the American Association of Colleges of Teacher Education, Parent Advocacy Coalition for Educational Rights, and the American Federation of Teachers) as well as focus groups of beginning special education teachers, mentors, administrators, teacher educators, parents, and distinguished teachers had input into the development of the principles and guidelines. The three principles upon which the guidelines are based are:

1. An array of supports, including mentoring, should be available to all beginning teachers.

2. Effective mentoring relationships that provide meaningful supports to teachers are dependent on several key components.

3. School districts have an obligation to ensure that their mentoring programs include those key elements for effectiveness. (White & Mason, 2001, p. 2)

The guidelines (http://www.cec.sped.org) address the mentoring program, roles and responsibilities of the mentoring team (beginning teacher, mentor teacher, building administrator, mentoring program coordinator), mentor selection, orientation and training, and specific implementation components.

The MIP principles and guidelines have been piloted in urban and suburban schools throughout the country. Districts were selected based on a high need for mentoring, the ability to support

the MIP, and administrative support. The guidelines are being revised and refined based on pilot test results. Further, the MIP involves the development of electronic support for mentoring programs, an economic cost comparison of MIP and other mentoring models, a national meeting to disseminate outcomes and make recommendations, and a report of the effectiveness of the model.

Statewide Programs

We found several comprehensive statewide programs aimed at supporting and retaining new special education teachers. The Oregon Recruitment/Retention Project (2002 on-line in Boyer & Gillespie, 2000). The project addressed new teachers through the following activities: consultation to special education administrators, list server and web-based guidance for recruitment and retention strategies, direct assistance in capacity building and retention strategies, case study evaluation of a district's support programs, and a self-assessment tool for identifying challenges in recruiting and retaining special education teachers. The web site has a detailed guide for setting up a mentoring program, including a timeline for activities (e.g., type of feedback to give, use of journals) based on new teacher development and guidelines for selecting, training, and assigning mentors.

Utah Mentor Teacher Academy (UMTA) (Gibb & Welch, 1998) addressed the need for mentor training. UMTA is a statewide mentor training program for special educators, general educators, principals, and state health agency personnel that actually originated with special education. In UMTA, mentors attend two-day workshops each month in their two-year mentoring commitment. Many topics (e.g., behavior management, curriculum adaptation, co-teaching, inclusion strategies, peer-mediated instruction, learning strategies, motivation strategies, social skills training) are directly related to students with disabilities. Mentors are expected to support teachers through consultation, in-service presentations, and/or workshops.

District-Level Programs

Programs targeting induction for special education teachers have also been developed at the district level. We are sure that we did not find all programs specifically focused on special education teachers. Some programs with this focus were developed and implemented solely by districts (e.g., Boyer & Gillespie, 2000; Whitaker, 2000b), and some were connected to universities (e.g., Burstein & Kennedy, 2002; Lane & Canosa, 1995; Keuker & Haensly, 1991).

Whitaker (2000b) described a district-level program that is grounded in the findings of her focus group research (Whitaker, 2000a). The program involved support from mentor teachers and the district administrators and provided forms and content of support found to be particularly helpful, including scheduled and unscheduled meetings with mentors and monthly contact with administrators. New teachers attended a day-long orientation meeting tailored to identified needs of special education teachers, including learning system information related to special education. The special education teachers participated in a graduate induction course for all new teachers in the district and also met at least two more times to discuss issues relative to special education. As in the Oregon Recruitment/Retention Project (2002), the mentors received a

schedule of assistance, emphasizing suggested types of assistance to be given throughout the year.

Attention to the needs of novice teachers in specific disability areas was seen in Fairfax County, Virginia Public School's induction program (Boyer & Gillespie, 2000). Teachers working with students with learning disabilities or students with emotional disabilities at the secondary level who are assigned a special education mentor also participate in the district's 17-session course for new teachers in general education. Elementary teachers of students with low-incidence disabilities, emotional disabilities, and early childhood delays, however, can elect to attend a 17-session course for new teachers implementing specifically designed or modified curricula or working with students with challenging behaviors. The Fairfax program encouraged collaboration and integration with general education through the first option, while at the same time, meets needs particular to teachers of certain populations of children.

University Input

A university and school district partnership is seen in the Beginning Teacher Support and Assessment Program – Special Education (BTSA-SE) (Burstein & Kennedy, 2002), a special education adaptation of a 1992 statewide induction program in California. The partnership among California State University-Northridge, Los Angeles Unified School District, and the United Teachers Union of Los Angeles targets first- and second-year special education teachers. Teachers who volunteer to participate are assigned mentors with experience in urban schools and in special education. The mentors make monthly visits and maintain weekly contact. California uses the California Formative Assessment and Support System for Beginning Teachers (CFASST), an assessment and support system based on the state standards for beginning teachers. Assessment is done through a series of events—for example, Observation: Profile of Professional Practice; Inquiry: Assessing Instructional Experiences. In the BTSA-SE, these events have all been adapted for special education. Participant teachers and mentors are invited to professional development workshops on the events. Additionally, the beginning teachers are given two release days per year and a stipend to purchase instructional materials.

We found information about several universities with mentoring components built into their preparation programs. Texas A & M's graduate program required that the first year of teaching be an internship with a mentor teacher (Majeta, 1992; Weeks, 1992). The mentors were selected by the school principal, the university supervisor, and the beginning teacher and then trained by the university to work closely with a graduate supervisor (e.g., through weekly progress notes). Lane and Canosa (1995) described a mentoring program for preparing teachers of students with severe disabilities through Johns Hopkins University. Students who worked as teachers (special education teachers seeking skills and certification in severe disabilities) and all other students (working as paraprofessionals or in related professions) were matched with mentors through mentee selection or assignment. The mentor/mentee relationship lasted for the four semesters of the program and involved goal setting, support from mentors based on the goals, reflection about the process, and university support for mentors.

Induction in Alternative Certification

Alternative route certification programs help beginning teachers learn to teach on the job. Some have distinguished between *alternative certification programs* and *alternative routes to certification* terminology. For this review, we use the term *alternative route certification programs* (ARCs) and employ the frequently cited definition proposed by Roth and Lutz (1986, in Rosenberg & Sindelar, 2001) as programs that "…allow(s) the individual to assume full classroom responsibility prior to completion of the preparation program" (p. 4). Alternative route certification programs in special education are growing rapidly (Rosenberg & Sindelar, 2001). Some programs target those who are certified to teach in areas other than special education (e.g., Burnstein & Sears, 1998; Gaynor & Little, 1997); but many are designed for those entering the field without a teaching credential or teaching experience. For those in alternative route programs, induction to teaching occurs within the context of the programs.

Rosenberg and Sindelar (2001) identify the primary factors driving the increase in alternative route certification in special education as: (a) the persistent shortages; (b) the need for multicultural personnel in special education to provide role models, culturally responsive instruction, and establishment of close connections with families; and (c) concerns about the effectiveness of traditional teacher preparation raised by groups such as the Thomas B. Fordham Foundation (1999). The universities and colleges of education are not graduating sufficient numbers of preservice teachers to meet the shortages. In turn, traditional programs do not tend to attract high percentages of students from minority populations; but alternative programs tend to draw from more diverse populations, at least for programs in urban settings (Rosenberg & Sindelar, 2001; Zeichner & Schulte, 2001). The criticisms of traditional programs are many, including unnecessary pedagogical course work and weak reform efforts that do not really alter the status quo of teacher preparation.

As noted by Rosenberg and Sindelar (2001), existing programs identified in the literature on alternative route special education certification programs most likely represent the "tip of the iceberg." Programs provide limited details; but, features are similar to the supports received by novice teachers prepared in traditional programs. However, there appear to be added supports, particularly in terms of intensity (i.e., length of time support is provided) and the frequency with which linkages between school districts and institutions of higher education (IHEs) are formed.

In several alternative route certification programs, IHEs and school districts identified appropriate placements for on-the-job teachers. Initial placements have been identified as an important component (Boyer, 1999). Placing novice teachers in an appropriate setting (e.g., appropriate number of students, supportive colleagues, adequate materials)—rather than giving them the most difficult assignments often associated with first-year teaching—can make the first year a more positive experience for novice teachers and their students. In the California internship program described by Karge, Laskey, McCabe, & Robb (1995), the school district selected sites for interns, keeping their teaching status in mind. In the Johns Hopkins University's ALCERT program (Rosenberg & Rock, 1994), university faculty provided information about the interns' interests and abilities, and the school district used this information in assigning placements. Directors of the University of Wisconsin-Milwaukee/Milwaukee Public Schools (UWM/MPS) Internship Program (Dieker, Winn, & Sprewer, 2000; Winn &

Dieker, 2001) worked closely with the special education hiring specialist to place interns. Efforts were hampered by union-governed seniority hiring practices so that often the most challenging positions were the only ones available. Hiring policies and procedures in other districts also may impede assignments of on-the-job teachers to appropriate positions.

As in most induction programs, mentoring was a prominent component of the alternative route certification programs reviewed; however, alternative program mentoring may be more intense. In the programs reviewed, mentoring was most often done by school district personnel. In many programs, the mentors were building-based (Burnstein & Sears, 1998; Gaynor & Little, 1997; Ludlow & Wienke, 1994; Rosenberg & Rock, 1994). Some programs had full-time mentors without their own classroom assignments (CASE Program described in Boyer & Gillespie, 2000; Winn & Dieker, 2000). Throughout the literature, only a few descriptions gave the amount of time that mentors were released or the time that they spent with each intern. In the RISE Program in Hawaii (Ikei & Hoga, 1995), mentors visited their mentees weekly or more often if needed. In the program at the University of Texas-El Paso (Lloyd, Wood, & Moreno, 2000), there were six exchange visits per year, with mentors observing for a half day in the new teacher's room and the new teacher observing in the mentor's class for the other half. UWM/MPS mentors worked intensely with their interns (two half-days per week in the first year with monthly follow-up visits in the second year).

Mentoring in alternative route certification programs may last longer than in induction programs for traditionally prepared special education teachers. Several of the programs reviewed involved four semesters of support (e.g., Burnstein & Sears, 1998; Dieker & Winn, 1999; Edelen-Smith & Sileo, 1996; Karge et al., 1995). Both mentors and supervisors were noted to spend considerable time with the teachers in training, particularly in the beginning. Supervisors in some cases also assumed a mentoring rather than assessment role in the beginning of the program, perhaps more so than in traditional preparation programs. In most programs reviewed, mentors did not have supervisory or gatekeeping responsibilities. Rather, these were assumed by supervisors, most often university-based. In several programs (e.g., Burnstein & Sears, 1998; Rosenberg & Rock, 1994; Winn & Dieker, 2001), mentors and supervisors shared information about the interns. In the program described by Edelen-Smith and Sileo (1996), the interns had two supervisors—one from the University of Hawaii at Manoa and one from the Hawaii Department of Education. The CASE program through Southwest Texas State University (described in Boyer & Gillespie, 2000) employs retired special education directors as supervisors.

Links between Mentors and Teacher Preparation Programs

In alternative route certification programs, there is often extensive IHE involvement in induction, more than in many traditional teacher preparation programs. Mentoring is often built into the preparation programs, creating stronger links between what the teachers learn from their mentors and from IHE personnel. Links between mentors and IHEs in alternative route programs occur through the selection process, training, and ongoing involvement with supervisors and other program faculty. In the ALCERT program, mentors were selected by the principals with input from the university. The criteria used were the candidate's teaching skills, experience as a cooperating teacher or mentor, willingness to participate, and collaborative skills. University representatives served on selection panels for the UWM/MPS program mentors and helped

construct the job description. In at least three programs (ALTCERT, the University of Texas at El Paso, and UWM/MPS Internship Program), mentors were trained by the university, creating close ties between the program and the mentoring support. The training helped mentors understand the experiences of the interns, the mentoring process, and the teacher preparation program.

As noted, the special education and induction programs described are a sample of mentoring programs rather than a comprehensive review. We do see in these programs attempts to identify specific needs of special education teachers and to address these needs in mentor assignments, mentor training, content of workshops, and adaptation of assessment and support systems. As more is learned about effective induction for special education teachers, including supports to help link their students to the general education curriculum, we expect to see this knowledge integrated into new and existing programs.

The research on induction that specifically addresses beginning special education teachers in the last ten years is sparse. While we acknowledge that much of the research on induction in general education may include special educators, we examine research results that focus specifically on induction for special education teachers.

REVIEW OF RESEARCH ON INDUCTION FOR SPECIAL EDUCATORS

Based on a review of journal articles, web-based resources, and dissertation abstracts, we identified 10 studies that focused on induction activities for first-year special educators. The studies were selected because, to varying degrees, each systematically documented and analyzed features and outcomes of induction in the literature on beginning special education teachers. **Table 1** provides a brief description of each study.

Table 1. Studies Examining Induction Year Activities for Special Educators

AUTHOR/ YEAR	TYPE OF STUDY & DATA SOURCES	PURPOSE	PARTICIPANTS
Boyer (1999)	Qualitative - individual interviews	To analyze the impact of a 1- year mentoring program on first-year special education teachers' decisions to remain in teaching	9 beginning teachers of children with autism, hearing impairments, moderate retardation, and physical disabilities
Boyer & Lee (2001)	Reflective case analysis – teacher's journal, researcher's analysis of the literature	To describe and analyze the experience of one beginning special education teacher who participated in a school-based mentoring program	1 beginning teacher in program for students with autism
Cheney, Krajewski, & Combs (1992)	Descriptive study	To describe observations made of 42 first-year teachers and to relate those observations to microphases of development during the first year of teaching	42 first-year teachers: 9 special educators and 33 elementary school teachers
Cooley & Yavanoff (1996)	Exploratory intervention study - survey questionnaire	To evaluate the combined and differential effects of ▪ stress management workshops, ▪ peer collaboration program on job burnout, job satisfaction, and organizational commitment	92 special educators and related service providers; 35% of participants worked for <5 years (not all beginning teachers)
Hopkins (1997)	Evaluation by comparison between treatment and control groups - 40-item mail survey	To evaluate the effect of specific induction interventions on beginning teachers' plans to remain in teaching	Comparable groups of first-year teachers in school districts in North Carolina; 169 in treatment group and 133 in control group.
Kueker & Haensly (1991)	Descriptive study	To examine the perceptions of mentor characteristics (student teaching and first-year), develop a training workshop, and gather preliminary data on mentor/protégé training	8 students in years 5 and 6 of a generic special education masters program

AUTHOR/ YEAR	TYPE OF STUDY & DATA SOURCES	PURPOSE	PARTICIPANTS
Lane & Canosa (1995)	Evaluation - Participant satisfaction surveys end of Year 1 & 2	To evaluate the impact of mentorship program in achieving specific goals of the graduate program	10 students in the two-year graduate program
Maddex (1994)	Qualitative and quantitative analysis - Survey questionnaire	To investigate mentoring activities and perceived benefits and concerns related to mentoring	157 mentees and 198 mentors in general and special education participating in ten Virginia mentoring programs
Tucker (2000)	Qualitative case study: Beginning teacher journals, researcher's journal, interviews with teachers, mentors, and principals	To examine the impact of an induction program for special educators in small multicultural, multiethnic community	Three beginning teachers
Whitaker (2000a, 2000b)	Descriptive study with regression and factor analysis - Survey questionnaire	To determine beginning special education teachers' perceptions of what is an effective mentoring program; to examine the impact of mentoring program on teachers' decision to remain in teaching	156 beginning special education teachers from a random sample of 200 participating in mentoring programs mandated by South Carolina's for all first-year teachers
White (1996)	Evaluation - mail survey	To analyze the Kentucky Teacher Internship Program and its effect on attrition rates in beginning special educators	725 teachers (63.1% return rate) in years 1, 2, and 3 of teaching in Kentucky Internship Program

In the selected studies, mentoring often was either the major or sole activity of formal special education induction programs. Most research on mentoring examined the impact of mentoring on the beginning teacher, personally and professionally, and perceived effectiveness of features or components of effective mentoring programs. We first summarized the results of research with mentoring as the primary or sole activity of induction. Then, we discuss what research has to say about the impact of other kinds of induction activities that are often a part of special education induction programs.

Impact/Outcomes of Mentoring

Satisfaction and retention. Studies typically examined beginning teachers' satisfaction with their mentors and satisfaction with features of the mentoring programs. All studies reported generally positive results of mentoring arrangements (Hopkins, 1997; Kueker & Haensly, 1991; Lane & Canosa, 1995; Maddex, 1994; Tucker, 2000; Whitaker, 2000a, 2000b; White, 1996). Several studies reported that the mentorship program impacted first-year teachers' intentions to remain in teaching for the next 1-5 years. (Boyer, 1999; Whitaker, 2000a, 2000b; Tucker, 2000).

Increase in self-confidence. In a qualitative study of nine first-year special education teachers, Boyer (1999) found that eight of the nine teachers attributed their decision to remain in special education to their mentor. Boyer concluded that the mentorship program contributed to teachers' confidence in themselves and their teaching. Further, she argued that building confidence and competence in teachers helped to develop teachers' long-term commitment to teaching.

> Each new teacher stated that the mentor contributed to her meeting expectations for herself and for her students and, therefore, contributed to her sense of competence, value, and self-confidence. (Boyer, 1999, p. 2)

In Kueker and Haensly's (1991) study, eight first-year teachers in a generic special education teacher training program increased in self confidence, which they directly attributed to the mentor support in their first year. On a survey at the end of the induction year, teachers gave their highest rating to the statement, "the value of having a mentor in the first year."

Development of collaboration skills. Lane and Canosa (1995) reported another impact of the mentorship program beyond general satisfaction. This study examined the explicit focus of the Mentorship Program at Johns Hopkins University, which was to develop preservice teachers to work effectively in an interdisciplinary context and veteran teachers to provide leadership, consultation, and support. Some teachers in the program were full-time and others were assigned to classrooms. From written surveys, the mentorship program "contribute(d) substantially to the development and enrichment of their (pre-service and veteran teachers) collaborative skills" (p. 235). One major factor that mediated this outcome was the non-evaluative role of the mentor, which students characterized as encouraging rather than inhibiting professional rapport.

Benefits to mentors. Although the studies reviewed were primarily concerned with the impact of mentoring on first-year special educators' satisfaction with mentoring and retention, a few noted positive impacts of the program on the mentors (Kueker & Haensly, 1991; Maddex,

1994; Lane & Canosa, 1995). Many mentors found that their work with beginning teachers benefited their own personal and professional development. According to Lane & Canosa (1995), "Mentors saw the mentoring program as an opportunity to enhance and practice their collaborative, consultative, and interpersonal skills" (p. 235).

Effective Features of Mentoring Programs

Frequent contact between mentor and mentee. Most studies identified time and frequency of contact with a mentor as an important factor influencing teachers' satisfaction with mentorship and success in the first year of teaching. This is most prominent in Whitaker's study where there was a significant correlation between the frequency of mentor contact and perceived effectiveness of the mentorship. She writes, "While frequency alone did not determine the perceived effectiveness of the mentoring, to be perceived as most effective, the mentor must have had contact with the first-year teacher on at least a weekly basis" (p. 552). Significant correlations also were found between overall perceived mentoring effectiveness and retention, although the effect size was small.

Factors that directly influenced the frequency and extent of interactions in mentoring included the proximity of the mentor (e.g., same building), release time for meetings, and routinely scheduled meetings. Many mentorship programs were designed to include these features, which were thought to facilitate mentor/mentee interactions. The only caveat came from Whitaker's study (2000a); although desirable, it was not necessary for a mentor to be in the same building as the mentee for the mentorship to be perceived as successful.

Mentors in special education. Studies that examined the characteristics of mentors suggested that mentors should be special educators and preferably that mentors and first-year teachers have similar jobs. The most commonly cited reason was that the knowledge and experience base of the mentor matched the needs of the first-year special education teachers (Lane & Canosa, 1995; White, 1996; Seitz, 1994).

White (1996) analyzed the effect of the Kentucky Teacher Internship Program on attrition rates of special education teachers in the state. When the mentor was a special educator, beginning teacher interns reported that they asked for more help and received more quality help in areas of need. Overall results showed that the internship program did not influence interns' decisions to remain in special education. However, when a special education teacher was assigned a mentor who also was a special educator, the beginning teachers reported a more successful first year and rated the mentor's influence on their decision to remain in special education significantly higher.

Non-evaluative role of the mentor. A number of studies addressed the role of the mentor regarding evaluation. Clearly supporting findings of the Moskowitz and Stephens (1996) multinational study, first-year special education teachers in Boyer's study (1999) found it more useful when mentors took an objective point of view and offered non-judgmental advice. Kueker and Hanesly (1991) examined differences in the roles of a cooperating teacher (in supervised student teaching year) and mentor (in first year of teaching) and concluded that a more collegial relationship developed between a mentor and mentee because the mentor did not play a role in evaluating teacher performance.

The mentoring process as understood by mentor and mentees. The extent to which mentors understood their role influenced beginning teachers' satisfaction and perceived effectiveness of mentoring. Participants in Maddex's (1994) study critiqued the lack of specific role definitions for the mentor's job. Confusion over the mentor's role was also revealed in Gibb and Welch's (1998) study of the Utah Mentor Program.

Kueker & Haensly (1991) evaluated the effectiveness of an orientation to the mentorship. They conducted a 3-hour mentorship orientation workshop that included: (a) background information on mentoring, (b) ideas for ways in which induction-year teachers might need help, (c) role-playing for mentors in providing support and beginning teachers in requesting support, (d) communication of strategies for providing feedback and encouragement, and (e) description of the developmental sequences for successful mentoring relationships. Although the orientation was open to mentors and mentees, it was primarily attended by first-year teachers in the program, and the orientation significantly helped mentees understand how to use their mentors.

Other mentor characteristics. Personal characteristics play a role in the quality and success of a mentoring relationship. Characteristics that teachers thought were important for special education mentors included personable, open, caring, friendly, comfortable around others, positive attitudes, unobtrusive and non-threatening, available, and flexible (Gibb & Welch, 1998). Additionally, first–year special educators identified the need for a mentor who was trustworthy and would keep their work confidential (Gibb & Welch, 1998).

Content of support. Beginning teachers often look for moral support and guidance as they traverse their first year of teaching (Kueker & Haensly, 1991). First-year special education respondents rated emotional support from mentors as the most effective support they received (Whitaker, 2000a). A regression analysis identified that *emotional support, materials/resources, system information for school/district*, and *system information for special education* accounted for 77% of the variance in teachers' perceptions of the overall effectiveness of the mentorship program.

Support valued by beginning special educators in other studies reflected similar perspectives. Boyer's (1999) study found first-year teachers wanted information about policies and procedures in special education. The teachers in Lane and Canosa's study (1995) reported the value of their mentor's expertise in adapting and selecting functional materials for instruction and using natural incentives. Maddex (1994) reported that the most useful assistance that mentors provided to beginning teachers was in the following areas: lesson planning, materials, classroom management, instructional techniques, and discussion of curriculum. Gibb and Welch (1998) in their evaluation of the Utah Mentor Teacher Academy found behavior management was the most frequent area of mentoring. Many studies pointed to the fact that the content of mentoring is most useful when it is directly related to situations, problems, and issues that individual teachers struggle with in their first year (Maddex, 1994; Lane & Canosa, 1995; Boyer, 1999).

Forms of support. Whitaker's study (2000a) focused on six potential forms of support that mentors could provide: unscheduled meetings, scheduled meetings, telephone contacts, written communication, observations by the first-year special education teachers' mentor, and observations of the mentor. First-year special education teachers reported unscheduled meetings

most frequently, followed by scheduled meetings. Telephone and written communications were infrequent. One fourth of the mentors never observed their beginning teachers, and many beginning teachers did not arrange to observe other teachers. Most studies reviewed described the most frequent form of support as face-to-face meetings between mentor and mentee. The effectiveness of face-to-face meetings no doubt is related to the frequency with which mentors and mentees were able to meet. It is also likely that the interaction of features that beginning teachers identified as effective in these studies contributed to the overall success of mentoring.

Mentoring and Teacher Development

In a 1-year study, Cheney, Krajewski, and Combs (1992) identified the content needs of first-year teachers related to their concerns and developmental aspects of what the literature describes as the "survival" stage for beginning teachers (Fuller, 1969; Katz, 1972; Kremer-Hayon & Ben-Peretz, 1986). Cheney et al. (1992) identified five *microstages* of development that they observed in general and special educators in their efforts to move beyond survival. At each stage, beginning teachers needed different kinds of supports. **Table 2** presents the stages and requests of first-year special educators to mentors.

Table 2. Stages of Development and Mentoring Needs of First-Year Teachers

STAGE	MENTORING REQUESTS
Ordering/time filling	Materials Procedural aspects, particularly related to IEPs Emotional support/camaraderie
Timing, planning, and management	Assessment of students Behavior management programs Programming for students who complete their work Communication with parents Some requests for teaching demonstrations
Experimentation	Feedback on aspects of program and instruction Modeling of potential changes
Long-range planning	No pattern in mentoring supports identified
Focus on students	Specific information on child abuse Community referral services for families Working with guidance counselors Clarification of disabilities & diagnostic process

The timing and intensity of certain types of support impacted teachers' self-confidence, developing competence, and independence. Cheney et al. (1992) proposed that the content and process of mentoring and induction, in general, should be aligned with a teacher's professional development in the first year.

Reports of Other Induction Activities for Special Educators

Other induction activities that accompanied or were independent of mentoring impacted first-year special educators' perceptions of success and/or their decisions to stay in teaching.
Cooley and Yavanoff (1996) conducted an exploratory study of the combined and differential effects of two intervention strategies to help beginning special educators manage stress associated with first-year teaching and to reduce collegial isolation. The interventions included: (a) stress management workshops to develop physical and cognitive coping skills to help teachers manage stressful situations (5 weekly 2-hour sessions) and (b) peer collaboration training (Johnson & Pugach, 1991) (3-hour session with 1-hour weekly follow-up for four weeks).

The results demonstrated improvement in the teachers' emotional state, job satisfaction, and organizational commitment. Generalization of these results to first-year special educators should be limited, because the participants included teachers who had taught for up to five years and related service providers. However, the study showed the potential benefits of support that targets specific concerns and issues faced by special educators.

Tucker (2000) in a dissertation conducted a qualitative study of three first-year special educators who participated in an induction program that included a new teacher buddy system, support group meetings, teacher journaling, release time, and observations of peer teachers. While most activities were beneficial, "the most helpful innovation for the three teachers was recording frustrations, difficulties, and successes in their journals and reflecting on those entries for future decisions" (p. 228).

A larger scale dissertation study by Hopkins (1997), which included first-year general and special education teachers, demonstrated the differences in type and amount of support that teachers received. First-year teachers in a treatment group participated in a 1-year orientation and induction program. The teachers had comparable teaching assignments, class preparations, class sizes, and room assignments. The program included: (a) an orientation prior to their first contractual workday, (b) placement in their field of licensure, (c) ready access to a mentor, and (d) only one extracurricular assignment. Teachers from nearby school districts comprised the control group. Teachers in the treatment group had more access to an orientation, orientation information, support with first-day tasks, mentor access and support, and outside assignments. There was a significant relationship between teachers' access to orientation and their decision to remain in teaching.

White's dissertation study (1996) examined the impact of a state-mandated induction program on statewide attrition of special educators. The Kentucky Internship Program, initiated in 1986, required all first-year Kentucky teachers and all teachers transferring into the state with less than two years of teaching experience to complete an internship. Internship teachers worked with a team that also included a resource or master teacher, an administrator, and a teacher educator. The goal was to develop the knowledge and skills delineated in the Kentucky teaching standards. A mail survey of first-, second-, and third-year teachers who participated in the Kentucky Internship Program was returned by 725, providing information on demographics, perceived

stressors in the internship year, and the influence of the internship year on decisions to remain in special education.

Beginning teachers rank-ordered 10 stressors experienced in their internship year: (1) lack of planning time, (2) overcrowded classes, (3) excessive paperwork, (4) obtaining classroom materials, (5) work overload, (6) student behavior, (7) role ambiguity, (8) working with parents, (9) problems with other faculty, and (10) problems with administrators. Also, beginning teachers credited mentor teachers with alleviating stressors experienced in the internship year, particularly in cases where the mentor teacher was a special educator. However, the Kentucky Internship Program did not impact teachers' decisions to remain in special education, which was the major objective of the program (White, 1996).

Case studies (e.g., Boyer and Lee, 2001) document the experience of a beginning special educator and its impact on long-term commitment to teaching. Boyer identified the challenges encountered by a first-year teacher whose role included the development of a new program for students with autism. The challenges were: (a) inclusion of students with disabilities in general education, (b) providing access to the general education curriculum, (c) accountability for student progress, (d) managing excessive paper work, and (e) working with paraprofessionals. Boyer and Lee emphasized that challenges are often created by placing beginning teachers in the most difficult schools and classrooms with little support or incentive to remain in special education. They also stressed that the actual impact of induction and mentorship programs on retaining beginning special educators depends on a variety of factors, not the least of which is the intensiveness and integrity of the support offered first-year teachers (Boyer & Lee, 2001).

DISCUSSION AND IMPLICATIONS

We summarize the findings of this review with responses to four pointed questions:

- What does the literature tell us about the induction of beginning special education teachers?
- How do these findings relate to findings from the general education literature?
- What has the research on induction in special education discovered about contextual variables that are key to a first-year teacher's survival?
- What are the implications for teacher educators and school districts?

Induction in Special Education

We described induction programs designed to serve the unique needs of beginning special educators. Mentoring was found to be a prominent feature of these programs. Another important component was content about the disability categories of first-year teachers' students. These induction programs were administered at three levels: statewide, district-level, or through university-school partnerships. State-level induction programs included the Oregon Recruitment/ Retention Project (in Boyer & Gillespie, 2000) and the Utah Mentor Teacher Academy (Gibb & Welch, 1998). Programs were developed and implemented solely by districts (Boyer & Gillespie, 2000; Whitaker, 2000b) or in collaborative partnerships with universities (Burstein & Kennedy, 2002; Lane & Canosa, 1995; Keuker & Haensly, 1991). Induction programs that served special educators who are learning to teach on the job through alternative routes to certification were presented. Some teacher preparation programs at colleges and universities were involved in designing and implementing these programs (e.g., Deiker & Winn, 2000; Rosenberg & Rock, 1994). Mentoring again surfaced as an important component of the ARC induction programs reviewed. In these programs, mentoring took on a more significant role and was typically provided more intensively (e.g., two half-days per week in the first year, with monthly follow-up visits in the second year).

In the research on the induction of new special educators, we identified 10 studies (see **Table 1**). Like the emphasis in the programs we reviewed, mentoring was also the most widely examined activity in the studies of induction (Hopkins, 1997; Kueker & Haensly, 1991; Lane & Canosa, 1995; Maddex, 1994; Tucker, 2000; Whitaker, 2000a, 2000b; White, 1996). Specifically, special education teachers attributed decisions to remain in the field to their mentors (e.g., Boyer, 1999) and not necessarily to a program (White, 1996). The literature in special education also suggests ways that these mentors were most facilitative. Mentors should be special educators like their mentees (Lane & Canosa, 1995; White, 1996; Seitz, 1998) and the pair may have a better experience if they come together frequently (Whitaker, 2000a). Mentors who understood that their role was to provide objective, non-judgmental advice to first-year teachers were viewed as more useful and tended to enhance collegial relationships. Personal characteristics (e.g., being caring, friendly, flexible, and available) helped to create successful mentoring experiences (Gibb & Welch, 1998).

These studies indicated that beginning teachers experienced a high degree of satisfaction with the mentoring arrangements, a heightened self-confidence, and improvement in collaboration skills. Finally, a serendipitous outcome of new teacher induction in special education was that mentors found their work with beginning teachers beneficial to themselves and their own personal and professional development (Lane & Canosa, 1995).

The research also suggested effective features of induction programs for special educators. For example, the content of induction programs and the forms of support provided were important, with first-year teachers valuing emotional support, materials/resources, and system information related to the school district and special education. In addition, face-to-face meetings (scheduled or unscheduled) between mentors and beginning teachers surfaced as an effective method for delivering support; other ways were identified as helpful (e.g., telephone contacts, observations).

Relationship between Special and General Education Induction

The research on general education induction suggests that programs increase short-term retention rates of teachers; however, questions remain about long-term effects (Arends & Rigazio-DiGilio, 2000; Huling-Austin, 1990). Special education research supports these findings, suggesting that induction practices contribute to first-year teachers' decisions to continue teaching during the early years (Boyer, 1999; Whitaker, 2000a, 2000b; Tucker, 2000).

Empirical support for induction in special education leads to examination of the kind of support offered to beginning special educators and the nature of interactions between new and experienced teachers. Research suggests that collegial relationships between a mentor and mentee can be strengthened when the mentor does not formally evaluate the teacher's performance (Kueker & Hanesly, 1991). This finding is supported further by many authors of induction reviews (Arends & Ragazio-DiGilio, 2000; Gold, 1996; Moskowitz & Stephens, 1996; Serpell, 2000), who recommend assistance and support over evaluations that determine whether or not new teachers can become certified. Not surprisingly, special education mentees rated *emotional support* as the most helpful kind of assistance they received from mentors (Whitaker, 2000a). However, new teachers also desired information about policies and procedures in special education, instruction and curriculum adaptation, and classroom behavior management (Boyer, 1999; Lane & Canosa, 1995; Maddex, 1994).

Studies of induction activities that did not focus exclusively on mentoring revealed positive outcomes in other areas. Stress management workshops and peer collaboration training improved emotional exhaustion, job satisfaction, and organizational commitment (Cooley & Yavanoff, 1996). In Tucker's (2000) study, the use of a journal and teacher reflection was perceived as helpful by first-year special educators over other activities offered. In addition, having access to an orientation before the first day of school encouraged first-year teachers to stay in teaching (Hopkins, 1997). Mentoring and other activities reinforce Gold's (1996) general education recommendation that regular opportunities for new and experienced teachers to communicate are important and the content of induction activities for new teachers should meet both their instructional and psychological needs.

The agreement between general and special education research on induction is encouraging. In addition to ensuring better early experiences, if congruent research findings from both fields are used to design programs, induction activities have the potential to address the professional needs and personal well-being of **all** teachers. However, in both fields, questions about new teacher induction remain regarding: (a) the long-term retention of teachers who have been involved in induction activities; (b) school setting variables (e.g., large vs. small, urban vs. rural); and (c) alternative certification.

Connections between Induction in Special Education and Contextual Variables

Earlier in this review, we painted a grim picture of the conditions of teaching that many special educators encounter. These conditions are shaped by factors that can result in high-teaching loads (e.g., Carter & Scruggs, 2001); insufficient resources (e.g., Billingsley & Tomchin, 1992); insufficient time (e.g., MacDonald & Speece, 2001); and inadequate administrative support for special education (Kilgore & Griffin, 1998), to name a few. When first-year teachers are faced with these adverse conditions, difficulties typically encountered (e.g., time management) are exacerbated.

The conditions of teaching present unique needs for induction support and mentoring. Urban schools, in particular, often present particularly challenging working conditions, lack of professional respect, low morale, and a culture of high faculty turnover. Special education teachers, particularly beginning teachers working in urban settings, must be equipped "to educate the nation's most diverse student body to the highest academic standard and prepare students to contribute to our democracy and global community" (Council of the Great City Schools, 1996, p. 5). Similar challenges face teachers in rural areas (Lemke, 1995). While all novice special educators need support, the unique conditions of teaching and barriers to achievement for students should be addressed directly through induction support. If we have learned anything from this review of the literature, it is that induction supports must deal directly with needs that emerge from the unique contexts in which special educators find themselves in their initial teaching years. The Beginning Teacher Support and Assessment Program-Special Education (Burstein & Kennedy, 2002) is one example of an induction program that explicitly addresses urban special education teaching . More programs like this and more research on their effectiveness are called for.

Implications for Teacher Educators and School Districts

We focus our recommendations on two prominent areas in the special education literature—mentoring and alternative certification—and suggest ways to create schools that foster optimal support for and achievement by the entire school community.

Mentoring. Although findings from the literature we reviewed on mentoring in special education induction programs are encouraging, questions remain. For example, Whitaker (2000a) found that beginning special education teachers and their mentors focused more on personal adjustment and the mechanics of the job than on students and their learning. This

finding prompted her to pose two questions that we feel need to be considered seriously and systematically studied as mentorships are conceptualized and implemented:

- Do mentors provide less assistance in the areas that focus directly on the student because the first-year special educator is not ready for such assistance or because the mentor is less comfortable or capable in providing this type of assistance?
- Can and should mentors assist in moving first-year special education teachers more quickly through the early stages into the stage that focuses on students? (p. 562)

Both questions address the role of the mentor and the possibility of interrupting stages of teacher development in which a student focus is not at the forefront. Time is of the essence for students with special education needs who are often seriously lagging in achievement. It is imperative that mentoring programs are designed and mentors selected and prepared to promote beginning teachers' focus on teaching and learning as soon as possible. Important areas for research are: (a) qualities of mentors (e.g., curriculum knowledge, their own focus on teaching and learning, confidence to push novices to move beyond adjustment) and (b) a mentoring process (e.g., intensity, format, feedback mechanisms) that facilitates a focus on students.

Alternative Certification. Surrounded by controversy, alternative route certification programs continue to multiply (Rosenberg & Sindelar, 2001). Support for new teachers prepared outside of traditional teacher education programs is crucial. Initial placement settings are important. All new teachers, especially those learning to teach on the job, deserve placements with a reasonable number of students, adequate materials, and supportive colleagues (Boyer, 1999). Mentoring in ARC programs, as in other induction programs reviewed, is a prominent feature; however, unlike traditional programs, the nature of the support may need to be intensified. For example, mentees may require visits from mentors at least once a week, continuing through the mentee's second year of teaching (e.g., Dieker & Winn, 1999; Lloyd et al., 2000). Beyond mentoring, another rare feature of ARC programs is the involvement and sincere commitment of colleges and universities (IHEs) in the induction process (e.g., McKibbin, McCabe, Evans, & Reid, 2003; Miller & Wienke, 2001; Rosenberg & Rock, 1994; Winn & Dieker, 2001). These linkages allow IHE faculty to share information with mentors and supervisors, provide training, work with districts to identify placements, and hopefully lessen the gap between research and practice (i.e., what interns/novice teachers glean from their courses and from the field).

A myriad of issues remain in ARCs. One centers on the intensity of effort expended to support novices prepared in this manner. Despite recommendations that support provided to new teachers in ARC programs should be greater, Rosenberg and Sindelar (2001) state:

> We remain unsure of the actual level of support that ARC (alternative route certification) candidates require, a factor that can be especially critical when the cost/benefit aspects of a comprehensive teacher development program are being considered (p. 16).

As alternative route certification programs grow, it is critical that researchers in teacher education examine the type and amount of induction support from both districts and IHEs

required to support new teachers learning to teach on the job. Research is needed to define and to identify the most important aspects of induction support, for example:

- amount of time on-the-job teachers need to be with their mentors
- nature and sequence of mentoring activities most beneficial to the teachers and students
- most profitable ways to link the school districts with teacher education programs
- ways assignments can match teachers' strengths and needs.

An important area for research is identifying how to define and implement these topics on an individual level, particularly within larger programs.

Attending to the differences between the induction needs of student teachers going through traditional and ARC special education teacher preparation programs are important. By examining the type and effectiveness of supports in alternative route certification programs, we also identify induction practices that can benefit all beginning special education teachers.

School Culture and New Teacher Induction. Optimal teacher induction is created when factors that reform the school culture are embraced and then practiced. These factors allow new teachers and their students to achieve their potential and simultaneously improve conditions in schools and special education classrooms. These factors, which have been presented elsewhere (Kilgore, Griffin, Sindelar, & Webb, 2002) and supported by Darling-Hammond (1997) and others interested in school reform, include: (a) strong leadership, (b) shared governance, (c) collaboration, and (d) professional growth.

Successful schools require strong and nurturing leadership from the principal that includes support for innovation without risk and for setting high standards for all school personnel. It is also critical that principals communicate the importance of teaching and learning—for everyone. Improvement is possible in schools where teachers are involved in making school-wide decisions, where they work with assistance and support from others and not in isolation, and where they have opportunities for ongoing professional development. It is in a school with this kind of culture that significant change can occur, and significant dilemmas—like how best to support new teachers—can be addressed and truly effective approaches created and implemented.

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