

Paraprofessionals



The “Sous-Chefs” of Literacy Instruction

Julie N. Causton-Theoharis

Michael F. Giangreco

Mary Beth Doyle

Patricia F. Vadasy

A primary responsibility of general and special educators is to teach students how to read. In inclusive classrooms, paraprofessionals are frequently utilized to support literacy instruction. Paraprofessionals can be employed to help improve the reading skills of students with disabilities and those who are considered at risk. This article outlines commonalities from the body of literature discussing circumstances in which paraprofessionals were used successfully to improve the reading skills of students. The commonalities examined include situations where (a) paraprofessionals were used for supplemental rather than primary instruction, (b) research-based reading approaches were used so that paraprofessionals were not inappropriately asked to make pedagogical decisions, (c) paraprofessionals were explicitly and extensively trained in the research-based reading approach, (d) paraprofessionals were explicitly trained in behavior management, and (e) teachers and special educators provided paraprofessionals with ongoing monitoring and feedback regarding their instruction. Each of these commonalities is addressed and other practical considerations also are shared and discussed.

The sous-chef and the executive chef work closely together to prepare gourmet cuisine. Although an untrained observer might have difficulty determining where one chef’s role ends and the other’s begins, their respective roles in the kitchen are differentiated very clearly. Ultimately, the executive chef ensures that all of the dishes complement one another and are well-paired thematically—and creates and prepares delicious cuisine. The role of the sous-chef is to support the executive chef’s goals in assigned ways. The French word “sous” means literally “under,” and the sous-chef works under the direction of the executive chef. Sous-chefs are responsible for a variety of hands-on tasks and for the production of certain parts of the meal—working from recipes that are carefully planned by the executive chef. Sous-chefs, however, are not responsible for planning the meals, are not afforded the autonomy to adapt the recipes, and do not do the majority of the cooking. Each of these responsibilities falls under the purview of the executive chef.

How Are Paraprofessionals and Sous-Chefs Alike?

In elementary education classrooms, paraprofessionals in certain ways are analogous to sous-chefs, working under the direction of qualified teachers and special educators (the “executive chefs” of the classroom). The paraprofessionals’ role is not to plan or design classroom instruction, but rather to make important contributions to classroom instruction by effectively implementing important delegated tasks for which they are specifically trained. Like sous-chefs, paraprofessionals provide useful supports that help keep things running efficiently and effectively.

Some teachers might have questions about the most effective ways to direct the work of paraprofessionals.

One critical and primary responsibility of general and special education teachers is the complex task of literacy instruction; this is the main course of

the educational “meal.” Classroom teachers and special educators are responsible for planning, adapting, and implementing literacy instruction—much like executive chefs in creating a restaurant’s fare. Inclusive classrooms might have paraprofessionals (i.e., teaching assistants, instructional aides, tutors, paraeducators) to help in this endeavor. A paraprofessional might be assigned as an assistant to the whole class or to help support a subset of students that have learning, personal care, or behavioral needs. Yet some teachers might have questions about the most effective ways to direct the work of paraprofessionals. General support strategies for effectively utilizing paraprofessionals have been documented in the literature (Doyle & Lee, 2007; French, 1998; Giangreco & Doyle, 2004; Giangreco, Edelman, & Broer, 2003). The practices listed in Table 1 (adapted from Giangreco & Doyle) offer concrete suggestions on how classroom teachers and special educators can effectively support the work of paraprofessionals. These general practices include: welcoming, acknowledging, orienting, planning for, and communicating with paraprofessionals. This article outlines ways in which teachers can effectively involve paraprofessionals in literacy instruction.

Five Commonalities for Effectively Utilizing Paraprofessionals in Literacy Instruction

There are numerous resources that address working with paraprofessionals (Ashbaker & Morgan, 2006; Causton-Theoharis & Malmgren, 2005; Doyle, 2002; French, 1998; Giangreco & Doyle, 2004; Giangreco, Edelman, & Broer, 2001; Pickett & Gerlach, 2003), and there is a smaller—but growing—body of literature that specifically addresses the use of paraprofessionals for literacy instruction. The existing materials regarding utilizing paraprofessionals in literacy instruction primarily focus on students who have learning disabilities or who are considered to be at risk for failing in school. This literature documents that, under specific conditions, paraprofessionals and other noncertified

Table 1. General Best Practices for Working With Paraprofessionals

Practice Categories	Methods for Incorporating This Practice
Welcoming and Acknowledging Paraprofessionals	<ul style="list-style-type: none"> • Provide space for the belongings of the paraprofessional. • Place a plant or coffee cup on the desk of the paraprofessional at the beginning of the year. • Include the name of the paraprofessional on the classroom door. • Introduce the paraprofessional as part of the teaching team, not as a specific student's helper. • Share routine tasks that communicate authority (e.g., taking attendance, writing on the white board, doing hot lunch count). • Write specific thank-you notes periodically.
Orienting Paraprofessionals	<ul style="list-style-type: none"> • Provide a thorough school tour and introduce the paraprofessional to important people (e.g., office personnel, librarian). • Orient the paraprofessional to the location of supplies and the technology within the school and classroom. • Review school and classroom policies, procedures, and rules each year. • Provide access to IEPs and teach paraprofessionals how to read and interpret the documents.
Planning for Paraprofessionals	<ul style="list-style-type: none"> • Provide a daily and weekly schedule. Include who the paraprofessional will be supporting, what the paraprofessional will be doing, and when they will be doing it. • Include the following in daily plans: <ul style="list-style-type: none"> – Goals/objectives for an activity. – Role of the paraprofessional. – What the paraprofessional should do. – Support level. – Modifications/adaptations. • Review each plan. • Teach, model, support, and provide feedback.
Communicating With Paraprofessionals	<ul style="list-style-type: none"> • Clarify roles and responsibilities. • Develop shared expectations and mechanisms for communication (e.g., daily notebook, check-in point at the start and end of each day, weekly meetings for planning and communication). • Be open to the perspectives and ideas of the paraprofessional. • Use active listening skills.

individuals can be employed to help improve the reading skills of such students (Blachman, Ball, Black, & Tangel, 1994; Gunn, Smolkowski, Biglan, & Black, 2002; Lane, Fletcher, Carter, Dejud, & DeLorenzo, in press; Miller, 2003; Simmons, Kame’enui, Stoolmiller, Coyne, & Harn, 2003; Vadasy, Jenkins, & Pool, 2000; Vadasy, Sanders, & Peyton,

2006a, 2006b; Vadasy, Sanders, Peyton, & Jenkins, 2002).

These studies share a few key commonalities, including: (a) paraprofessionals were used for supplemental rather than primary instruction, (b) research-based reading approaches were used so that paraprofessionals were not inappropriately asked to make pedagogical decisions, (c) paraprofessionals

Top Five Ways to Utilize Paraprofessionals Effectively for Literacy Instruction

1. Use paraprofessionals in supplementary roles.
2. Use research-based reading approaches.
3. Train paraprofessionals in the reading approach.
4. Train paraprofessionals to manage behavior.
5. Provide paraprofessionals with ongoing monitoring and feedback.

were explicitly and extensively trained in the research-based reading approach, (d) paraprofessionals were explicitly trained in behavior management, and (e) teachers and special educators provided paraprofessionals with ongoing monitoring and feedback regarding their instruction. Each of these themes is listed in the “Top Five Ways to Utilize Paraprofessionals Effectively for Literacy Instruction” box.

Much can be learned from these studies; they can provide useful information on using paraprofessionals to assist with reading instruction within the context of inclusive classrooms. General and special educators use a variety of literacy philosophies, strategies, and curricula, and it is not the intent of the authors to recommend any one over another. This article instead describes generic literacy support strategies that can be utilized across philosophies and as part of differing instructional approaches.

Use Paraprofessionals for Supplemental Support

A number of studies (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Gunn et al., 2002; Lane et al., in press; Miller, 2003; Simmons et al., 2003; Vadasy, Jenkins, & Pool, 2000; Vadasy, Sanders, Peyton, & Jenkins, 2002) examined utilization of either paraprofessionals or other nonprofessional tutors in instruction that supplemented—but did not replace—the classroom literacy program provided by the teacher or special educator. The litera-

ture on paraprofessionals in inclusive classrooms repeatedly notes concerns regarding circumstances where students with disabilities—especially those with moderate and severe disabilities—receive all or most of their instruction from paraprofessionals, rather than from qualified teachers and special educators (Giangreco, 2003; Giangreco, Broer, & Edelman, 1999; Marks, Schrader, & Levine, 1999). There is no evidence that this practice is effective in improving literacy outcomes for students with disabilities. It is critical, and now is mandated through the No Child Left Behind Act of 2001 (Pub. L. No. 107-110; NCLB), that all students have access to highly qualified teachers and special educators for their primary literacy instruction. Under NCLB, the definition of “highly qualified” requires that public elementary- and secondary-school teachers be fully state certified or pass the state teacher-licensing examination and hold a professional license to teach in the state. IDEA 2004 clearly states that paraprofessionals must be trained and supervised in order to assist in special education (IDEA 612(a)(14)(A)).

In addition to providing supplemental instruction, paraprofessionals can be used in supportive instructional roles. These roles can include having paraprofessionals answer individual questions, re-read stories, or reinforce skills, but such tasks do not include introducing new material (see box “How Can Paraprofessionals Support (Rather Than Instruct) During Literacy Instruction?”). By assigning paraprofessionals to specific instructional roles, teachers can maximize their own instructional contact time with students. As demonstrated by the studies listed previously, paraprofessionals can effectively supplement the literacy instruction of students with reading difficulties, but they should not replace qualified educators.

Use a Research-Based Approach

In a restaurant, executive chefs use recipes that are tried and true. To succeed in the restaurant business, maintaining the quality and consistency of the food is essential. The same concept is true for reading instruction; maintain-

How Can Paraprofessionals Support (Rather Than Instruct) During Literacy Instruction?

- Answer individual questions.
- Re-read stories with students.
- Reinforce skills by leading a game or activity.
- Listen to students read.
- Practice letter names and sounds.
- Lead sound-categorization activities.
- Use story sequencing.
- Play dictionary games.
- Perform alphabetizing and rhyming exercises.
- Lead syllable-segmentation tasks.
- Direct magnetic-letterboard activities.

ing the quality and consistency of the curriculum and instruction is essential. Paraprofessionals are most effectively utilized during instructional time if they are provided with research-based reading approaches that have explicit and systematic instructional guidelines. Just as sous-chefs use specific methods for food preparations, paraprofessionals should follow the particular instructional strategies and should not be put in the inappropriate position of making pedagogical decisions. Further, instruction in early literacy skills that is explicit, rather than incidental, is most effective for students who struggle with learning to read (Foorman et al., 1998). This practice also enables all school personnel involved in the literacy program to more readily replicate instruction in a manner that improves overall fidelity of implementation.

Paraprofessionals can be used in supportive instructional roles.

In all of the studies that demonstrate that paraprofessionals can play a supportive role in literacy instruction, the programs examined used research-based approaches to teaching reading (Foorman et al., 1998; Gunn et al., 2002; Lane et al., in press; Miller, 2003; Sim-

mons et al., 2003; Vadasy, Jenkins, & Pool, 2000; Vadasy, Sanders, Peyton, & Jenkins, 2002).

Each of the studies that involved primary-age students used a research-based reading intervention that included phonological awareness and phonics instruction. Manning (1979) illustrates what can happen when paraprofessionals do not utilize research-based practices. The findings of the Manning study showed that students did not make reading gains as a result of receiving support from untrained paraprofessionals who were not using a research-based approach. The teachers and paraprofessionals utilized their own daily lesson plans, selected their own materials, and did not use a specific research-based intervention.

Though dated, the practices highlighted in the 1979 Manning study still are seen in some classrooms today. In a meta-analysis of the research on one-to-one instruction in reading conducted by Erlbaum, Vaughn, Hughes, and Moody (2000), design of the intervention was found to be one of the most important factors contributing to student success. It therefore is important to note that most paraprofessionals have a limited background in reading instruction and theory. When trained to implement a research-based program, however, these nonteacher instructors can provide the additional and explicit instruction and practice opportunities that some students need to acquire early reading skills.

Train Paraprofessionals Explicitly and Extensively on the Reading Approach

The paraprofessional and sous-chef are not analogous when it comes to training. Sous-chefs are required to have extensive culinary training and experience before they are assigned to work with an executive chef, and all sous-chefs are prepared and trained in specific areas of cooking. A sous-chef should be trained in baking, for example, before being able to become a pastry sous-chef. Importantly, sous-chefs spend significant time and gain substantial instruction in each aspect of kitchen duties, to become comfortable

with the techniques, utensils, and equipment.

Similarly, paraprofessionals need initial training in literacy interventions they are to use. In some cases, however, paraprofessionals receive no specific training for carrying out delegated literacy instruction tasks or other classroom responsibilities. In a meta-analysis of studies examining one-on-one tutoring, the best indicators of student success were the qualifications and training of the instructor (Erlbaum et al., 2000).

In a recent study conducted by Lane et al. (in press) that examined the effectiveness of a paraprofessional-led intervention with youngsters at risk for reading and behavioral concerns, a paraprofessional was trained to directly teach children reading skills. The paraprofessional in this study was systematically trained to use a supplementary early-reading curriculum, *Phonological Awareness Training for Reading* (PATR; Torgesen & Bryant, 1994), which is designed to promote awareness of word-sound structure. The training took place during a 2-hour session and subsequent 30-minute monthly meetings. The findings of this study suggest that a reading intervention provided by a paraprofessional can lead to improvements in the early-literacy skills of students considered at risk for reading and behavioral concerns (Lane et al., in press). Similarly, Vadasy et al. (2006) and Miller (2003) studied the conditions of effective early-literacy tutoring and found that noncertified individuals can effectively increase reading skills when they are provided significant training.

In each of these studies, the paraprofessionals were trained intensively on the instructional techniques being used. Paraprofessionals require appropriate, initial, and ongoing training and coaching specific to the reading interventions that they are to use with students. Even when paraprofessionals are trained to help the classroom teacher provide parts of the core classroom reading instruction (Blachman et al., 1994; Torgesen et al., 2001), the classroom teacher provides the oversight and diagnostic decisions necessary for maximizing the progress of all students.

It is advisable that training be provided by qualified professionals skilled in the particular literacy method or intervention. Teachers who are trained in a research-based literacy approach can effectively train other school professionals (Vaughn & Coleman, 2004). In each of the intervention studies described previously, a qualified teacher, university researcher, or professor conducted the training. It is critical for paraprofessionals to receive explicit training, and to have access to ongoing supervision, dialogue, and coaching from professional educators skilled in the approach being used.

Train Paraprofessionals Explicitly in Behavior Management

Safety is one of the first topics covered in a training program for sous-chefs; they learn how to keep the kitchen environment running smoothly without incident or injury. Sous-chefs are also carefully trained to respond to emergencies in the kitchen.

It is critical for paraprofessionals to receive explicit training, and to have access to ongoing supervision, dialogue, and coaching from professional educators skilled in the approach being used.

Management of student behavior corresponds to the topic of safety in the training of classroom staff. In a recent study, paraprofessionals reported that they spent one fifth of their time providing behavioral supports to students (Giangreco & Broer, 2005). Yet many paraprofessionals do not feel confident in the type and amount of training they receive to address challenging behaviors. Lane et al. (in press), suggested that paraprofessionals need more behavior-management training to enable them to provide effective small-group reading instruction. Training in positive behavioral techniques prepares paraprofessionals to effectively support students, maximize instructional time,

What Systems Can I Use to Communicate With a Paraprofessional?

Establish a firm 15-minute meeting time for each day.

Set aside a longer (45-minute to 60-minute) meeting time for each week.

Determine a monthly meeting to discuss progress of individual students.

Meet when students do not need supports (such as during lunch, recess, or special-areas classes).

Establish a communication notebook to be used by the teacher and paraprofessional.

Use e-mail as a way to efficiently check in each day or to answer burning questions.

and make supplemental literacy instruction more effective. For students having a history of challenging behavior, paraprofessionals should have easy-to-follow written behavior plans that they can use to ensure that students receive consistent feedback. Such plans should include specific ways to engage students and help them to stay focused on specific tasks, to cue effectively, and to transition seamlessly between tasks. When teachers provide paraprofessionals with written plans, paraprofessionals clearly understand how to support students, and students can spend more time learning.

Provide Paraprofessionals With On-Going Feedback

In a well-run kitchen, to ensure quality and consistency the executive chef continually monitors the work of the sous-chef. Although it might be expected that teachers do the same with regard to paraprofessionals (and some do), others fall prey to what Giangreco coined as the “training trap” (Giangreco, 2003, p. 51). The training trap occurs when teachers relinquish instruction of students with disabilities to the paraprofessionals after paraprofessionals have received virtually any level of training, no matter how scant—reasoning, “Now

they are trained.” Even when paraprofessionals have some training, however, teachers must continue to make the pedagogical decisions, provide the primary instruction, and monitor the paraprofessionals’ work.

Teachers should provide paraprofessionals with ongoing supervision and feedback on the implementation of their instruction. In a study examining the tutoring of first-grade struggling readers in phonological reading skills, Jenkins, Vadasy, Firebaugh, and Profflet (2000) highlighted the importance of a trained teacher providing consistent feedback and supervision to the paraprofessionals in their study as a means of ensuring appropriate instruction. They stated:

The supervisor must have the time and knowledge not only to train [paraprofessionals] before they begin, but also to provide ongoing support and scaffolding. You can’t just train [paraprofessionals] and expect them to carry on. They need help trouble shooting when problems come up or when new lesson activities are introduced. They need help keeping on track, adhering to the lesson activities, and they need encouragement. (p. 78)

Teachers often feel that there is not enough time in the day to provide the appropriate training, monitoring, and feedback to paraprofessionals. The box “What Systems Can I Use to Communicate With a Paraprofessional?” includes some strategies that teachers have utilized to make time to meet with and to provide feedback to paraprofessionals. Although, it is not possible to make the school day longer, some of these strategies can be useful ways to communicate more efficiently.

Other Practical Considerations

All students deserve to receive their primary instruction from highly qualified general and special educators. This is especially true for students who are struggling to learn to read, and it is clearly outlined in both the NCLB and IDEA. Teachers and special educators should avoid assigning paraprofessionals the primary instructional responsi-

bilities for students with disabilities or those who are at risk (Giangreco, 2003). It is important to remember that certified teachers are specially trained in how to teach reading and how to manage behavior. Some paraprofessionals are not specifically trained in either area, and those who do have some training typically have substantially less training than qualified teachers and special educators.

Gerber, Finn, Achilles, and Boyd-Zaharias examined whether the presence of a teacher aide in the classroom had a noticeable impact on student learning. They found that “greater contact between aides and students had an adverse effect on performance, while students benefited academically if aides performed more administrative tasks [than instructional tasks]” (Gerber et al., 2001, p. 137). Several other studies have documented the unintended detrimental effects that untrained paraprofessionals can have on students’ social interactions with peers and teachers’ academic expectations (Broer, Doyle, & Giangreco, 2005; Causton-Theoharis & Malmgren, 2005; Giangreco, Edelman, Luiselli, & MacFarland, 1997; Malmgren & Causton-Theoharis, 2006). These findings suggest that teachers should carefully consider how to use and place paraprofessionals who lack the specific training and preparation necessary for handling instructional roles.

When can a paraprofessional be most effective? Giangreco, Broer, and Edelman suggested that when identifying a student’s support needs it is best to ask the question: “In the best of all possible worlds who should provide this support?” (Giangreco et al., 1999, p. 287). In other words, is the instruction for this particular student best provided by a paraprofessional? In hiring and assigning a paraprofessional, teachers and administrators should consider the questions: What knowledge, skills, interests, and abilities does this person bring to this teaching team? What tasks match this person’s strengths and interests? Depending upon the answers, it might make the most sense to either redeploy the paraprofessional to non-instructional roles or to supportive

What Are Noninstructional Roles for Paraprofessionals?

Administrative tasks (e.g., copying).

Helping students/groups that are working independently.

Researching reading materials in the library.

Creating a bulletin board displaying student writing.

Reading student journal entries.

Editing student work.

Searching online for new instructional computer games.

Preparing instructional materials.

Monitoring/supporting computer work.

Preparing modifications or adaptations that are planned by the teacher.

Recording student data.



instructional roles under direct teacher supervision.

For example, teachers could assign the paraprofessional tasks that can free the teacher to have more time to instruct students with disabilities or others in need of extra help. During literacy instruction, the teacher could assign the paraprofessional tasks that allow the teacher more direct instructional contact with every child in the classroom. Teachers should make sure that paraprofessionals understand that noninstructional assignments are valued contributions to the overall classroom program. The list in the box “What Are Noninstructional Roles for Paraprofessionals?” suggests supportive roles for paraprofessionals that free the teacher for literacy instruction.

Conclusion

In the food industry, the success or failure of the restaurant falls squarely on the shoulders of the executive chef. Similarly, in the classroom the effectiveness of literacy instruction falls squarely on the shoulders of the teachers and special educators. It is important to con-

sider how paraprofessionals are being used in your literacy program. Consider the following questions.

- Are paraprofessionals providing supplemental or primary literacy instruction?
- Are you using a research-based approach to literacy instruction?
- Have the paraprofessionals in your school been explicitly and extensively trained on the reading approach?
- Do the paraprofessionals have the behavior management knowledge and skills needed to support instruction?
- Is a certified professional consistently monitoring and coaching the paraprofessionals in their supplemental instruction?
- Have you considered re-deploying paraprofessionals to noninstructional or support roles to allow teachers to have more instructional time with students?

Teachers should make sure that paraprofessionals understand that noninstructional assignments are valued contributions to the overall classroom program.

If “no” is the answer to any of these questions, then it might be prudent to consider what changes could be made to utilize paraprofessional staff more effectively. When they are trained appropriately and used effectively in the classroom, paraprofessionals can not only can expand a school’s literacy learning opportunities for struggling students, but can also make the “main course” of literacy learning more appetizing and more nourishing.

References

- Ashbaker, B. Y., & Morgan J. (2006). *Paraprofessionals in the classroom*. Boston: Pearson/Allyn and Bacon.
- Blachman, B. A., Ball, E., Black, R., & Tangel, D. (1994). Kindergarten teachers develop phoneme awareness in low-income, inner-city classrooms: Does it make a differ-

ence? *Reading and Writing: An Interdisciplinary Journal*, 6, 1-17.

Broer, S. M., Doyle, M. B., & Giangreco, M. F. (2005). Perspectives of students with intellectual disabilities about their experiences with paraprofessional support. *Exceptional Children*, 71, 415-430.

Causton-Theoharis, J. N., & Malmgren, K. W. (2005). Building bridges: Strategies to help paraprofessionals promote peer interactions. *TEACHING Exceptional Children*, 37(6), 18-24.

Doyle, M. B. (2002). *The Paraprofessionals Guide to the Inclusive Classroom: Working as a Team* (2nd ed.). Baltimore: Paul H. Brookes.

Doyle, M. B., & Lee, P. A. (2007). Creating partnerships with paraprofessionals. In M. F. Giangreco & M. B. Doyle (Eds.), *Quick-guides to inclusion: Ideas for education students with disabilities* (2nd ed., pp. 267-280). Baltimore: Paul H. Brookes.

Erlbaum, B., Vaughn, S. Hughes, M., & Moody, S. (2000). How effective are one-to-one tutoring programs in reading for elementary students at risk for reading failure? A meta-analysis of the intervention research. *Journal of Educational Psychology*, 92, 605-619.

Foorman, B. R., Francis, D. J., Fletcher, J. M., Schatschneider, C., & Mehta, P. (1998). The role of instruction in learning to read: Preventing reading failure in at-risk children. *Journal of Educational Psychology*, 90, 37-55.

French, N. K. (1998). Working together: Resource teachers and paraeducators. *Remedial and Special Education*, 20, 61-73.

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, 123-143.

Giangreco, M. F. (2003). Working with paraprofessionals. *Educational Leadership*, 61(2), 50-53.

Giangreco, M. F., & Broer, S. M. (2005). Questionable utilization of paraprofessionals in inclusive schools: Are we addressing symptoms or causes? *Focus on Autism and Other Developmental Disabilities*, 20, 10-26.

Giangreco, M. F., Broer S. M., & Edelman, S. W. (1999). The tip of the iceberg: Determining whether paraprofessional support is needed for students with disabilities in general education settings. *Journal of the Association for Persons with Severe Handicaps*, 24, 281-291.

Giangreco, M. F., & Doyle, M. B. (2004). Directing paraprofessional work. In C. Kennedy & E. Horn (Eds.), *Including students with severe disabilities* (pp. 185-204). Boston: Allyn & Bacon.

Giangreco, M. F., Edelman, S. W., & Broer, S. M. (2001). Respect, appreciation, and acknowledgment of paraprofessionals

who support students with disabilities. *Exceptional Children*, 67, 485-498.

Giangreco, M. F., Edelman, S. W., & Broer, S. M. (2003). School wide planning to improve paraeducator supports. *Exceptional Children*, 70, 63-79.

Giangreco, M. F., Edelman, S., 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.

Gunn, B., Smolkowski, K., Biglan, A., & Black, C. (2002). Supplemental instruction in decoding skills for Hispanic and non-Hispanic students in early elementary school. *The Journal of Special Education*, 36, 69-79.

Individuals With Disabilities Education Improvement Act of 2004, Pub. L. No. 108-446, 118 Stat. 2647 (2004).

Jenkins, J. R., Vadasy, P. F., Firebaugh, M., & Profflet, C. (2000). Tutoring first-grade struggling readers in phonological reading skills. *Learning Disabilities Research and Practice*, 15, 75-84.

Lane, K. L., Fletcher, T., Carter, E., Dejud, & DeLorenzo, J. (in press). Paraprofessionaled phonological awareness training with youngsters at-risk for reading and behavioral concerns. *Remedial and Special Education*.

Malmgren, K. W., & Causton-Theoharis, J. N. (2006). Boy in the bubble: Effects of paraprofessional proximity and other pedagogical decisions on the interactions of a student with behavior disorders. *Journal of Research in Childhood Education*, 20, 301-312.

Manning, D. (1979). The reading and math achievement of remedial middle school students taught by teachers versus paraprofessionals. *Reading Improvement*, 16(1), 35-42.

Marks, S. U., Schrader, C., & Levine, M. (1999). Paraeducator experiences in inclusive settings; helping, hovering, or holding their own? *Exceptional Children*, 65, 315-328.

Miller, S. D. (2003). Partners-in-reading: Using classroom assistants to provide tutorial assistance to struggling first-grade readers. *Journal of Education for Students Placed at Risk*, 8, 333-349.

Pickett, A. L., & Gerlach, K. (2003). *Supervising paraeducators in school settings: A team approach* (2nd ed.). Austin, TX: PRO-Ed.

Simmons, D. C., Kame'enui, E. J., Stoolmiller, M., Coyne, M. D., & Harn, B. (2003). Accelerating growth and maintaining proficiency: A two-year intervention study of kindergarten and first-grade children at risk for reading difficulties. In B. R. Foorman (Ed.), *Preventing and remediating reading difficulties: Bringing science to scale* (pp. 197-228). Timonium, MD: York Press.

Torgesen, J. K., Alexander, A. W., Wagner, R. K., Rashotte, C. A., Voeller, K., Conway, T., & Rose, E. (2001). Intensive remedial instruction for children with severe reading difficulties: Immediate and long-term outcomes from two instructional approaches. *Journal of Learning Disabilities*, 34, 33-59.

Torgesen, J. K., & Bryant, B. R. (1994). *Phonological Awareness Training for Reading [PATR]*. Austin, TX: PRO-Ed.

Vadasy, P. F., Jenkins, J. R., & Pool, K. (2000). Effects of tutoring in phonological and early reading skills on students at risk for reading disabilities. *Journal of Learning Disabilities*, 33, 579-590.

Vadasy, P. F., Sanders, E. A., Peyton, J. A., & Jenkins, J. R. (2002). Timing and intensity of tutoring: A closer look at the conditions for effective early literacy tutoring. *Learning Disabilities: Research and Practice*, 17, 227-241.

Vadasy, P. F., Sanders, E. A., & Peyton, J. A. (2006a). Code-oriented instruction for kindergarten students at risk for reading difficulties: A randomized field trial with paraeducator implementers. *Journal of Educational Psychology*, 98, 508-528.

Vadasy, P. F., Sanders, E. A., & Peyton, J. A. (2006b). Paraeducator-supplemented instruction in structural analysis with text reading practice for second and third graders at risk for reading problems. *Remedial and Special Education*, 27, 227-241.

Vaughn, S., & Coleman, M. (2004). The role of mentoring in promoting use of research-based practices in reading. *Remedial and Special Education*, 25, 25-38.

Julie N. Causton-Theoharis (CEC NY Federation), Assistant Professor, Department of Teaching and Learning, School of Education, Syracuse University, New York. **Michael F. Giangreco** (CEC VT Federation), Professor, Department of Education, University of Vermont, Burlington. **Mary Beth Doyle** (CEC VT Federation), Associate Professor, Department of Education, St. Michael's College, Colchester, Vermont. **Patricia F. Vadasy** (CEC WA Federation), Senior Research Associate, Washington Research Institute, Seattle.

The authors wish to acknowledge the contributions of Melissa Price from the New York Higher Education Center for Systems Change for providing the analogy of paraprofessional as sous-chef.

Address correspondence to Julie N. Causton-Theoharis, Department of Teaching and Learning, School of Education, Syracuse University, 150 Huntington Hall, Syracuse, NY 13244 (e-mail: jcauston@syr.edu).

TEACHING Exceptional Children, Vol. 40, No. 1, pp. 56-62.

Copyright 2007 CEC.

To order call
1-800-224-6830
or visit us online at
www.cec.sped.org



TAM Fan

TECHNOLOGY SUPPORTS
FOR YOUNG CHILDREN

Technology supports can help children with disabilities not only to participate, but also to do so independently. Technology solutions can make it easier for children to move, communicate, and use materials to participate. The TAM Fan is a practical tool for families, teachers, service providers, and other caregivers to use when considering technology items for young children.

2006

Price: \$8.95
Item #S5766

