

FOCUS ON EXCEPTIONAL CHILDREN

Paraeducators in Special Education Programs

Nancy K. French

Special education programs are the single largest employer of paraeducators—also known as paraprofessionals, educational assistants, instructional aides, teacher assistants, and numerous other job titles. The tradition of employing lesser-trained assistants to help with students with disabilities began more than 200 years ago when Itard (1801/1962), a physician, employed Madame Guerin to assist him in his work with Victor, the wild boy of Aveyron (Boomer, 1994). At various times, special education programs have employed both professionals and paraprofessionals (Cruickshank & Herring, 1957; Gartner, 1971; Pickett, 1986; 1996).

The numbers of paraeducators employed in U. S. schools increased dramatically during the 1990s, at a national average of 48%, with some western states (e.g., Idaho) reporting as much as a 94% increase (National Center for Educational Statistics [NCES], 2000). To put the growth in perspective, during that same time period, the student population increased by only 13% and the number of teachers increased by 18%. These numbers reveal a vital shift in the way we deliver special education services to students.

ALONGSIDE THE TEACHER OR ALONGSIDE THE STUDENT?

Although the prefix “para” in conjunction with the word “educator” signifies that someone works “alongside” an education professional, paraeducators work alongside special education teachers only in a figurative sense (Pickett & Gerlach, 1997). Paraeducators frequently provide instructional services alongside the student rather than alongside the teacher (French, 1998).

This shift in employment patterns parallels the medical field’s shift in staffing patterns. At one time, doctors made home calls to provide medical attention to those who could not come to the office. Over time, it became less efficient and less feasible for physicians to travel. Eventually, lesser-trained personnel (e.g., nurses, nurse practitioners, physician’s assistants, paramedics) were employed to perform specified medical functions outside the presence of the physician and in settings far from the medical office or hospital. Increasing pressures for timely and affordable medical services thus have been addressed by employing personnel with sufficient preparation to perform the service or procedure but with significantly less training than doctors.

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Similarly, reasoned speculation suggests that factors that have contributed to the shift in special education's use of lesser-trained service providers are (1) inclusion, (2) high academic standards, (3) legislative changes and litigation, (4) related services, and (5) shortage of fully qualified professionals (French & Pickett, 1997; Katsiyannis, Hodge, & Lanford, 2000).

Inclusion

Special education programs have a duty to include students with disabilities in general education settings and to provide necessary supplementary aids and services to make the settings effective (Etscheidt & Bartlett, 1999). One of the possible supplementary aids and services specifically mentioned in the law is a "teacher associate" or paraeducator. Moreover, IEPs (Individual Education Programs) must consider the provision of resources to the general education teacher, the paraeducator, and the student at a level not previously required by law (Etscheidt & Bartlett, 1999). Thus, to assure the success of inclusion efforts, special educators are spending more time consulting with general education teachers than ever before (Friend & Cook, 2003).

Students who are included in general education classes often require more attention and individual assistance than the general education teacher has time to provide. Classroom teachers believe that the inclusion of students with disabilities is more acceptable when the child is accompanied by a paraeducator and that paraeducators are a necessary component of inclusion (Bennett, Deluca & Bruns, 1997; Coots, Bishop & Grenot-Scheyer, 1998) Fisher, Sax, Rodifer, & Pumpian, 1999). But Giangreco (2003) pointed out the potential pitfalls of assigning paraeducators to classrooms that include students with special education needs. Classroom teachers might abdicate their instructional responsibility for the child, leaving the paraeducator to provide all instruction, entrusting the paraeducator with more responsibility than is ethically correct. Some general educators fall prey to the "training trap"—the illusion that whatever small amount of training a paraeducator has is sufficient justification for entrusting to him or her full responsibility for special education students (Giangreco, 2003). Moreover, some paraeducators have gained the impression that it is their duty to "protect" classroom teachers from being "bothered" by the included child (Marks, Schrader, & Levine, 1999).

In any case, special education teachers who are judged to be effective in including students with disabilities use paraeducators to support the curricular and instructional adaptations they design (Chopra, 2002; Chopra & French, 2004; Coots, Bishop, & Grenot-Scheyer, 1998; Downing, Ryndak, & Clark, 2000). Special education teachers in successful inclusion programs recognize that paraeducators can provide assistance, just as nurses can legitimately provide some medical services.

In addition, many parents request inclusion for their children (Marks, Shrader & Levine, 1999) and believe that paraeducators are vital to the inclusion process (French & Chopra, 1999). In many cases, parents of students with disabilities request that a dedicated paraeducator be hired to assist and accompany their child throughout the school day. Parents assert that support for the physical, health, social, and academic needs of their children is essential to their child's success in school (French & Chopra, 1999).

Hearing the demands for paraeducator assistance from all sides, special education administrators have increased the numbers of paraeducators assigned to special education programs. As the numbers grow, administrators have begun to recognize the need for systematic policies and procedures to guide the process (French, 2003a; Giangreco, 2003; Mueller & Murphy, 2001). Several systems are available to guide the IEP team's recommendation to employ a paraeducator (French, 2003a; Giangreco, Edelman, & Broer, 2003; Mueller & Murphy, 2001). Only one of the systems, however, has been rigorously tested by special education teams.

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Giangreco et al. (2003) reported on 46 sites that used a 10-step planning system for improving paraeducator supports, and indicated that the process helped school-based teams in assessing their own practices, identifying priorities, developing actions, and implementing and evaluating action plans. The findings showed that the process contributed to improved morale among paraeducators, a greater sense of respect for the position, an increased sense of value for the role, higher retention of paraeducators in position, and less absenteeism.

Those researchers also reported improved delivery of instruction, increased home-school collaboration and favorable parent satisfaction with paraeducator performance, and a general sense that student achievement had improved because of the use of the system. The teachers also believed that the process resulted in more inclusion, improved safety, and increased peer interactions, and they thought that students "scored" better.

Emphasis on Student Achievement of High Standards

When the Individuals with Disabilities Education Act (IDEA) was reauthorized in 1997, it shifted the emphasis of special education from that of providing access to general education curriculum to a focus on measuring student outcomes against the same standards held for all students. This shift amplified the need for individualized instructional supports (French, 2003b). The No Child Left Behind (NCLB) Act of 2002 renewed the federal commitment to equalize opportunities for children from impoverished communities. NCLB requires districts to report on the annual yearly progress of students benefiting from funding under the Act, including special education students.

Legislation and Litigation

Most states have permissive language whereby districts may hire both professional and nonprofessional personnel to carry out school programs (French, 2003a). Statutory authority to employ paraeducators also is provided for programs that receive federal funding in the United States. For example, Titles I and III of the No Child Left Behind Act (NCLB) of 2002 contain permissive language regarding paraeducators but specify certain permissible roles as well as training and supervision standards.

IDEA '97 specified that paraeducators who are adequately trained and supervised may assist in delivering special education and related services (National Association of State Directors of Special Education, 1997). Moreover, IDEA '97 indicated that paraeducator services must be provided to students with disabilities (including one-on-one services) if these services are necessary for a student to receive a free appropriate public education. Some legal decisions have addressed the "necessity of paraeducator services,"

indicating that the individualized education plan (IEP) team holds the responsibility to make the determination whether a paraeducator is necessary for a "free appropriate public education" (Katsiyannis, Hodge, & Lanford, 2000). Federal funds may be used for paraprofessionals, "even if one or more non-disabled children benefit from such services" [1413(a)(4)(A)] (Etscheidt & Bartlett, 1999).

Related Services

Under IDEA '97, schools must provide "related services" as required to assist students with disabilities to benefit from special education. Those related services may include health care services and/or therapies according to the students' individual needs (Rapport, 1996; Katsiyannis & Yell, 2000). The test for whether a service is considered a "medical" service or a "school health" service is whether, legally speaking, a doctor must perform the procedure. If a nurse or other qualified person can perform the procedure, it qualifies as a required service under IDEA (IDEA Regulations, 34 C.F.R. § 300.16). The key words are "other qualified person." Courts have held that a "health aide" can perform technical procedures such as clean intermittent catheterization and tracheotomy tube suctioning, as well as procedures that require lesser amounts of training (e.g., dispensing oral medication) under the supervision of a school nurse. In most states the nurse practice act specifies that "supervision" means that the nurse trains the paraeducator to perform the procedure, observes the performance of the procedure on individual students, and conducts follow-up observations.

As reported by Fryer and Igoe (1996), "school health aide" was the title used most frequently for positions that were figuratively alongside the school nurse. And while school nurses were increasing in number at the time, the number of paraeducators was increasing simultaneously. Examples of paraeducator responsibilities included first aid and medication, but nurses continued to perform evaluations of the child's health, formal cardiovascular screenings, tube feedings, and blood collection and testing.

Paraeducators also supplement the work of speech-language pathologists (SLPs) sometimes. Where large numbers of trained speech language assistants are employed, there is an increased ability to serve larger numbers of students and to increase the amount of services to each student at a lower cost (Blodgett & Miller, 1996; Miller, 1999; Radaszewski-Byrne, 1996). Programs for the preparation of speech-language pathology assistants are under development and are being pilot-tested in many places (C. Curran, personal communication, May 2, 2002; Longhurst, 1997).

Longhurst (1997) coined the term *paratherapist* to describe those who work figuratively alongside related-services providers in schools. He described how physical therapy assistants carry out treatment designed by the physical

therapist (PT), after the PT's evaluation and assessment of student functioning. Longhurst also described how certified occupational therapy assistants (COTAs) carry out treatment designed by the occupational therapist (OT).

Further, Longhurst clearly delineated the levels of authority in physical therapy, occupational therapy, and speech-language therapy and specified that the title of "aide" was to be given to individuals with a minimum level of training and a limited scope of practice, who carry out routine tasks under the therapist's direct, visual supervision. He also pointed out that the "assistant" title is given to people with a degree—often at the baccalaureate level—who have a more extensive scope of practice than that of the aide.

Although the practice is not widespread, school psychology is also beginning to employ lesser-trained personnel to supplement the work of fully prepared psychologists in schools. Paoni, Wise, Marshall, and Kelly (1996) described the effort in one district to train paraeducators to conduct behavioral observations, to make certain that intervention plans were being implemented correctly and monitored regularly, and to expand the roles of aides through their participation in behavior-management plans or home-school communication strategies.

Shortages of Fully Qualified Professionals

In some areas of education, shortages of fully qualified professionals have necessitated employing paraeducators who work under the direction of the available professionals. This has been true in early childhood programs (Innocenti & Roberts, 1995; Striffler, 1993), in the delivery of related speech-language therapy in rural areas (Haas, 1996), in special education (White, 1995), and in special education programs serving English-language learners (Miramontes, 1990). School psychology also is employing teachers as "assistant educational psychologists" to perform some of the more routine aspects of school psychology and to interest teachers in pursuing the education necessary to assume the school psychologist position (Lyons, 2000).

As the result of positive experiences working in the assistant role, some paraeducators are pursuing teaching as a career (Bernal & Aragon, 2004; Genzok, & Baca, 1998; Genzok, Lavadenz, & Krashen, 1994; Haselkorn, & Fideler, 1996; Kaufman & Staley, 1999; Priddy, 1996; Recruiting New Teachers Inc., 2000; Smith, 2003; White, 1995). The paraeducator position might serve as a preparatory or apprenticeship stage for the paraeducator who is becoming a teacher (Aragon, 2003; French, Bernal, & Chopra, 2002). And some paraeducators are encouraged to pursue teacher preparation by those around them who recognize some intuitive ability to teach (Aragon, 2003; Bernal & Aragon, 2004).

Many districts have "grow your own" programs that reward and support paraeducators who pursue teacher

preparation. Several universities have formed coalitions that pave the paraeducator-to-teacher pathway (Bernal & Aragon, in press; Genzok, Lavadenz, & Krashen, 1994; Platt, 2004; Sandoval-Lucero, 2004; Smith, 2003), and some universities have developed programs based on funding from the Office of Special Education Programs at the U.S. Department of Education (Epanchin & Wooley-Brown, 1993; White, 2004). Clewell and Villegas (2001a, 2001b) found that paraeducators who became teachers were more likely to work in targeted, difficult-to-staff schools, and to remain there significantly longer than other career changers. They also found that paraeducators who became teachers were rated as better teachers than other career changers (Clewell and Villegas, 2001b).

HOW EFFECTIVE ARE PARAEUCATORS?

Although the pragmatic reasons for employing paraeducators are predictable, the effects of the presence of a paraeducator on student independence, social interactions, behavior, and academic achievement remain disputed in the literature. Studies of paraeducator impact on special education students have yielded varying results. The difficulty of designing high-quality research to study the effectiveness of paraeducators is enormous. Yet, since the 1970s, researchers have tried to do so.

Social Interactions, Academic Engagement, and Inclusion

Two types of research have provided insight into the interactions: inclusion and engagement of students with disabilities. Some studies used survey or interview techniques, gaining self-reports and personal perspectives of paraeducators and others. Other studies used observational techniques and quasi-experimental designs to document the work of paraeducators. The works complement one another by examining both the perceptions and the actions of paraeducators.

Interview data from Marks, Schrader, and Levine (1999) revealed that paraeducators perceived that their job responsibilities included: (1) keeping students with disabilities from "bothering" general education classroom teachers, (2) creating all modifications and adaptations for the child, and (3) maintaining responsibility for all aspects of the child's education. These findings indicate that paraeducators perceived their duties to be actions that are not considered ethical (Heller, 1997; National Joint Committee on Learning Disabilities [NJCLD], 1999). Marks et al. reported corroboration of these perceived job duties by another group of paraeducators, but no observations were conducted, and no comparison made to job descriptions.

French and Chopra (1999) conducted interviews with parents who reported that they believe inclusion without

paraeducators is impossible. The parents cited reasons of health and safety, social and academic engagement in support of their assertions. Actually, these parents believe that paraeducators are more important than teachers to their child's inclusion. But parents also emphasized that paraeducators should "stand back a little, too..." and to "become invisible in a very calculated way" (French & Chopra, 1999, p. 264).

In Scotland, more than 4,400 classroom assistants were appointed between 2000 and 2001 in an effort to improve adult-to-student ratios. The program was federally funded and evaluated in three phases. All data sources verified that the amount of time students were engaged in active versus passive tasks increased as a result of the presence of the assistants, and that the presence of the assistants permitted teachers to improve the quality of their teaching time and to engage in more small group and individual work with students.

Scottish teachers also reported that their expectations of students had increased because of the added support available to them. Students liked working with classroom assistants and appreciated the extra support. Students clearly distinguished between classroom assistants, whom they saw as "helpers," and teachers. This evaluation study did not disaggregate findings for special education students (Wilson, Schlapp and Davidson, 2002).

Storey, Smith, and Strain (1993) conducted a study using a "multiple-probe across settings" design to examine the effectiveness of a peer-mediated intervention conducted by classroom assistants on the social behavior of socially withdrawn and socially skilled preschoolers in public school classrooms. Two socially skilled students were matched with one socially withdrawn student, and the group of three became the unit of study. The results demonstrated that all of the withdrawn preschoolers increased their social interactions with peers during the instructional triads studied. Social validation findings also indicated improvement in the students' behavior.

Hall, McClannahan, and Krantz (1995) observed that paraeducators were reluctant to "step away" from students in classroom interactions. Although they did not inquire as to the paraeducators' beliefs about their roles, the researchers assumed that the paraeducators believed their primary role to be that of providing support and assistance, just as Marks, Shrader, and Levine later reported. Hall et al., however, provided training for paraeducators on how to reduce the number of verbal and gestural prompts given to students and to use physical prompts whenever prompts were absolutely necessary. Observations subsequent to training revealed a significant reduction in the number of verbal and gestural prompts, indicating that the concepts the paraeducators had learned during training were being applied on the job. They then observed the amount of

engagement and initiative on the part of students and found that both increased significantly.

Young, Simpson, Smith-Myles, & Kamps (1996) examined the paraeducators' proximity to three students with autism in elementary education classrooms, each of whom was assigned a full-time paraeducator. Researchers assessed the on-task, in-seat, self-stimulatory, and vocalization behaviors of the students as a function of paraeducator proximity, recording activities, and behaviors at 20-second intervals. They considered three conditions: (1) close proximity?less than 2 feet away; (2) more than 2 feet away, and (3) out of room. Teacher-initiated contact with the target students occurred most often when the paraeducator was more than 2 feet away from students or when out of the room, but the teacher initiated contact with student less than 1% of the time when the paraeducator was closer than 2 feet away. This finding suggests that paraeducator proximity effectively reduced student opportunities to engage with the classroom teacher and could be used to support the argument that the presence of a paraeducator allows the classroom teacher to be relieved of responsibility for the child.

At the same time, observations showed that the use of gestures or cueing occurred less than 1% of the time—a problem because all students had difficulty with verbal directions and needed cues and prompts. Nevertheless, students were on task appropriate amounts of time—most often when working with a peer. Similar to the earlier conclusions of Storey, Smith, and Strain (1993) regarding preschoolers, those authors concluded that the most appropriate role of the paraeducator working with elementary-aged children with autism is to facilitate peer interaction, and they did not recommend discontinuing the use of paraeducators.

Giangreco, Edelman, Luiselli, and MacFarland (1997) observed classrooms where students with significant needs were included and reported that dedicated paraeducators serving children one-to-one "hovered" over their charges, which limited opportunities for the students to benefit from the teacher's instruction and interfered with social interactions among students. These findings were published in a widely read article that served as the wake-up-call for those who had rushed to provide every child with an individual dedicated paraeducator.

At variance with these findings, Hill (2003) observed paraeducators working in classrooms where students with disabilities were included. Their observations focused on (1) the activities in which the instructional assistant was involved, (2) participants in the interaction, and (3) whether the interaction occurred in or out of the classroom. Hill concluded that assistants facilitated inclusive practices by interacting more frequently with both exceptional and typical students together, rather than with the exceptional student alone, and that they spent significant time assisting in

activities that did not include exceptional students. Hill also concluded that paraeducators promoted independence by limiting the amount of direct instruction they provided to exceptional students, so that students would attend to the classroom teacher for their instruction.

Other reported benefits of employing paraeducators included improved student behavior (Kotkin, 1998). In a series of well designed, quasi-experimental studies, Kotkin reported consistent improvements in the behavior of boys with attention deficit hyperactivity disorder (1998). In one study, Kotkin (1998) tested the effects of social skills training versus the effects of combined social skills training and continued support of a trained classroom aide. This study showed that the majority of students receiving the combined set of practices (social skills training plus classroom aide) improved over the course of the year, whereas less than half of the students in the control group or the social-skills-only group improved (in terms of disruptive behavior in class).

Kotkin also examined the effects of social skills training and school-based token reinforcement components on response to provocation and frustration in aggressive boys. Repeated measures included direct observation of the boys, participants' role-plays of target skills, and teacher ratings. The data showed that boys receiving social skills training alone were able to perform in role-play but showed little improvement in natural settings. Token reinforcement improved the behavior in boys prior to social skills training, but adding a trained classroom aide resulted in greater improvement. Moreover, the improved behaviors were maintained at follow-up (Kotkin, 1998).

Werts, Zigmond, and Leeper (2001) considered the academic engagement of students with disabilities in general education classrooms. This quasi-experimental study examined the effects of paraeducator proximity to students. The findings showed that close proximity yielded higher levels of academic engagement, while greater paraeducator distance promoted social interaction.

Others have noted positive student attitudes toward learning and school. For example, McIntyre (1999) found that 9th- and 10th-grade students had improved attitudes and self-concept regarding math because of readily available assistance from a teaching assistant. The inference that may be drawn from these studies is that improved student achievement is related to the presence of paraeducators because improved student behavior, positive attitudes toward subjects, and better self-concept are all known to be highly correlated with student achievement. Although none of the research on the impact of paraeducators on attitudinal factors, or on social or academic engagement factors compared the data to student-achievement data, one might extrapolate that increased student engagement and independence, as well as a higher adult-to-student ratio, would be

associated with increased academic achievement, given the well-established findings about the positive effects of student engagement (Marzano, 2003) and small class size (Glass & Smith, 1979; Shavelson & Towne, 2002). Yet, such extrapolation remains unconfirmed by empirical information.

Effects on Teachers and the School Community

Harrington and Mitchelson (1986,1987) interviewed teachers who worked with paraeducators. The teachers reported improved morale, reduced stress, and improved school-home-community relations. French and Chopra (1999), from interviews with parents, similarly reported improved school-home relations. The parents reported that paraeducators served as connectors between the schools and themselves and that the most frequent contact with the school came through the paraeducator. Parents spoke of many ways in which paraeducators connected their children to typical children and created connections between their children and teachers.

Other reports describe paraeducators as a vital link to parents and the community, noting that they often live in low-income neighborhoods near their schools and are more familiar with their schools' diverse enrollments (Chopra ((2002); Jennings, 2000). Various anecdotal reports tell of paraeducators who assisted families in numerous ways. For example, in one case a family ran out of food stamps and had not eaten and the paraeducator helped the family access a local food bank (Sack, 1999).

Effects on Student Achievement

At the conclusion of a study of school district policies regarding the employment of paraeducators, Policy Studies Associates (1997) reported to the U. S. Department of Education with recommendations that districts should tend to programmatic aspects of their schools before deciding to invest in hiring or training paraprofessionals. Although this report did not recommend against employing paraeducators, the authors' intent clearly was to focus on instruction that engages students in hard work and challenging curriculum. This perspective puts the role of paraeducators in a defined subordinate role to the program and asserts that measuring the effectiveness of paraeducators is of merit only if the program in which they work is sound.

To date, only one of the reported attempts at measuring the effect of paraeducators on student achievement has considered the curricular and instructional program. Sam Stringfield led a team of researchers in a complex study of paraeducator effectiveness funded by the American Federation of Teachers. Schools were selected for participation only if they demonstrated high student achievement by students living in poverty and employed paraeducators in instructional roles. Therefore, the correlation between student achievement and

paraeducator employment was the antecedent of the study. The research team found that effective programs generally included whole-school reforms and professional development involving the entire staff. The paraeducators held clear task assignments, both academic and managerial, and provided intensive instruction to children under the close direction of classroom teachers (AFT, 1999).

In Scotland, a nationwide evaluation of a major initiative to put classroom assistants in every elementary classroom in the country showed that, at the end of two academic years, student achievement scores had been raised and either exceeded or met targeted levels. Researchers at the Scottish Council for Research in Education noted that job descriptions varied by district, and that supervision and training also varied considerably. They concluded that classroom assistants had an indirect impact on student achievement, although they were unable to define the precise contribution the classroom assistants made to improving student achievement because multiple curricular initiatives had been implemented simultaneously (Wilson, Schapp, & Davidson, 2002).

Like the Scottish study and in contrast to the AFT study, the Tennessee STAR study attempted to answer the question of paraeducator effectiveness relative to student achievement but ignored the curricular and instructional program factors (Boyd-Zaharias & Pate-Bain, 1998). Moreover, Boyd-Zaharias and Pate-Bain (1998) reported that teachers provided no direction, that untrained paraeducators did whatever they wanted to do or only routine paperwork, and, significantly, that many teachers resented the paraeducator's presence because the paraeducators employed during the study were political hires in an economy where jobs were precious.

Those authors also noted that the teacher-with-aide and teacher-alone groups were confounded by students moving between those classes during the experiment. In spite of flaws in the Tennessee study, groups with aides consistently performed slightly better than groups with teachers alone, but the differences were too small to show statistical significance (Institute for Educational Inquiry, 2000). Further analysis of the Tennessee data showed a small improvement in reading scores for students who attended a class with a teacher aide for 2 or 3 years (Gerber, Finn, Achilles, & Boyd-Zaharias, 2001, p. 123). Gerber et al. admitted that other benefits that might be associated with employing paraeducators were not considered in the study.

RECOMMENDATIONS ON IMPROVING PARAEDUCATOR EFFECTIVENESS

The following are three recommendations for improving the effectiveness of paraeducators in schools.

Recommendation 1:

Clearly Define the Role and the Responsibilities

Over the years, many authors have called for examining and carefully defining paraeducator roles and clearly delineating duties in every aspect of special education (e.g. Coufal, Steckelberg, & Vasa, 1991; Courson & Heward, 1988; Duhaney, 1999; Policy Studies Associates, 1997). Moreover, the findings of certain studies (e.g., AFT, 1999) suggest that, in schools that succeed with disadvantaged students, paraeducators have clearly defined roles.

Specific recommendations about appropriate and inappropriate tasks and duties for paraeducators have come from all sides (Boomer, 1980; Courson & Heward, 1988; Escudero & Sears, 1982; French, 2003b; Hennike & Taylor, 1973; Lamont & Hill, 1991; Pickett, 1999). For example, Courson & Heward (1988) reported that paraeducators often are used for one-on-one assistance but would be better used with small groups directing activities involving high rates of active student response.

French (2003b) limited the role of the paraeducator by specifying what paraeducators should not do (e.g., should not be fully responsible for any student, should not plan programs or lessons, should not assess students' progress or achievement, or should not maintain responsibility for consulting with general education teachers). Pickett (1999) assembled a group of experts to compile a document clearly delineating the scope of responsibility, roles, and duties of teachers and paraeducators.

Recommendation 2:

Assure Appropriate Supervision by Trained Teachers

The literature shows substantial agreement that teachers should assign specific tasks, deliver on-the-job training, hold planning meetings, design instructional plans, and direct and monitor the day-to-day activities of paraprofessionals (French, 1997, 1998, 1999, 2003a, 2003b; French & Pickett, 1997; NJCLD, 1999). In fact, the NJCLD posited that teachers who "fail to provide appropriate supervision of paraprofessionals may be in violation of their profession's code of ethics" (p. 25).

In various opinion-based articles, authors have made recommendations to teachers about supervisory practices. For example, Alexander (1987) recommended that teachers provide orientation to new paraprofessionals, provide on-the-job training, hold meetings, and plan for paraprofessionals. Boomer (1980) recommended that teachers do the planning, scheduling, directing, and delegating of tasks to paraprofessionals. Heller (1997) discussed the ethics of hiring practices, evaluating school personnel, and delineating roles. Pickett, Vasa, and Steckelberg (1993) recommended plan-

ning, scheduling, and delegating practices. French (1999b, 2000a, 2003a, 2003b) recommended that special education teachers maintain responsibility for assessing students, planning for instruction that addresses IEP goals, prescribing the learning environment, consulting with general education teachers, and directing the work of paraeducators. Downing, Ryndak, and Clark (2000) concluded that "teachers must be the educational leader in the classroom, providing guidance to others who support them" (p.180).

In spite of widespread agreement that the supervisory role is appropriate, preservice teacher training regarding the supervision of paraprofessionals is conspicuously absent in special education preparation programs (Hansen, 1996; Lindeman & Beegle, 1988; May & Marozas, 1986; Morgan, 1997; Salzberg & Morgan, 1995; Whorton & Reid, 1978). One teacher said:

There really isn't any training out there. You know, when you go through teacher training...nobody even approaches the subject, and then you're put in a situation and you tend to learn it by doing, and things hopefully get better after a year or so...

This indicates that the only way to learn to supervise paraeducators is by trial and error (French, 1998, p. 365). So, if teachers are expected to supervise and hold de facto supervisory responsibilities, what do they do? How do they manage without supervisory training?

French (2001) reported a dearth of empirical literature on teachers' supervisory practices. One unpublished research report (Adams, 1991) used frequency of meetings as the single indicator of quality of supervision and concluded that reported frequency of meetings was high among the population she surveyed. Another unpublished research report (Morgan, 1997) indicated that formal education and inservice training predicted self-perceived supervisory skill, but other factors, such as length of teaching experience, did not. Harrington and Mitchelson (1986, 1987) reported that teachers did not want to supervise even though they valued the presence of paraeducators. French (1998) concluded that teachers were reluctant to supervise because they failed to provide written plans or to hold sit-down meetings, yet were dissatisfied with the communications between the paraprofessionals and themselves. The teachers reported that they had scheduled no time to plan or meet and that they preferred paraprofessionals who were able to work without direction or supervision. Reluctance to supervise paraeducators was corroborated by the Tennessee study on student achievement and class size (Boyd-Zaharias & Pate-Bain, 1998).

Regardless of their reluctance to supervise, about 75% of special education teachers actually supervised paraeducators (French, 2001). In spite of the professional maturity and

high education level of the respondents in that study, the primary source of their knowledge about supervising paraprofessionals was "real life experience" rather than any type of formal preparation. About 30% of teachers reported that they never met with paraeducators, possibly indicating that their intuitive views of supervision did not include face-to-face contact, particularly because time constraints made it difficult.

Yet, face-to-face contact seems basic to supervision. Major references to teacher supervision from 1970 to 1980 (e.g., Cogan, 1973; Flanders, 1970; Goldhammer, Anderson, & Krajewski, 1980) referred to the first step of supervision as a face-to-face meeting. The literature on supervision of the 1990s featured collegial approaches and was predicated on face-to-face contact (e.g., Acheson & Gall, 1997; Goldhammer, Anderson, & Krajewski, 1993; Glickman, Gordon, & Ross-Gordon, 1998). If the supervision and professional development of teachers requires face-to-face meetings, reasoned speculation would suggest that the supervision of paraeducators requires no less. Although some supervisory functions (e.g., planning, delegation, communication) occur asynchronously (French, 1997; 2003a, 2003b), certain tasks, such as providing on-the-job-training and coaching new skills, can be done only face-to-face. Likewise, engaging in problem-solving processes and managing or resolving conflicts are done most appropriately face-to-face (French, 1997).

One explanation for the scarcity of meetings is the lack of scheduled time to meet. Teachers have reported that there is little time for meetings because paraeducators are hourly employees assigned to work the same hours that students attend (French, 1998; French & Chopra, 1999). Thus, no before- or after-school times are available. Apparently some teachers find ways to work around these limitations but others do not. Preparation in paraeducator supervision should include information about how to establish and maintain a schedule that includes meeting time during the paraeducator's workday (French, 2001).

French (2001) reported that the majority of respondents indicated that no one planned for the paraeducator. Among the few who did plan for the paraeducator, most transmitted their plans orally. Of some concern is that paraeducators who traditionally have little or no training may be working without direction or with hastily constructed or easily misconstrued oral directions. This gives rise to a serious question about how teachers are able to assure the delivery of special education services required in the IEP.

A related concern arises about the content of plans, whether provided orally or in writing. These findings show that less than half (43%) of the teachers regularly included IEP goals in their plans and even fewer (42.7%) consistently included specifications for how paraeducators were to doc-

ument student progress. Only slightly more than half (51.5%) included information about the purpose or rationale of the lesson or activity. Instructing the paraprofessional about the intended outcomes of the lesson or activity seems essential to program integrity. In fact, Ann Haggert (AGH Associates, 1993) claimed, "In an inclusive environment, the paraprofessionals have a large responsibility in making sure that the goals and objectives outlined in a child's IEP are realized" (p.1). One might ask how a paraeducator would be able to make sure that goals and objectives are realized without knowledge of the goals, objectives, or purposes of the lesson.

Haggert also raised a concern about how teachers remain accountable for educational outcomes of students. If there is no written plan for services, no specification of outcomes to be addressed, no documentation that services were delivered, and no documentation of student performance, how can teachers possibly assure the academic welfare of students? How would the district defend teachers' practice in court if it were to be contested?

Finally, a question arises about how decisions are made for providing Extended School Year (ESY) services. If a paraeducator provides instruction to a student on an ongoing basis without information about goals to be addressed and has no system for documenting student performance, what data do teachers use to show regression / recoupment of skills when ESY decisions are made? Considering that few paraeducators attend IEP meetings (French & Chopra, 1999), the question also arises of how the teacher is able to report on student progress for students who receive the majority of their services from paraeducators who do not document student progress or meet face-to-face with the teacher. Because the IEP goals are mandated to guide the instructional program, it seems that every service provider should know what they are and that teachers should be accountable for addressing them.

Since its inception, IDEA has specified that special education students should receive services designated on the IEP from persons with the highest qualifications. Yet, research findings documented that paraeducators were providing services with no written plans, and few formal sit-down contact meetings with the professionals who hold the highest qualifications and who have ultimate responsibility for the outcomes of the IEP (French, 1998, 2001). These findings are consistent with the work of others (Marks, Schrader, & Levine, 1999) who found that paraeducators perceived that the responsibility for special education students was entirely in their hands, including planning lessons without the supervision of a teacher.

By contrast, in an intensive study of three special education programs serving children with significant needs, Chopra (2002) found that when paraeducators were appropriately

directed, and trained to perform their responsibilities, classroom teachers perceived they had adequate assistance to include students with disabilities, parents were satisfied with the extent to which their children were included in general education classes, and the special education teacher had time to consult with the classroom teacher regarding curricular adaptations. In cases where supervision was lacking, parents and classroom teachers were less satisfied.

Recommendation 3: Provide Appropriate Training

Program integrity and quality are based on the quality and preparation of those who deliver services to students. Twenty years ago, Blalock (1984) reported that higher levels of paraeducator education and training were associated with higher levels of paraeducator performance. Since then, there have been repeated calls for paraeducator training (DeFur & Taymans, 1995; Frank, Keith & Steil, 1988; French & Cabell, 1993; Jones & Bender, 1993). Yet, paraeducators remain relatively poorly prepared to teach and support students (Downing, Ryndak & Clark, 2000; Giangreco, Edelman & Broer, 2003).

Authors who call for training also speak of the need for increased hiring standards. As a rule, however, hiring standards are low. Paraeducators continue to be hired for the job with no preparation. The majority of paraeducators indicate that they had no prior training or orientation to the job (Downing, Ryndak & Clark, 2000). For example, "They were desperate for someone at the time, so I had an interview. I received an explanation of the philosophy, [but then] it was a fly-by-the-seat-of-your-pants type of deal" (p. 177). Another paraeducator explained, "I was just told to go in there—that he's in there and he can't read or write. I should just work with him and get him to be a part of the class as much as possible" (p. 177). A third paraeducator corroborated the lack of training: "I had never done this kind of work before. So I came in the first day, was handed a schedule, and was told to go to the first class. That basically was my training. It was trial by fire" (p. 177). Three years later, French, Chopra, Beckman, et al. (2003) reported similar comments from paraeducators in California.

At the same time, substantial information is available about the training needs of paraeducators who work with students who have disabilities (DeFur & Taymans, 1995; Evans & Evans, 1986; French & Cabell, 1993; Hansen, 1996; Killoran, Templeton, Peters & Udell, 2001; Long, Emery & Reeham, 1994; Mueller, 1997; Parsons & Reid, 1999; Passaro, Pickett, Latham & HongBo, 1991; Pearman, Suhr & Gibson, 1993; Riggs, 2001). Moreover, substantial agreement about the knowledge and skills required for the job

offers guidance for the development of content for training programs. Training needs that have been documented in multiple states by multiple researchers include:

- knowledge of specific disabilities (autism is most frequently mentioned)
- understanding and following team plans for instruction,
- behavior management; supervision of large groups of children
- communicating with children
- social-emotional, physical, and communication development in children
- learning styles, characteristics of human learning
- instructional techniques for students with varying abilities
- instructional techniques for students who are learning to speak English
- rationale and current issues in inclusion
- assistive technology
- promoting social acceptance of children with disabilities
- individual and small-group instruction
- working with adults (communicating and conflict management)
- special education process and laws
- specific information about targeted students

Knowing the appropriate content of training, however, is a far cry from knowing how to deliver training. The gap between administrators' interest in training paraeducators and their wherewithal to deliver is, unfortunately, a "Grand Canyon" (Chopra, 2004). Planning a training program for paraeducators involves seven major decisions.

1. *Select curricula.* Although several curricula are currently available, administrators may find it difficult and precious little has been written about the criteria to employ in making this decision. Without criteria on which to base such a decision, selecting a curriculum that meets the needs of the district may be a random act. Some curricula are promoted through colorful advertising materials and, in the absence of criteria, "flash" may win out over substance. French (2003a) recommends the following criteria for the consideration and comparison of curricula for paraeducator training.

- *Need.* Match the knowledge, concepts, and skills that paraeducators need in a specific assignment to the content of the curricula. At about the same time that the No Child Left Behind Act was passed in 2002, many community colleges were designing 2-year programs intended to articulate with teacher preparation programs in 4-year colleges and universities. In many

cases these programs are advertised as paraeducator preparation programs, assuming that the paraeducator needs the same basic preparation as teachers do. In addition, commercial enterprises have responded quickly to the NCLB training requirement by creating programs that may or may not be based on research regarding paraeducator needs. The wise consumer will study the content of the program to assure a good match.

- *Consistency.* Match the philosophy and the mission of the school or program. A program designed for inclusion might be less useful in a separate school for students with disabilities. Or a curriculum designed to be universal might fail to impart the values and concepts essential to the program. Another consideration is the context in which paraeducators work, and the instructional and behavior support practices used by those around them. We know that beginning teachers are influenced strongly by the culture of the school and that they often shift away from the research-based practices taught in teacher education programs and accept the less-effective practices used in the school where they are first employed (Goodlad, 1990). Generalizing to paraeducators, we can assume that those who have less training and who, by definition, are supposed to follow the lead of the teachers in the school also use the kinds of practices they see in context. Where there is disjuncture between common practice and what paraeducators have learned to be best practice in their training program, they may be compelled to follow the teacher's lead.
- *Integrity.* Check the accuracy of the material and honest portrayal of issues such as inclusion, health and safety issues, and roles of paraeducators. Consider the breadth of the materials and whether it provides multiple points of view.
- *Comprehensiveness.* Note the amount of instructional time, amount of material, and number of activities related to a specific skill or concept. More depth and more opportunity to interact with the content signals greater likelihood of skill development. Less coverage may mean that paraeducators get superficial knowledge but little skill. Breadth of the program is also important. Programs that fail to cover the array of topics that paraeducators need to perform their duties will fall short of expectations.
- *Role legitimacy.* Determine that the coverage of concepts and skills really match the roles and responsibilities as defined in district policy. For example, a curriculum that teaches paraeducators to observe teachers and give them feedback about their performance may be inconsistent with the district's role

definition.

- *Practicality.* Notice whether the curriculum or the program design has built-in immediate applicability of the skills or concepts. Knowledge and skills that are taught but not of immediate value tend to be forgotten or never developed.
- *Instructional quality.* Look for a curriculum that has specific goals. Look for attractive instructional materials including handouts or materials that paraeducators can keep on hand to guide their practice of new skills. Consider how the trainer will use the instructional materials and assure that the materials are trainer-friendly.
- *Accountability.* Check to see that the curriculum specifies competencies gained by paraeducators and how they are measured. Look for a tracking or monitoring system and for capstone or field experiences that allow for demonstration of all the knowledge and skills learned in the program.
- *Cost.* Carefully examine the cost in terms of time expenditure, money, human resources, or knowledge necessary to use or maintain the program. Programs that seem to be simple to use, or easy to simply hand to a paraeducator, or do-it-yourself models that are attractive initially may not achieve the desired effects. Thus, the cost of the program may seem to be reasonable, but without the intended effects the program could be a waste of money. Or if curricula in the public domain seem attractive but the materials are not trainer-ready or are out-of-date, the costs in terms of trainer time could be excessive.

2. *Assure that training will count toward a degree* if the paraeducator pursues teacher preparation or a college degree. When provided as inservice training, a program may impart important knowledge and skills but fall short of contributing to a degree program. When the No Child Left Behind requirements went into effect in 2002, many districts were shocked to find out that their prior efforts to train paraeducators had not helped them comply with the law. Where training efforts failed to carry college credits, paraeducators were unable to document their knowledge and districts were unable to retroactively verify the qualifications of valued employees. As curriculum selection takes place, districts may want to work with local colleges to establish a credit-bearing program that leads to a degree (Platt, 2004; Sandoval-Lucero, 2004).

3. *Determine when to train paraeducators.* On one hand, if the services of a paraeducator are listed in the IEP, training sessions held during the school day means that services are denied during that time. Or it means that a substitute

with even less preparation, experience, or skill is assigned to the student, a questionable solution at best. On the other hand, providing advance training to a substitute pool before training the person in the permanent position is likely to affect morale adversely.

Providing required training outside of school time means that paraeducators must be compensated for attending, which requires a substantial budget. It is also problematic because many paraeducators hold second jobs (French & Chopra, 1999). Offering credit for optional classes that are provided after school hours, weekends, or summers is an attractive alternative because it does not necessitate paying wages to those who attend. The cost of credit, however, may be beyond the limited means of most paraeducators and financial assistance may be necessary. Pell grants, student loans, and grant funds offered by the Office of Special Education programs may be made available to degree-seeking paraeducators (Chopra, 2004; Haselkorn & Fideler, 1996; White, in press).

4. *Determine who will conduct the training.* This is another difficult aspect of designing a training program. If a college program is selected, one problem is solved. Colleges hire faculty to teach classes and pay the instructors using the tuition money generated. But some assurance must be given that the instructors will be of satisfactory quality, and districts might want to negotiate some rights to stipulate what instructors are employed. If an inservice program is selected, the question is whether to hire outside consultants to deliver training or to prepare an in-house cadre of trainers. Either way, trainer compensation must be budgeted. Advantages to having a cadre of in-house trainers include controlling the quality of the instruction, assuring that instruction matches district policies and practices, updating and changing training according to changing needs, and controlling the timing, frequency and location of classes (Chopra, 2004).

5. *Determine how the district will compensate employees who hold higher skill levels,* thereby retaining them in their jobs. A well trained paraeducator is worth his or her weight in gold. Yet, creating compensation systems that are reasonable and fair is not easy. A good compensation package meets the following standards (Tillery, Werts, Roark & Harris, 2003):

- Increased pay level and responsibility for highly skilled paraeducators who are pursuing teaching credentials as they achieve specified steppingstones toward completing the degree or licensure program.
- Increased pay rates for paraeducators with the highest levels of demonstrated skills and, therefore, the most adaptability. This standard is based on the district need

to staff programs with sufficient numbers of highly qualified personnel. Employees with multiple areas of skill may be moved to other programs or locations as students move and staffing needs change.

- Higher pay levels for paraeducators who work with students having the most significant learning needs. This standard addresses the difference in the types of tasks required of a paraeducator working in programs with children who are learning to use sign language, or who require specific teaching and learning techniques to access knowledge, or who require assistance with invasive procedures.
- Higher starting wages and hiring preference for paraeducators who have preservice preparation and demonstrated skills. Eventually, school districts should be able to find a suitable applicant pool among those who have completed preparation programs. Until then, giving wage and hiring preference to those who are already trained encourages effective college programs and provides an incentive to those who might intend to make paraeducation a career position.
- Acknowledge and honor paraeducators whose performance excels. Paraeducators report that acknowledgment is meaningful in their willingness to stay in their positions despite wages that are lower than desired.

6. *Assure that training yields the desired effects.* The staff development literature of the last 20 years indicated the effects of systematic staff development on the behaviors and behavioral changes in teaching and teachers. Long ago, Joyce and Showers (1980) established that more than a single workshop session or one-shot training is needed to get teachers to apply skills to the classroom. They demonstrated that additional coaching and feedback were needed to create behavior changes in teachers. Staff developers who were familiar with this and related subsequent studies (Joyce & Showers, 1988) began incorporating peer-coaching programs into serious efforts to improve teachers' teaching behaviors, and thus outcomes for students, often adhering to the research-based tenets established by Joyce and Showers (1980; 1988).

Costa and Garmston (1986) extended Joyce and Showers' (1988) work by demonstrating the importance of cognitive coaching to the ongoing development of teachers and teaching. Thus, they connected two fields of study—staff development and supervision (Garmston, 1987). Other theorists, such as Glatthorn (1997), support the interrelationships between staff development, as well as supervision of teachers. Reinoehl and Halle (1994) reported that coaching is important to the application of knowledge and skills by paraeducators. If paraeducators fail to apply the skills they learn in training sessions, the

time and effort spent on curricula, trainers, supervision, and compensation packages will be wasted. Unused knowledge and skills constitute lost experience for students and their outcomes will show it.

7. *Find the money to pay for training.* Budgets are built on values. Where paraeducators are recognized as valued employees with a distinct contribution to make, budgets contain line items for training and rewarding them. Sometimes, however, a single individual recognizes and values paraeducators' contributions but the rest of the system does not yet hold that value. The single believer, then, is faced with convincing the whole system to change. Leadership for systems change in schools has been long studied. Fullan (1990) Sarason (1990), Senge (1990), and others have examined ways by which groups of people in districts and schools incorporate innovative practices and begin to shift how they do business.

Change models tend to agree that change isn't a linear process where one component is implemented before another begins. Change isn't systematic—and may not always be rational. Change has to occur at multiple levels of an organization simultaneously; multiple people and groups must be involved simultaneously. The Concerns Based Adoption Model (CBAM), developed by Hall, Hord and others over a 10-year period, explains how individuals can influence change in a system (Hall & Hord, 2000). The model suggests that people are influenced by those they respect and that people engage with an innovation if others around them, whom they perceive to be like themselves, do. Thus, the effort to incorporate paraeducator training into a district should bring together special education directors, bilingual directors, Title I program directors, and curriculum directors to discuss the common need for paraeducator training, for jointly pursuing funding options, and for strategizing to optimize available funding. If paraeducator training were easy to incorporate into school districts it would have been done long ago.

Some ideas for funding paraeducator training programs are:

- General operating funds.
- Federal special education funds, if the need for training is specified in the IEP.
- Grant funds available through the Office of Special Education and Rehabilitative Services (OSERS) and the Office of Special Education Programs (OSEP).
- Title I of the No Child Left Behind Act—provides funding for staff development and training for teachers and paraeducators.
- Title II of the No Child Left Behind Act—provides funding for staff development and training for the

improvement of all instructional personnel.

- Title III of the No Child Left Behind Act—provides funding for teachers and paraeducators who serve students who are English-language learners.
- State education agencies often have funds available for training purposes. Generally, those funds are accessed through a competitive application process.
- Grant funds from foundations and charitable organizations.

Funding for training programs may come from multiple sources and be pieced together through the cooperation of directors of multiple programs. Where there is shared interest in training, finding small amounts of money in multiple budgets is the answer.

INTERNET RESOURCES

Numerous organizations maintain websites containing valuable information for those who seek to improve practices and policies regarding paraeducators. Here is a start.

- The PAR²A Center at the University of Colorado at Denver is a research and resource center for paraeducator issues, producing new knowledge and pragmatic applications for districts, colleges, and universities. Available products include curriculum materials for paraeducators in special education, bilingual education, literacy programs, and general education. The center has developed a training of trainers' model that employs teachers as trainers for paraeducators: www.paracenter.org
- The National Resource Center for Paraprofessionals (NRC), located at Utah State University, is a resource center for paraeducator issues, and hosts an annual conference for paraeducators and those who train them. Curricular products, information about training needs, roles and responsibilities, and research reports are available on the website www.nrcpara.org.
- The Center for Multilingual, Multicultural Resources, located at the University of Southern California, provides a variety of resources about paraeducators. It is the best single source of information about career ladder programs for paraeducators of Latino heritage: <http://www.cmmr.org>
- The Center on Disability and Community Inclusion at the University of Vermont provides information about planning for the employment of paraeducators in special education and provides numerous resources: www.uvm.edu/cdci/parasupport

REFERENCES

- Acheson, K. A., & Gall, M. D. (1997). *Techniques in the clinical supervision of teachers* (4th ed.). White Plains, NY: Longman.
- Adams, J. (1991). *A study of the paraprofessional / professional supervisory relationship in special education programs in Kansas schools*. Topeka: Report to the Kansas State Board of Education.
- AFT (September, 1999). Saving Title I. *PSRP Reporter*. Washington, DC: American Federation of Teachers.
- AGH Associates, Inc. (1993). The evolution of the paraprofessional role. *News Link*, 1-4.
- Alexander, H. L. (1987). *Developing a working relationship with teachers and paraeducators*. Topeka, KS: Kansas State Department of Education.
- Aragon, L. (2003). *Factors to consider when selecting paraprofessionals for participation in a teacher preparation program*. Unpublished dissertation, University of Colorado, Denver.
- Bennett, T., Deluca, D., & Bruns, D. (1997). Putting inclusion into practice. *Exceptional Children*, 64(1), 115-131.
- Bernal, C. & Aragon, L. (In press). Critical factors affecting success of paraprofessionals in the first two years of career ladder projects in Colorado. *Remedial & Special Education (RASE)*.
- Blalock, V. E. (1984). *Factors influencing the effectiveness of paraprofessionals with disabled populations*. Unpublished doctoral dissertation, University of Texas, Austin.
- Blodgett, E. G., & Miller, J. M. (1996). Speech-language paraprofessionals working in Kentucky Schools. *Journal of Children's Communication Development*, 18(1), 65-79.
- Bond, E. G., Bajus, J., Bornell, D., Dworet, D., Frizzell, R., LaPierre, J., McGuinness, B., Pittaway, J., & Smith, S. (1996). *Position paper on professional standards and competencies for educational assistants*. Ontario: Council for Exceptional Children, Ontario Provincial Federation.
- Boomer, L. W. (1994). The utilization of paraprofessionals in programs for students with autism. *Focus on Autistic Behavior*, 9(2). Austin: Pro-Ed.
- Boomer, L. W. (1980). Special education paraprofessionals: A guide for teachers. *Teaching Exceptional Children*, 12(4), 146-149.
- Boyd-Zaharias, J., & Pate-Bain, H. (1998). *Teacher aides and student learning: Lessons from Project STAR*. Arlington, VA: Educational Research Service.
- Chopra, R. V. (2002). *Parent-paraeducator collaboration in inclusion*. Unpublished dissertation, University of Colorado, Denver.
- Chopra, R. V. (2004). *Comprehensive training opportunities for paraeducators: Final Report*. Evaluation report submitted to OSERS, U. S. Department of Education, Washington, DC.
- Chopra, R. V. & French, N. K. (In press). Paraeducator relationships with parents of students with significant disabilities. *Remedial & Special Education (RASE)*.
- Chopra, R. V., Sandoval-Lucero, E., Aragon, L., Bernal, C., Berg de Balderas, H., & Carroll, D. (In press). The paraprofessional role as connector. *Remedial & Special Education (RASE)*.
- Clewell, B. C., & Villegas, A. M. (2001a). *Ahead of the class: A handbook for preparing new teachers from new sources*. Washington, DC: Urban Institute.
- Clewell, B. C., & Villegas, A. M. (2001b). *Absence unexcused: Ending teacher shortages in high-need areas*. Washington, DC: Urban Institute.
- Cogan, M. (1973). *Clinical supervision*. Boston: Houghton Mifflin.
- Coots, J. J., Bishop, K. D., & Grenot-Scheyer, M. (1998). Supporting elementary-age students with significant disabilities in general education classrooms: Personal perspectives on inclusion. *Education and Training in Mental Retardation and Developmental Disabilities*, 33(4), 317-330.
- Costa, A. L., & Garmston, R. (1986). Cognitive coaching: Supervision for intelligent teaching. *Wingspan*, 3(1), 38-40.

- Coufal, K. L., Steckelberg, A. L., & Vasa, S. F. (1991). Current trends in the training and utilization of paraprofessionals in speech and language programs: A report on an eleven-state survey. *Language, Speech, and Hearing Services in Schools, 22*, 51-59.
- Council for Exceptional Children (CEC). Knowledge and skill base for all beginning special education paraeducators. Available: www.cec.sped.org/ps/paraeducator.doc
- Courson, F. H., & Heward, W. L. (1988). Increasing active student response through the effective use of paraprofessionals. *The Pointer, 33*(1), 27-31.
- Cruickshank, W., & Herring, N. (1957). *Assistants for teachers of exceptional children*. Syracuse, NY: Syracuse University Press.
- DeFur, S. H., & Taymans, J. M. (1995). Competencies needed for transition specialists in vocational rehabilitation, vocational education and special education. *Exceptional Children 62*(1), 38-51.
- Downing, J. E., Ryndak, D. L., & Clark, D. (2000). Paraeducators in inclusive classrooms: Their own perceptions. *Remedial and Special Education, 21*(3), 171-181.
- Duhany, L. M. G. (1999). A content analysis of state education agencies' policies/position statements on inclusion. *Remedial and Special Education, 20*(6), 367-376.
- Epanchin, B. C., & Wooley-Brown, C. (1993). A university-school district collaborative project for preparing paraprofessionals to become special educators. *Teacher Education and Special Education, 16*(2), 110-123.
- Escudero, G. R., & Sears, J. (1982). Teachers' and teacher aides' perceptions of their responsibilities when teaching severely and profoundly handicapped students. *Education and Training of the Mentally Retarded, 17*, 190-195.
- Etscheidt, S. K., & Bartlett, L. (1999). The IDEA amendments: A four-step approach for determining supplementary aids and services. *Exceptional Children, 65*(2), 163-174.
- Evans, S. S., & Evans, W. H. (1986, Winter). Training needs of special education paraprofessionals: Results of a survey conducted by a community college. *New Directions*, pp. 1, 4-6.
- Fisher, D., Sax, C., Rodifer, K., & Pumpian, I. (1999). Teachers' perspectives of curriculum and climate changes. *Journal for a Just and Caring Education, 5*(3), 256-268.
- Flanders, N. A. (1970). *Analyzing teaching behavior*. Reading, MA: Addison-Wesley.
- Frank, A. R., Keith, R. Z., & Steil, D. A. (1988). Training needs of special education paraprofessionals. *Exceptional Children, 55*, 253-258.
- French, N. K. (1993). The relationship of class size to perceived teacher stress. *Journal of Research and Development in Education, 26*(2), 66-73.
- French, N. K. (1997). Management of paraeducators. In A. L. Pickett & K. Gerlach (Eds.), *Working with paraeducators in special education: A team approach* (pp. 91-169). Austin, TX: Pro-Ed.
- French, N. K. (1998). Working together: Resource teachers and paraeducators. *Remedial and Special Education, 19*(6), 357-368.
- French, N. K. (1999a). Paraeducators: Who are they and what do they do? *Teaching Exceptional Children, 32*(1), 65-69.
- French, N. K. (1999b). Paraeducators and teachers: Shifting roles. *Teaching Exceptional Children, 32*(2), 69-73.
- French, N. K. (2000a). Taking time to save time: Delegating to paraeducators. *Teaching Exceptional Children, 32*(3), 79-83.
- French, N. K. (2000b). Preparing teachers to supervise paraeducators: What they need to know. *Association for Persons with Severe Handicaps 1999 Yearbook*, pp. 116-119.
- French, N. K. (2001). Supervising paraprofessionals: A survey of teacher practices. *Journal of Special Education, 35*(1), 41-53.
- French, N. K. (2003a). *Managing paraeducators in your school: How to hire, train, and supervise non-certified staff*. Thousand Oaks, CA: Corwin Press.
- French, N. K. (2003b). Management of paraeducators. In A. L. Pickett and K. Gerlach (Eds.) *Working with paraeducators in special education: A team approach*, 2d ed. (pp. 97-171). Austin, TX: Pro-Ed.
- French, N. K., Bernal, C., & Chopra, R. V. (2002). *A case study of three career ladder participants: Paraeducators who became teachers of English language learners*. Research report submitted to OBELMA, U. S. Department of Education.
- French, N. K., & Cabell, E. A. (1993). Are community college training programs for paraeducators feasible? *Community College Journal of Research and Practice, 17*, 131-140.
- French, N. K., & Chopra, R. V. (1999). Parent perspectives on the role of the paraprofessional in inclusion. *Journal of the Association for Persons with Severe Handicaps, 24*(4), 259-272.
- French, N. K., Chopra, R. V., Beckman, V., Berg de Balderas, H., Stimson, B. J., & Bryant, K. (2003). *Paraeducator duties, training considerations, and career development possibilities*. Research report presented to California School Employees Association and Association of California School Administrators.
- French, N. K., & Pickett, A. L. (1997). Paraprofessionals in Special Education: Issues for Teacher Educators. *Teacher Education and Special Education, 20*(1) 61-73.
- Freschi, D. F. (1999). Guidelines for working with one-to-one aides. *Teaching Exceptional Children, 31*(4), 42-45.
- Friend, M., & Cook, L. (2003). *Interactions: Collaboration skills for school professionals*, 4th ed. Boston: Allyn & Bacon.
- Fryer, G. E. Jr., & Igoe, J. B. (1996). Functions of school nurses and health assistants in U. S. school health programs. *Journal of School Health, 66*(2), 55-58.
- Fullan, M. (1990). Staff development, innovation and institutional development. In B. Joyce (Ed.), *Changing school culture through staff development* (pp. 3-25). Alexandria, VA: Association for Supervision and Curriculum Development.
- Garmston, R. (1987). How administrators support peer coaching. *Educational Leadership, 44*(5), 18-26.
- Gartner, A. (1971). *Paraprofessionals and their performance: A survey of education, health, and social services programs*. New York: Praeger.
- Genzuk, M., & Baca, R. (1998). The paraeducator-to-teacher pipeline. *Education and Urban Society, 31*(1), 73-88.
- Genzuk, M., Lavadenz, M., & Krashen, S. (1994). Paraeducators: A source for remedying the shortage of teachers for limited-English-proficient students. *Journal of Educational Issues of Language Minority Students, 14*, 211-222.
- Gerber, S. B., Finn, J. D., Achilles, C. M., & Boyd-Zaharias, J. (2001). Teacher aides and students' academic achievement. *Educational Evaluation and Policy Analysis, 23*(2), 123-143.
- Gerlach, K. (1994). Strengthening the partnership: Recognizing the paraeducator's role. *Paraphrase, 1*(1), 1-3.
- Giangreco, M. F. (2003). Working with paraprofessionals. *Educational Leadership, 61*(2), 50-53.
- Giangreco, M. F., Edelman, S. W., & Broer, S. M. (2003). Schoolwide planning to improve paraeducator supports. *Exceptional Children, 70*(1), 63-79.
- Giangreco, M. F., Edelman, S. W., Luiselli, T. E., & MacFarland, S. Z. C. (1997). Helping or hovering? Effects of instructional assistant proximity on students with disabilities. *Exceptional Children, 64*, 7-18.
- Glass, G. V., & Smith, M. L. (1979). Meta-analysis of research on class size and achievement. *Educational Evaluation and Policy Analysis, 1*, 2-16.
- Glatthorn, A. A. (1997). *Differentiated supervision* (2d ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (1998). *Supervision of instruction: A developmental approach*. Boston: Allyn & Bacon.
- Goldhammer, R., Anderson, R., & Krajewski, R. (1993). *Clinical supervision: Special methods for the supervision of teachers* (3d ed.). Fort Worth, TX: Harcourt, Brace, Jovanovich.

- Goodlad, J. I. (1990). *Teachers for our nation's schools*. San Francisco: Jossey-Bass.
- Haas, E. M. (1996). Necessity: The mother of invention. A parent's recommendation for the preparation and use of speech-language paraprofessionals in education settings. *Journal of Children's Communication Development*, 18(1), 111-113.
- Hall, G. E., & Hord, S. M. (2000). *Implementing change: Patterns, principles & potholes*. Boston: Allyn & Bacon.
- Hall, L. J., McClannahan, L. E., & Krantz, P. J. (1995). Promoting independence in integrated classrooms by teaching aides to use activity schedules and decreased prompts. *Education and Training in Mental Retardation and Developmental Disabilities*, 30, 208-217.
- Hansen, D. (1996). Use of focus-group needs assessment for planning paraprofessional staff development in Iowa's education settings. *Journal of Children's Communication Development*, 18(1), 1-3.
- Harrington, R. G., & Mitchelson, D. (1986). *A report on special education paraprofessional effectiveness*. Topeka: Kansas State Department of Education.
- Harrington, R. G., & Mitchelson, D. (1987, winter). Special education paraprofessionals: How effective are they? *New Directions*, pp. 3-4.
- Haselkorn, D., & Fidler, E. (1996). *Breaking the class ceiling: Paraeducator pathways to teaching*. Belmont, MA: Recruiting New Teachers.
- Heller, W. (1997). Professional and ethical responsibilities of team members. In A. L. Pickett & K. Gerlach (Eds.), *Supervising paraeducators in school settings: A team approach* (pp. 207-234). Austin, TX: Pro-Ed.
- Hennike, J. M., & Taylor, D. E. (1973). Teachers' perceptions of teacher aide roles and responsibilities. *Education and training of the Mentally Retarded*, 8, 15-19.
- Hill, C. (2003). The role of instructional assistants in regular classrooms: Are they influencing inclusive practices? *Alberta Journal of Education Research*, 59(1), 98-100.
- Innocenti, M. S., & Roberts, R. N. (1995, May). *Using paraprofessionals to provide early intervention services: lessons learned and useful directions*. Paper presented at Contemporary Trends in Special Education Conference, Pedagogical University, Crakow, Poland.
- Institute for Educational Inquiry. (2000). Teachers' aides, class size, and student learning. *News Comments and Tips*, 1(2), Author.
- Itard, J. M. G. (1801/1962). *The wild boy of Aveyron*. New York: Appleton-Century-Crofts.
- Jennings, J. F. (2000). Title I: Its legislative history and its promise. *Phi Delta Kappan*, 81(7), 516-522.
- Jones, K. H., & Bender, W. N. (1993). Utilization of paraprofessionals in special education: A review of the literature. *Remedial and Special Education*, 14(1), 7-14.
- Joyce, B., & Showers, B. (1980). Improving inservice training: The messages of research. *Educational Leadership*, 37, 379-385.
- Joyce, B., & Showers, B. (1988). *Student achievement through staff development*. New York: Longman.
- Katsiyannis, A., Hodge, J., & Lanford, A. (2000). Paraeducators: Legal and practice considerations. *Remedial and Special Education*, 21(5), 297-304.
- Katsiyannis, A., & Yell, M. L. (2000). The Supreme Court and school health services: Cedar Rapids v. Garret F. *Exceptional Children*, 66(3), 317-326.
- Kaufman, R., & Staley, W. (1999). Southeast Asian teacher licensure program: From paraeducator to professional. In K. Murray (Ed.), *7th annual CSPD conference on leadership and change monograph* (pp. 77-80). Arlington, VA: Office of Special Education Programs and National Association of State Directors of Special Education.
- Killoran, J., Templeton, T. P., Peters, J., & Udell, T. (2001). Identifying paraprofessional competencies for early intervention and early childhood special education. *Teaching Exceptional Children*, 34(1), 68-73.
- Kotkin, R. (1998). The Irvine paraprofessional program: Promising practice for serving students with ADHD. *Journal of Learning Disabilities*, 31(6), 556-564.
- Lamont, L. L., & Hill, J. L. (1991). Roles and responsibilities of paraprofessionals in the regular elementary classroom. *British Columbia Journal of Special Education*, 15(1), 1-24.
- LeTendre, M. J. (1999). Paraprofessionals: A resource for tomorrow's teachers. Retrieved January 22, 1999 from <http://www.ed.gov/compen-satoryeducationprograms>. Washington, DC: U.S. Department of Education.
- Lindeman, D. P., & Beegle, G. B. (1988). Preservice teacher training and use of the classroom paraprofessional: A national survey. *Teacher Education and Special Education* 11, 184-186.
- Long, C. A., Emery, M., & Reeham, S. P. (1994, April). *Training special education paraprofessionals: A comparison of teachers' and paraprofessionals' concerns*. Paper presented at 13th Annual Conference on the Training and Employment of the Paraprofessional Workforce in Education, Rehabilitation and Related Fields, Albuquerque, NM.
- Longhurst, T. M. (1997). Team roles in therapy services. In A. L. Pickett & K. Gerlach (Eds.), *Supervising paraeducators in school settings: A team approach* (pp. 55-90). Austin, TX: Pro-Ed.
- Lyons, J. (2000). Training and supporting assistant educational psychologists. *Educational Psychology in Practice*, 15(4), 272-277.
- Marbel, C. S. (1996). From the "velcro effect" to wings of flight. *New Directions*, 17(2), 1-2.
- Marks, S. U., Schrader, C., & Levine, M. (1999). Paraeducator experiences in inclusive settings: Helping, hovering, or holding their own? *Exceptional Children*, 65(3), 315-328.
- Marzano, R. J. (2003). *Classroom management that works: Research based strategies for every teacher*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Mattson, B., & Beckstrom, S. (1999). Coordinating Title I Schoolwide Programs with 1997 Amendments to the Individuals with Disabilities Education Act (IDEA '97). In K. Murray (Ed.), *7th Annual CSPD conference on leadership and change monograph* (pp. 143-148). Arlington, VA: Office of Special Education Programs and National Association of State Directors of Special Education.
- May, D. C., & Marozas, D. S. (1981). The role of the paraprofessionals in educational programs for the severely handicapped. *Education and Training of the Mentally Retarded*, 16, 228-231.
- May, D. C. & Marozas, D. S. (1986). Working with paraprofessionals: Are teachers of persons with severe handicapping conditions being prepared for this responsibility? *DPH Journal*, 9, 22-26.
- McIntyre, N. D. (1999). *It does make a difference: Teacher aide support for secondary school students*. A project presented in partial fulfillment of the requirements for the degree of Master of Education (Special Education) at Massey University, Albany, New Zealand.
- Miller, J. M. (1999). Support personnel for speech-language pathology in the schools: The Kentucky model. In K. Murray (Ed.), *7th Annual CSPD Conference on Leadership and Change Monograph* (pp. 145-150). Arlington, VA: Office of Special Education Programs and National Association of State Directors of Special Education.
- Miramontes, O. B., (1990). Organizing for effective paraprofessional services in special education: A multilingual / multiethnic service team model. *Remedial and Special education*, 12(1), 29-36.
- Morgan, B. (1997). *The S___ word: What teachers consider important in the supervision of paraeducators*. Paper presented at 16th Annual Conference on the Training and Employment of the Paraprofessional Workforce in Education, Los Angeles.
- Mueller, P. H. (1997, April). The Vermont paraeducator survey. *Paraeducator Newsletter*, pp. 1-6.
- Mueller, P. H., & Murphy, F. V. (2001). Determining when a student requires paraeducator support. *Teaching Exceptional Children*, 33(6), 22-27.
- National Association of State Directors of Special Education (1997).

FOCUS on EXCEPTIONAL children

- Overview of the professional development requirements: 1997 IDEA Amendments. Washington, DC: Author.
- National Center for Education Statistics. (2000, June). *Digest of education statistics and statistics in brief: Public school student, staff, and graduate counts by state, school years 1998-99* (NCES Publication 2000-330). Washington, DC: Author.
- National Joint Committee on Learning Disabilities (NJCLD). (1999). Learning disabilities: Use of paraprofessionals. *Learning Disability Quarterly*, 22, 23-30.
- Paoni, M. F., Wise, S. P., Marshall, M., & Kelly, R. (1996). Classroom aide-teacher relationships. *NASP Communiqué*, p. 22.
- Parsons, M. B., & Reid, D. H. (1999). Training basic teaching skills to paraeducators of students with severe disabilities: A one-day program. *Teaching Exceptional Children*, 31(4), 48-54.
- Passaro, P. D., Pickett, A. L., Latham, G., & HongBo, W. (1991). *The training and support needs of paraprofessionals in rural special education settings*. Unpublished report. Mountain Plains Regional Resource Center, Utah State University, Logan.
- Pearman, E. L., Suhr, D., & Gibson, F. (1993). *Colorado system of personnel development needs assessment: Paraprofessionals*. Denver: Colorado Department of Education.
- Pickett, A. L. (1986). *Paraprofessionals in special education: The state of the art-1986*. New York: National Resource Center for Paraprofessionals in Special Education, New Careers Training Laboratory, Center for Advanced Study in Education, City University of New York. (ERIC No. ED 276 209)
- Pickett, A. L. (1996). *A state of the art report on paraeducators in education and related services*. New York: The National Resource Center for paraprofessionals in education and related services, Center for Advanced Study in Education, The Graduate School and University Center, City University of New York.
- Pickett, A. L. (1999). *Strengthening and supporting teacher/provider-paraeducator teams: Guidelines for paraeducator roles, supervision, and preparation*. New York: NRC for paraprofessionals in Education and Related Services, Center for Advanced Study in Education, Graduate Center, City University of New York.
- Pickett, A. L., & Gerlach, K. (1997). *Supervising paraeducators in school settings: A team approach*. Austin, TX: Pro-Ed.
- Pickett, A. L., & Gerlach, K. (2003). *Supervising paraeducators in school settings: A team approach*, 2d ed. Austin, TX: Pro-Ed.
- Pickett, A. L., Vasa, S. F., & Steckelberg, A. L. (1993). *Using paraeducators effectively in the classroom*. Fastback 358. Bloomington, IN: Phi Delta Kappa Educational Foundation.
- Platt, J. (2004, Feb. 8). *Solutions to barrier 5: Fundamental design of teacher preparation programs. Paper presented in the symposium "Recruiting Paraeducators into Teaching Careers: Barriers & Solutions."* Paper presented at American Association of Colleges of Teacher Education, Chicago.
- Policy Studies Associates. (1997). *Roles for education paraprofessionals in effective schools: An idea book*. Washington, DC: U. S. Department of Education.
- Priddy, D. (1996). A tool for special education recruitment. *CEC Today*, 2(10), 12.
- Radaszewski-Byrne, M. (1996). Issues in the development of guidelines for the preparation and use of speech-language paraprofessionals and their SL supervisors working in education settings. *Journal of Children's Communication Development*, 18(1), 1-3.
- Rapport, M. J. (1996). Legal guidelines for the delivery of special health care services in school. *Exceptional Children*, 62, 537-549.
- Recruiting New Teachers Inc., (2000). *A guide to developing paraeducator-to-teacher programs*. Belmont, MA: Recruiting New Teachers Inc. Retrieved from www.rnt.org/publications/toolkit2.pdf
- Reinoehl, R. B., & Halle, J. W. (1994). Increasing the assessment probe performance of teacher aides through written prompts. *Journal of the Association for Persons with Severe Handicaps*, 19(1), 32-42.
- Riggs, C. G. (2001). Ask the paraprofessionals: What are your training needs? *Teaching Exceptional Children*, 33(3), 78-83.
- Sack, J. L. (1999). Debate turns on role of Title I aides. *Education Week on the Web*, 19(14), 1, 26-27.
- Salzberg, C. L., & Morgan, J. (1995). Preparing teachers to work with paraeducators. *Teacher Education and Special Education*, 18(1), 49-55.
- Sandoval-Lucero, E. (2004, Feb. 8). *Solutions to academic and admissions barriers: Fundamental design of teacher preparation programs*. Paper presented at symposium "Recruiting Paraeducators into Teaching Careers: Barriers & Solutions," at American Association of Colleges of Teacher Education, Chicago.
- Sarason, S. (1990). *The predictable failure of educational reform: Can we change course before it's too late?* San Francisco: Jossey-Bass.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. New York: Doubleday.
- Shavelson, R. J., & Towne, L. (2002). *Scientific research in education*. Washington, DC: National Academy Press.
- Smith, C. (2003). *Focus on an untapped classroom resource: Helping paraprofessionals become teachers*. Atlanta: Southern Regional Education Board (SREB).
- Smith, M. L., & Glass G. V. (1980). Meta-analysis of research on class size and its relationship to attitudes and instruction. *American Educational Research Journal*, 17, 419-433
- Storey, K., Smith, D. J., & Strain, P. S. (1993). Use of classroom assistants and peer-mediated intervention to increase integration in preschool settings. *Exceptionality*, 4(1), 1-16.
- Striffler, N. (1993). *Current trends in the use of paraprofessionals in early intervention and preschool services*. Chapel Hill, NC: National Early Childhood Technical Assistance System. (NECTAS)
- Tillery, C. Y., Werts, M. G., Roark, R., & Harris, S. (2003). Perceptions of paraeducators on job retention. *Teacher Education and Special Education*, 26(2), 118-127.
- Villa, R. A., & Thousand, J. S. Making inclusive education work. *Educational Leadership*, 61(2), 19-23.
- Werts, M. G., Zigmond, N., & Leeper, D.C. (2001). Paraprofessional proximity and academic engagement: Students with disabilities in primary aged classrooms. *Education and Training in Mental Retardation and Developmental Disabilities*, 36(4), 424-440.
- White, R. (1995, November). *Showcase: Teacher education program that recruit paraeducators*. Paper presented at annual meeting of Teacher Education Division, Council for Exceptional Children, Honolulu.
- White, R. (In press). The recruitment of paraeducators into the special education profession: A review of progress, select evaluation outcomes, and new initiatives. *Remedial & Special Education (RASE)*.
- Whorton, J. E., & Reid, B. A. (1978). The implications of paraprofessional training for upper division programs of teacher preparation. *Education and Training of the Mentally Retarded*, 2, 93-95.
- Wilson, V., Schlapp, U., & Davidson, J. (2002). *More than "An extra pair of hands?"* (Final report). Edinburgh, Scotland: Scottish Council for Research in Education, University of Glasgow.
- Young, B., Simpson, R. L., Smith-Myles, B., Kamps, D. M. (1996). An examination of paraprofessional involvement in supporting inclusion of students with autism. *Focus on Autism and Other Developmental Disabilities*, 12(1), 31-38, 48.

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