A COLLABORATIVE EFFORT TO ENHANCE READING AND WRITING INSTRUCTION IN INCLUSION CLASSROOMS

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Abstract. **A year-long researcher-teacher professional development group with a next-year followup was conducted with seven general education teachers from two elementary schools in a large urban school district in the southeastern United States. The two schools had recently restructured their special education program to include students with LD in the general education class full-time. Teachers were taught four reading and writing practices (one during each nine-week grading block). All but two of the teachers partially or completely implemented the practices during the nine-week period. Sustained implementation during the school year was maintained by four of the seven teachers, and three of the seven teachers continued high implementation of the instructional practices during the next school year. The components of successful professional development programs are discussed and implications for teacher education are offered.**

There is little question that if students with learning disabilities (LD) are to be instructed effectively in general education classrooms, considerable effort is needed to alter traditional instructional practices, particularly in reading. Recent reports on instructional practices in reading in general education classrooms indicate that most instruction is for the class as a whole, with little or no differentiated instruction to meet the needs of special learners (e.g., Baker & Zigmond, 1995; Schumm, Vaughn, Haager, McDowell, Rothlein, & Saumell, 1995; Schumm, Vaughn, & Moody, 1996; Vaughn, Moody, & Schumm, 1998; Zigmond & Baker, 1990). Even when extensive effort is exerted to boost instruction for students with LD in the general education classroom, students' progress is less than adequate (Jenkins & Leicester, 1992; Simmons, Fuchs, Fuchs, & Mathes, 1995; Zigmond, Jenkins, Fuchs, Deno, & Fuchs, 1995; Zigmond et al., 1995). While

teachers consider many adaptations designed to meet the needs of students with disabilities as desirable to make in their classrooms, few view them as feasible (Schumm & Vaughn, 1991). When adaptations are made by teachers, they are largely incidental, inconsistent, idiosyncratic, and not part of a systematic instructional plan (Schumm & Vaughn, 1995b). For the most part, teachers do not perceive that they have the skills, knowledge, or confidence to meet the special needs of students with LD (Schumm &

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Vaughn, 1992; Semmel, Abernathy, Butera, & Lesar, 1991).

Based on these findings (for reviews, see Schumm & Vaughn, 1995a; Vaughn & Schumm, 1996), we initiated the development, implementation, and evaluation of a series of professional development programs designed to enhance the quality of instruction for students with LD in the general education classroom. Though we were tempted to develop a professional development program that would give general education teachers the tools to provide individualized instruction for students with LD in their classrooms, we were aware that teachers were more likely to sustain an instructional practice in their classrooms if it was effective for the classes as a whole and required little pre-planning or material development (Schumm et al., 1995).

Prior to implementation of the collaborative researcher-teacher group described in this article, we had initiated a series of six researcher-teacher programs designed to enhance general education teachers' effectiveness to meet the needs of students with LD (for review, see Schumm & Vaughn, 1995b).

These previous professional development programs can be viewed as occurring in two stages. The first stage, Exploration (four programs), was based on the rationale that if an atmosphere of mutual respect and shared knowledge could be created (Anders & Richardson, 1991; Showers, Joyce, & Bennett, 1987), teachers would have more ownership in the program and would be more likely to implement recommended instructional practices. In this stage, a series of meetings was conducted in which instructional adaptations and strategies were identified by researchers and teachers. Teachers chose ones that made sense for them to implement in their classrooms and then reported their successes and concerns back to the group. We learned that teachers appreciated a support group to problem solve issues and to give permission to rethink how they dealt with students with LD in their classrooms. Though the teachers enjoyed the experience, we were less than satisfied with the extent to which teachers changed or added instructional practices to their teaching routines, and we were concerned that outcomes for students with LD in these classrooms were left unaltered.

In the second stage, Collaboration, we completed two researcher-teacher programs. We refer to this as an *intensive collaboration* because we are involved in a multi-year professional development program at each of two elementary schools. During the first year, we provided on site an intensive year-long seminar designed to enhance strategies and practices for students with LD in the general classroom. To ensure that the content would be appropriate, we conducted separate interest inventories at each school by individually interviewing teachers and asking them to complete a written questionnaire. To avoid a difficulty encountered in the Exploration Stage, we worked to ensure that the experience would provide sufficient content. Unfortunately, the experience ended up being much like a university-based seminar, except that it was held on site with teachers who knew each other and had common experiences. Though we had learned from our previous professional development experiences the importance of engaging teachers collectively in the process (e.g., Cochran-Smith & Lytle, 1992; Cone, 1992), we did not successfully achieve the balance between developing a community of learners and providing adequate content (for review, see Schumm & Vaughn, 1995b).

Our next professional development experience, the one described here, was designed to achieve the right mix between content and community (for review, see Little, 1993). Ongoing interviews with teachers assured us that teachers wanted more than informal meetings and discussions with each other. We also knew that too much content that was not tailored to their classrooms was unlikely to be implemented (Crandall & Associates, 1982; Gersten & Woodward, 1992).

The purpose of this year-long researcher-teacher professional development group was to build on previous knowledge by providing an intensive, collaborative professional development program for teachers in two schools who had volunteered to participate in a school reform effort aimed at including selected students with disabilities full-time into their general education programs. The key elements of this professional development researcher-teacher group included: (a) teaching four specific instructional practices targeted to meet the needs of the teachers and their students (Ball, 1995; Harris, 1995; Peter-

son, 1995), (b) coaching in their classroom by a partner who was employed by the research team and not a member of their school setting (Gersten, Morvant, & Brengelman, 1995), (c) providing demonstration lessons in their classroom for each of the instructional practices provided by their partner (Vaughn & Schumm, 1996), and (d) arranging ongoing meetings with other teachers who were in the process of implementing the same instructional practices (Englert & Tarrant, 1995; Little, 1990). All participating teachers volunteered and agreed to implement the four instructional practices during a nine-week period. Teachers were encouraged to continue implementation if they perceived that the instructional practice was effective.

Through this year-long researcher-teacher group, we were interested in documenting: (a) the extent to which teachers implemented the instructional practices in their classrooms during the year the program was conducted and during the next year as part of a follow-up, and (b) teachers' perceptions of the effectiveness of the instructional practices. Our primary interest was the extent to which teachers would implement instructional practices when provided an intensive program that included coaching, in-class demonstration lessons, and a supportive community of other teachers and professionals who are implementing the same instructional practices.

METHOD

Schools

The professional development program was conducted in two public elementary schools in a large urban district in the southeastern United States over a two-year period. The school district as a whole includes more than 80% minority students. The two schools had recently restructured their special education program to include students with LD in the general education class full-time. The two schools had adopted different inclusion models.

Consultation/collaborative model. One school implements inclusion through the use of a consultation/collaborative teaching model. Two special education teachers are each assigned to two general education teachers, and spend from 60 to 90 minutes in each general education classroom during language arts and,

depending on the students' needs, also during math. The amount of time depends upon the number of students with disabilities in the class (range from four to eight) and the severity of the students' needs. In addition, the special education and general education teachers co-plan for a minimum of 30 minutes per week and discuss plans and student progress informally on a daily basis. The school has a third special education teacher who serves as the pull-out resource room teacher and meets the needs of all students with disabilities for whom the teachers and parents have not identified the inclusion model as appropriate.

Co-teaching model. The other school implements inclusion using a co-teaching model. The majority of students with high-incidence disabilities at this school are in grades three through five. There are enough students with disabilities at each of these grade levels to have a special education teacher full-time for each grade.

The school personnel have placed the students with high-incidence disabilities who have been identified as likely to benefit from inclusion into three general education classrooms. A general and special education teacher co-teach in the same classroom for the entire school day. The approximately 32 students in each class are about evenly divided between students with disabilities and general education students. A fourth special education teacher at the school serves as the pull-out resource room teacher for other students with disabilities at the school.

Participants

Teachers. The primary participants in this study were seven general education teachers (six female and one male) who participated in the professional development program. All were general education teachers currently teaching in the inclusion classrooms in the previously described schools. The teachers were all certified to teach elementary education and did not have additional certification in special education or reading. Table 1 provides a summary of the descriptive characteristics of these teachers.

The secondary participants in this study were five special education teachers. Since all of these teachers taught in the classrooms with the general education teacher, they were included in the professional development, but were not the primary targets for the study.

Researchers. Six researchers participated in the professional development program. All researchers had previous experiences teaching and were presently either on faculty (three) or were graduate assistants (three).

Procedures

The researcher-teacher group consisted of six researchers and seven teachers from two schools (one researcher was assigned to two teachers). The researcher-teacher group met as a group during an entire school year. The meetings focused on four instructional practices covered in four separate blocks (nine weeks each; a school-district grading period) over a 36-week period. At the beginning of each block, a single instructional practice was introduced to all participating researchers and teachers during a full-day professional development workshop. The professional development sessions were provided by experts in the instructional practice (two were members of the research team and two were outside consultants). The group met two additional times (three hours each) during each of the four blocks to discuss implementation of the instructional practice and to provide support and encouragement for practice implementation. During the second school year, teachers were interviewed and Intervention Validity Checklists (IVCs) were collected to determine the extent to which the instructional practices were maintained over time.

In our previous research, teachers had identified reading and writing as the areas in which they were most in need of assistance. Thus, all four of our instructional practices targeted reading and writing. The practices were selected because they are multileveled, involve active learning, and do not require extraordinary expenditures of materials and equipment. The practices were also selected because they can be used to enhance instruction in a variety of reading programs (e.g., whole language, basal). Each practice was selected to promote learning in a particular reading/writing competency (or set of competencies). When used in conjunction with each other, they form a comprehensive way to supplement instruction in phonemic awareness, decoding, spelling, fluency, comprehension, and composition. Since the instructional practices have been described in-depth elsewhere (Vaughn, Schumm, & Forgan, 1995), only a brief description follows.

The first instructional practice was Writing Process (Graves, 1983). This practice was selected to target composition skills. Particular emphasis was placed on the use of Writing Process with individuals with disabilities in general education settings (Zaragoza & Vaughn, 1992). The second practice, Collaborative Strategic Reading (Klingner & Vaughn, 1996; Klingner, Vaughn, & Schumm, 1996), was chosen to teach reading comprehension strategies for content area reading materials through the use of cooperative learning groups. The third practice was Classwide Peer Tutoring (Delquadri, Greenwood, Whorton, Carta, & Hall, 1986; Mathes, Fuchs, Fuchs, Henley, & Sanders, 1994). Classwide Peer Tutoring was selected to help students improve their decoding, fluency, and comprehension skills. Finally, Making Words (Cunningham & Cunningham, 1992) was selected because this practice is designed to teach students phonemic awareness, spelling patterns, and decoding skills through the use of sequenced activities using letters as manipulatives.

Each researcher was paired with a general education "partner." The role of the researchers was to spend one day a week during language arts in their general education teacher's classroom (their partner). The researchers served as data collectors, but more significantly as coaches for their partners, co-teaching the instructional practices and problem-solving with teachers to resolve dilemmas in implementing the practices for their classrooms.

The role of the general education teachers was to implement each of the four instructional practices in their classrooms during the designated nine-week block, to engage in ongoing reflection about the practices, and to collaborate with the research team in coordinating student data collection. Teachers were encouraged to work with their special education colleagues to implement the strategies according to their own school-based model (collaboration/consultation or co-teaching). We communicated to all teachers (general and special education) that their role was to serve as co-researchers to learn how best to implement the instructional practices in large urban classrooms that include students with disabilities.

Measures

Teacher interviews. Individual interviews were conducted five times during the year-long

Table 1
Summary Description of Teachers

Teacher	Degree	Years Taught	Class Size	Students with LD
Leigh	BS	5	31	4
Collin	BS	4	39	8
Rita	BS	2	36	8
Angie	SP	30	39	7
Amanda	BS	4	27	16
Toni	BS	2	32	12
Isabel	BS	2	35	12

Note. BS = Bachelor of Science; SP = Specialist.

professional development intervention and again in December of the following year. The interviews were designed to be purposeful conversations and to elicit information from the teachers (Bogdan & Biklen, 1992). Thus, they were semistructured and teachers were encouraged to talk freely about designated or related topics. The first teacher interview was conducted prior to participation in the professional development program. The focus of this interview was to determine the extent to which teachers had prior knowledge of the four instructional practices to be presented. Each of the other four interviews was conducted at the end of a nine-week implementation block to obtain further information about the effects of the instructional practices, students' response, and the types of modifications teachers made to each of the instructional practices.

Intervention validity checklists (IVC). The IVCs were developed to provide an objective assessment of the extent to which teachers implemented specific components of the instructional practices presented in the professional development program. A separate IVC was developed for each of the four instructional practices: Writing Process, Collaborative Strategic Reading, Classwide Peer Tutoring, and Making Words. Each IVC consists of a list of 16-19 statements that address the major components of each instructional strategy. For each statement, the observer indicates the extent to which the teacher implements that aspect of the instructional practice on a three-point scale (0 = does not implement, 1 = implements on a limited basis, 2 = implements). Scores were based on the fidelity and frequency of implementation. The appropriate IVC was conducted three times during the nine-week implementation block for each instructional practice. Followup IVCs were conducted at nine-week intervals after the initial implementation block. Sample items from each of the IVCs for each instructional practice are provided in Table 2.

Implementation barriers and facilitators checklist. This measure was designed to elicit teachers' perceptions of what helped or impeded their implementation of each of the instructional practices. A total of 24 items was selected to represent a wide range of potential facilitators and barriers, including time, curricular, student, and personal factors. Teachers were asked to identify the five items that assisted their implementation of the instructional practice and the five items that hindered their implementation of the practice. Teachers were also encouraged to write any additional items that were not listed in the checklist. The teachers completed one checklist per instructional practice after each nine-week implementation block.

Researchers' logs. Researchers kept a written record of their observations, conversations, activities, and reflections from weekly classroom visits focusing on how the instructional practices were implemented in the classrooms. Researchers also noted any relevant quotes from

Table 2
Representative Items from Intervention Validity Checklists (IVCs)

	Does Not Do	Does on a Limited Basis	Implements
Writing Process			
Children choose their own topics	0	1	2
Children are given sustained and consistent teacher or student time for daily process writing	0	1	2
Children use T-Tell what you like, A-Ask questions, G-Give ideas (TAG) during full class sharing	0	1	2
Teacher conducts mini-lessons (5 minutes each) on skills to full class and subgroups of students within the context of children's writing and during the appropriate stage of the process (i.e., handwriting spoken about during publication)	0	1	2
Teacher conducts individual and small-group writing conferences	0	1	2
Collaborative Strategic Reading			
Children work in groups with roles specified	0	1	2
Children preview passages before reading	0	1	2
Teacher monitors student understanding of content learning during group work	0	1	2
Teacher provides ongoing instruction in the comprehension strategies	0	1	2
Teacher conducts a whole-class wrapup to review clunks and what was learned	0	1	2
Classwide Peer Tutoring (CWPT)			
Children are given sustained and consistent time for CWPT (three 35-minute sessions per week)	0	1	2
Children make transitions between CWPT components quickly	0	1	2
Children take turns as reader and tutor, with the higher-performing reader always serving as tutor first	0	1	2
Teacher collects points from each pair at end of week and monitors individual progress	0	1	2
Materials and supplies for CWPT are available to students and easily accessible	0	1	2
Making Words			
Children make words using individual letter sets during the Making Words Slowly routine according to teacher directions	0	1	2
Children identify word patterns at the pocket chart during the Word Sorting routine	0	1	2
Teacher leads the Making Words Slowly routine by introducing each new word, using it in context, and bringing attention to word patterns	0	1	2
Teacher monitors individual students during the Making Words Slowly routine	0	1	2
Teacher implements at least two times per week	0	1	2

the teachers and students and summarized their observations at the completion of each of the nine-week implementation blocks.

Data Analysis

Most of the data collected for this study were a result of field notes, interviews, and observations. We followed guidelines suggested by Miles and Huberman (1994) for data reduction and analysis and applied three major flows of analysis. The first flow of analysis occurred during data collection and involved two activities: (a) researchers transcribed tapes and notes, summarized transcriptions and field notes, and brought their written materials to weekly meetings; and (b) researchers met weekly to listen to reports and to discuss organizational frameworks and whether further data sources were needed. This ongoing process continued during the entire academic year the study took place.

The second flow of analysis included the development of data summaries and displays. Each of the six researchers summarized key findings for their teacher(s) around questions generated by the research team. One researcher examined all of these summaries and identified significant findings, continually seeking evidence that disconfirmed these findings (Yin, 1991). Using the group mind process, we negotiated the central findings and then reconfirmed them through individual reexaminations of our own data sources (Guba & Lincoln, 1989). Matrices that represented multiple findings and teacher outcomes were developed to summarize the group's thinking.

The third flow of analysis involved drawing conclusions and subsequently verifying them. Conclusions were drawn over time and reported if they were found to be "explicit and grounded" (Glaser & Strauss, 1967). Verification was conducted through the group process as well as through healthy skepticism stemming from ongoing individual examination of data sources.

RESULTS

Findings related to teachers' implementation of each of the four instructional practices are presented first, followed by themes from the data sources that were evident across instructional practices.

Writing Process

Background. This is the only instructional practice teachers indicated that they had some knowledge of prior to their participation in the researcher-teacher group. Three of the teachers noted that they had used Writing Process during the previous year and had planned to use it again this year. None of the teachers was familiar with all of the components of the Writing Process approach that were taught during the professional development program.

Implementation levels. All teachers implemented some aspects of the Writing Process approach during the initial nine-week period. Most of them continued partial implementation over the remainder of the school year, with many of the teachers taking a 9- to 12-week break from Writing Process implementation to introduce a more traditional writing approach. During the followup interviews the next year, all of the teachers commented that they used Writing Process during part of the school year.

In most classes, students initially self-selected topics. However, over time teachers switched and began to assign topics to their students. The primary rationale provided by teachers for assigning topics was that the students only wrote stories and were not practicing other writing genres. Also, the state writing assessment requires students to write from a prompt. Students wrote and shared drafts with the entire class using a whole-class sharing/response strategy taught during the professional development program; they edited, revised, and published their books. While the teachers implemented the more global features of Writing Process (children wrote, edited and published their work), many of the critical features of Writing Process that are likely to enhance instruction for all learners, particularly students with special needs, were not implemented, such as skills groups, monitoring student performance, and conferencing between teacher and student.

Two classes adapted Writing Process by having the students make class books rather than individual books. Another class used writing as one of several centers during language arts. Several teachers allowed more time for Writing Process (90 minutes) but for fewer times during the week (1 to 2 times per week).

Teachers' perceptions. All of the teachers reported that they liked Writing Process and were particularly impressed by how enthusiastic their students were about it. Collin captured the sentiments of many of the teachers when he

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Table 3
Implementation of Instructional Practices by Teacher during Nine-Week Instructional Session, Throughout the Year, and the Following Year

Teacher	WP			CSR			CWPT			MW	
	9W	TY	FY	9W	TY	FY	9W	TY	FY	9W	FY
Leigh	H	H	H	H	H	H	H	H	H	H	H
Collin	P	P	P	P	P	L	H	H	P	P	L
Rita	P	P	H	H	H	H	H	H	H	H	H
Angie	H	P	H	H	P	H	H	H	H	H	L
Amanda	L	L	L	L	L	L	P	L	L	P	P
Toni	H	P	P	L	L	L	H	L	L	H	H
Isabel	P	L	L	L	L	L	P	L	L	H	P

Note. WP = Writing Process; CSR = Cooperative Strategic Reading; CWPT = Classwide Peer Tutoring; MW = Making Words; 9W = Nine weeks; TY = Throughout year; FY = Following year; H = High fidelity of treatment and/or high frequency of implementation; P = Partial fidelity of treatment and/or lower frequency of implementation than requested; L = Low fidelity of treatment and/or low frequency of implementation; MW was taught the last nine weeks; thus, it is not possible to determine how it was implemented throughout the year.

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said, "At first I didn't think I was going to like it as much. But as I got into Writing Process, I saw the kids really motivated and interested in writing."

Teachers' perceptions of their implementation and observed implementation levels varied, with some reporting that they were implementing Writing Process even when key components of the approach were missing (e.g., students wrote once or twice a week rather than every day; students did not share with each other or conference with the teacher). A summary of teachers' level of implementation of Writing Process, as well as the other instructional practices, is provided in Table 3.

Facilitators of the implementation of Writing Process that were identified by more than half of the teachers included: ability to adapt/modify the strategy (71%) and students' acceptance of the strategy (57%). Barriers identified with implementation included: preparation for standardized tests (86%), time for instruction (71%), and instructional needs of students (57%). Angie said, "I was getting a little frustrated with Writing Process because I thought that we weren't meeting all of the competencies...." Teachers expressed concern about the amount of instructional time needed to implement Writing

Process adequately. Rita put it this way, "As far as Writing Process, they [the students] love it; it just takes a lot of time." Toni's concern about time was stated this way, "We try to write two or three times a week. It takes a long time. It might take at least two and a half hours, if not longer." A summary of teachers' views of the facilitators and barriers to implementing Writing Process and other practices is provided in Table 4.

Collaborative Strategic Reading

Background. All of the teachers except one (Rita) were unfamiliar with Collaborative Strategic Reading prior to the introduction of this strategy. Rita had been introduced to Collaborative Strategic Reading by one of the researchers during the previous year and had implemented it in her classroom. After the full-day workshop, the teachers indicated that they understood the procedures for implementing Collaborative Strategic Reading; however, through interviews and observations it became apparent that Rita was the only teacher who really understood the central ideas underlying the approach.

Implementation levels. This approach had the lowest implementation of the four instructional practices. One of the teachers never really implemented the approach independently. Two teachers, Rita and Leigh, implemented it consis-

Table 4
Teachers' Perceptions of the Facilitators and Barriers to Implementing the Instructional Practices

Writing Process

Facilitators

Ability to adapt/modify strategy	71%
Students' acceptance of the strategy	57%
Access to materials	43%
Lessons demonstrated in your class	43%
Meetings at the university	43%
Classroom partners	43%
Personal teaching style	43%

Barriers

Preparation for standardized tests	86%
Time for instruction	71%
Instructional needs of students	57%
Special events	43%
Range of student achievement levels	43%
Class size	43%

Collaborative Strategic Reading

Facilitators

Ability to adapt/modify strategy	100%
Students' acceptance of strategy	71%
Lessons demonstrated in your class	57%
Access to materials	43%
Classroom partners	43%
Instructional needs of students	43%
Grade-level curriculum	43%

Barriers

Range of student achievement levels	43%
Preparation for standardized tests	43%
Special events	43%

Classwide Peer Tutoring

Facilitators

Students' acceptance of strategy	100%
Ability to adapt/modify strategy	100%
Classroom partners	86%
Lessons demonstrated in your class	57%
Access to materials	43%

Barriers

Access to materials	43%
Time needed to prepare for the strategy	43%
Preparation for standardized tests	43%
Range of student achievement levels	43%
Class size	43%

Making Words

Facilitators

Students' acceptance of the strategy	86%
Access to materials	71%
Classroom partners	71%
Time for instruction	71%
Lessons demonstrated in your class	57%
Physical environment of classroom	57%
Time needed to prepare for strategy	57%
Meetings at the university	43%
Strategy implementation procedures	43%

Barriers

Range of student achievement levels	100%
Special events	57%
Instructional needs of students	57%
Class size	57%

Note. Percentages add up to more than 100% because participants could identify more than one facilitator and barrier.

tently throughout the year, two teachers implemented it partially throughout the year, and the remaining teachers implemented it only during the nine-week period. During the followup interviews the next year, two of the teachers reported that they used Collaborative Strategic Reading consistently, one teacher used it frequently but had made significant alterations in the implementation, one teacher implemented only one of the four significant components, and the remaining three teachers indicated that they thought students learned a lot from it and they intended to implement it but had not found the time.

Teachers' perceptions. Many teachers' first reactions to the approach were not positive though their enthusiasm increased considerably after implementation. Collin's first reaction was, "This approach is not as exciting to me as Writing Process, and I do not put much stock into it." However, after nine weeks of implementation he felt more positive: "I'm surprised at how well the students are understanding how to implement the strategy." Angie also expressed concerns during the training and then after implementation was very positive about the approach. "It really brings into focus what they know and what they don't know. I love the clicks and clunks and so do they. The only problem is time. We aren't getting to the wrapup."

Teachers expressed concerns that the strategy took too long to implement and that the students progressed too slowly through the material. Leigh's comment captures the concerns of many of the teachers: "It works all right for a three-paragraph article in the Weekly Reader, but it would take all day to do a chapter in science." Teachers used and integrated some of the language from the strategies such as "clicks and clunks" and "get the gist" often without implementing other components of the strategy.

As shown in the summary in Table 4, 100% of the teachers identified the ability to adapt and modify the strategy as a facilitator, and most of the teachers identified students' acceptance of the strategy (71%) as a strength. As barriers, teachers indicated that the time it took to cover material using the approach was a problem. Toni said, "It worked but it took a long time. You can't give that much time to one paragraph." Teachers indicated that the range of academic achievement levels made implementation difficult. For example, Amanda said, "We haven't used the practice be-

cause my group found it very difficult with so many poor readers." Another barrier was their perceived need to prepare students adequately for standardized tests.

Classwide Peer Tutoring

Background. None of the teachers were familiar with Classwide Peer Tutoring prior to its introduction to the group. After the full-day workshop, the teachers indicated that they understood the procedures for implementing Classwide Peer Tutoring; however, they were concerned about two things: (a) having adequate reading materials, and (b) the extent to which the students in their class would work effectively with their assigned reading partner.

Implementation levels. This approach had the highest implementation of the four instructional practices. All of the teachers indicated that they liked Classwide Peer Tutoring and implemented it regularly during the nine-week period. In addition, most of the teachers continued implementation during the remainder of the school year, occasionally taking several weeks off. During the followup interviews the next year, four of the teachers reported that they implemented the approach for nine-week periods with breaks in between, and two of the teachers indicated that they thought it was a very effective practice and wanted to implement it but had not done so yet.

Teachers' perceptions. Teachers liked Classwide Peer Tutoring because they perceived it as being easy to implement. They liked the fact that the instructor's manual is highly detailed, providing scripted lessons for the teachers to follow including what they should say to the students during the first several lessons. Collin's comment was similar to that of other teachers: "Implementing it has been a very easy thing to do since all of the directions for how to do it are very well laid out."

The only impediment teachers identified to getting started with Classwide Peer Tutoring was finding enough reading material at the students' instructional level. Also, since students read several times a week, they quickly consumed the available reading materials. Some of the teachers used their own money to purchase books so that they would have adequate materials. Other teachers worked extensively with the Title I teacher and the librarian to secure enough adequate reading materials. Two teachers decided to have all students use the same book regardless of the students' reading ability level.

Many of the teachers commented that what they liked about Classwide Peer Tutoring was that it actively involved all of the students in their classes in a meaningful way. Teachers felt that Classwide Peer Tutoring had contributed to improving the students' reading abilities. They based this assertion/perception largely on their own observations. They indicated that Classwide Peer Tutoring yielded improvement in students' comprehension, fluency, and vocabulary skills. Rita said, "I definitely think it helps all students academically. I know it helps them with their [reading] fluency." Teachers also indicated that they appreciated having the time to move around the room and monitor students' reading ability and/or on-task behavior. Overall, most of the teachers were extremely enthusiastic about Classwide Peer Tutoring. Angie described her reaction to Classwide Peer Tutoring this way, "After we got started, the kids caught on quickly and there was 100% engagement. They were on task. I loved it and I was so impressed. I thought we'd have a few that didn't get into it, and everybody did. So this was my all-time favorite."

Other than finding and maintaining an adequate supply of reading materials, teachers only expressed two concerns regarding Classwide Peer Tutoring. One was the point system. Several did not use it effectively and several felt it interfered with implementation. Teachers were also concerned about the use of Classwide Peer Tutoring with their good readers, noting that several of the good readers appeared bored with the reading material because it was too easy for them and the practice required them to do rereading. Toni said, "I think some of the higher kids didn't want to do it because they were reading stories that were grade levels below what they would normally read.... I think it was good for the low kids, but I couldn't see any major results from the higher kids."

As can be seen in Table 4, teachers' responses to Classwide Peer Tutoring were very positive and no barriers were identified by even half of the teachers. Barriers that were identified by a few of the teachers included: access to materials (43%), time needed to prepare for the strategy (43%), preparation for standardized tests (43%), range of student achievement levels (43%), and class size (43%).

Making Words

Background. None of the teachers were familiar with Making Words prior to its introduction to the group. After the full-day workshop, the teachers indicated that they understood the procedures for implementing Making Words; however, they were concerned about whether it would be challenging enough for their good readers. This was particularly troubling for teachers of 4th, 5th, and 6th grade. Preparing the materials for Making Words is extremely time-consuming. Because we anticipated that this would be an impediment to initiating the strategy, we made the materials for the teachers to use when implementing Making Words for the first nine weeks.

Implementation levels. Making Words was the fourth strategy taught, which meant that it was implemented during the final nine weeks of the school year. Three teachers (Amanda, Collin, and Rita) indicated that it was difficult to implement due to end-of-year constraints. Five of the teachers implemented the strategy on a regular basis (see Table 3), and all of the teachers at least gave it a try (implemented at least 10 times during a nine-week period). During the followup interviews the next year, four of the teachers indicated that they implemented it regularly; three were not using it; and two indicated that they wanted to use it but had not yet worked it into their schedule. Finally, a 6th-grade teacher said that it was not appropriate for her students.

Teachers' perceptions. In general, teachers recognized the potential merit of the strategy for readers who had difficulty understanding phonics and the structure of words. There were concerns about the extent to which it could be paced rapidly enough to hold students' attention and whether it was challenging enough for better readers.

Upper-grade teachers in particular expressed concerns about implementing Making Words. Angie commented, "Although we did use the strategy, I felt that it was not beneficial enough for sixth graders to warrant the time spent preparing and implementing." Rita expressed similar concerns but solved the problem by pulling the students who needed Making Words into a small group.

Teachers who taught lower grades were much more enthusiastic about the effectiveness of Making Words. Toni said, "I really liked it. The

kids really liked it. I think it probably helps the lower kids more, but I think it helps the average kids also because some of them are not phonetically aware of patterns." Leigh summarized the responses of many of the teachers, "Overall, I think this was a very worthwhile intervention for a few reasons. One, the students got direct explicit instruction in phonemic awareness, and two, it was a whole class activity that involved everyone. I saw students make progress, especially the LD students. There were times though that the lessons seemed too easy for the average and high-achieving students. It seemed at times more appropriate for the lower grades."

As shown in Table 4, most teachers identified the following factors as facilitators for implementation of Making Words: students' high acceptance of the strategy, access to materials, classroom partners, and time for instruction (this strategy took the least amount of time to implement). All of the teachers (100%) identified the range of student achievement levels as a barrier to implementation of this instructional practice. Other barriers that were identified by slightly more than half of the teachers (57%) included special events that interfered with implementation, instructional needs of students, and class size.

Summative Findings from the Professional Development Program

1. Teachers crave instructional practices that can be used with the class as a whole, enhance learning for all students (particularly students with learning problems), and are easy to implement. Most of the teachers who participated in this year-long program mentioned frequently how satisfied they were to be taught instructional practices they could use the next day in their classrooms without making extensive changes in their classroom procedures. These teachers were "starved" (a word used by two teachers) for practical instructional practices that they could implement that would improve the language arts performance of their at-risk students and students with LD, while also enhancing performance of other students in the class. Teachers uniformly told us that if all of the procedures and materials were available so that with little or no planning they could implement the instructional practice they next day, they would be likely to do it. Otherwise, the likelihood of implementation was very low.

Teachers readily admitted that prior to their participation in this year-long researcher-teacher group, they knew few or no instructional practices designed to enhance the reading skills of students who were poor readers or students with LD. Most of the teachers were self-identified as whole-language teachers and their understanding of reading instruction, particularly phonics instruction, for students with reading problems was poor. As we have found with other elementary teachers (Schumm et al., 1996), teachers spend most of their reading instruction time teaching the class as a whole. Even when there was more than one teacher in the classroom (all of these classes had a special education and general education teacher in the class for reading/language arts), most of their instruction prior to involvement in this program was whole-class instruction. The instructional practices we taught provided teachers with the skills to organize their class into smaller groups of students so that students could work purposefully with each other.

2. Commitment to implementation, demonstration lessons, and followup meetings enhanced implementation. Most teachers initially reacted with concerns to the instructional practices that were presented, often providing reasons why the instructional practices would not work in their classrooms (e.g., class size, the number of low-achieving students, expectations to meet school or state standards). These same restrictions have been identified in previous professional development programs (Blumenfeld, Krajcik, Marx, & Soloway, 1994; Weinstein et al., 1991). However, teachers were aware that they had made a commitment to implement each practice for nine weeks and they took this commitment very seriously. Also, teachers perceived that they benefited from the demonstration lessons provided by their researcher-partner in their classes. Furthermore, once teachers implemented the practices, they all made very positive comments about their effectiveness.

Teachers were often afraid to implement the instructional practices. Toni said, "Teachers are afraid of new things, and we are afraid to fail. I think that the approach you did with us, showing them in our classes and then doing it ourselves within our own classroom, that sets you up for success." It was important for us to as-

sure the teachers that it was not only "okay" but desirable to vary procedures to suit their students. Also, teachers appreciated the followup meetings where they could problem solve implementation procedures with other teachers who were teaching the same instructional practices. Teachers were much more positive about the instructional practices after they implemented them. Many of the teachers became evangelical in their convictions about the effectiveness of particular practices and attempted to persuade fellow teachers at their school who did not participate in the professional development program to implement them.

3. Teachers learned the global features of the instructional practice. The teachers who participated in this researcher-teacher group implemented the instructional practices in ways that indicated that they knew the global features of the instructional practice but often did not know how to maximize its effectiveness or provide the necessary differentiated instruction for special learners. For example, with Writing Process, teachers allowed students to write for a designated length of time and recognized it was important for them to choose their own topics, but they implemented few or no skill groups and did not keep records of students' progress in writing. With Collaborative Strategic Reading, teachers arranged heterogeneous groups of students who were assigned specific roles in the groups; however, they seemed uncertain of how to ensure that students enacted their roles appropriately and what to do when groups were not effectively implementing the reading strategy.

This finding offers support for the need to provide explicit instruction in both the procedures for how to implement the instructional practice and how to ensure that the practices are working effectively for students with diverse learning needs. This involves extensive opportunities to problem solve situations that are likely to occur when the instructional practice is implemented. It also requires identifying explicit procedures that should be implemented to ensure that students who have learning problems get their needs met.

4. Standardized tests influence teachers' instructional practices. The extent to which teachers viewed the instructional practice as contributing to student performance on the yearly standardized test was directly related to whether they viewed the practice as effective and likely to be sustained by them. For example, although the teachers and students liked Writing Process and felt that students were learning a great deal from it, they were concerned that many of the practices associated with Writing Process would not prepare their students well for the standardized tests; thus, they stopped teaching Writing Process in order to implement a more traditional curriculum.

In addition, our observations revealed that the teachers in this study stopped implementing the instructional practices we taught them (as well as others) for a minimum of one month to prepare for standardized testing. Amanda said, "The SAT has just kind of disrupted everything. With the test booklets we are supposed to be giving them practice for the SAT, but I just can't let them keep failing these quizzes." In many classes the changes associated with preparation for the yearly standardized test were structural as well as instructional. Students who usually sat in groups or teams were moved into rows to prepare for testing. Assignments and lessons were changed to ensure that students were knowledgeable about the material likely to be covered on the test and were comfortable with the test format.

5. Some teachers did not implement instructional practices regardless of the support available. Some of the teachers implemented all the instructional practices well, making the adaptations needed to suit the grade and performance levels of their students. Some of the teachers implemented a few of the instructional practices well, selecting those that were most closely suited to their present teaching practices and that required few or no changes in their teaching routines or that did not require extensive planning. Some of the teachers implemented none of the instructional practices well despite extensive support, demonstration lessons in their classes, and efforts by others to conduct the planning and preparation for them.

This extensive professional development program offers support for the notion that many teachers are willing to make extensive changes in their instructional repertoires when provided the knowledge, tools, materials, and support to do so. It also offers support for the idea that

there are some teachers who will be able to identify reasons (e.g., my class has too many nonreaders; my class has too many behavior problems) for why it does not make sense for them to implement different instructional practices in their classes, no matter how much support and assistance is provided.

This variation in teacher participation lends support to selecting teachers for extended and ongoing professional development programs who are willing and interested in making changes in their instructional routines. However, our experience is that determining teacher willingness and interest is more difficult than implementers of professional development programs might think. Teachers experience many pressures and perceived threats that they feel compel them to volunteer to participate in professional development programs when their real interest in participation is indeed low. For some of these teachers, participation changes their orientation and their instructional practices. For others, all of the efforts and support available are unlikely to yield short- or long-range changes in their instructional practices.

6. Lack of time is a nagging problem. Time is the teacher's enemy in the classroom. Teachers consistently reported lack of time as a barrier to the long-term implementation of the instructional practices. Teachers were highly interested in how much time it would take to implement an instructional practice and what they perceived they would get in return. For example, Collaborative Strategic Reading was viewed as highly effective by teachers for teaching reading comprehension strategies and vocabulary development, but they expressed concern over how much time it took to implement it and it was sustained by only three teachers during the follow-up year. The teachers in this study reinforced a previous finding that content coverage is valued above learning and that teachers have a sense of accomplishment when they "cover" a lot of material, regardless of whether students master the material or not (Schumm et al., 1995; Vaughn & Schumm, 1994).

This concern with time is inconsistent with the way time was frequently misused in these classrooms. For example, in our observations, as in previous research (Good & Brophy, 1994), a considerable time is spent on such noninstructional activities as housekeeping, changing tasks,

preparing to leave the room, and classroom management.

7. Teachers sustained implementation into the second year. Implementation following the first year of the teacher-researcher professional development group was high. All four instructional practices were implemented in Year Two at least at the same level as during Year One, and for some teachers at a higher rate (Angie, Rita). Teachers who implemented the practices consistently during Year One maintained implementation throughout Year Two and teachers who were low implementers during Year One remained so during Year Two. Not surprisingly, some teachers "took to" and implemented some instructional practices and not others. Writing Process came the closest to being the instructional practice that all teachers implemented consistently.

DISCUSSION

Teachers participated in a year-long researcher-teacher professional development program designed to enhance language arts outcomes for students at risk and with LD in the general education classroom. The program was designed to capitalize on key elements of effective professional development: (a) teaching only four instructional practices identified through a review of the research as successful for enhancing language arts outcomes for students with special needs in general education classrooms and selected to respond to teachers' persistent concerns about effective instruction for language arts; (b) involving teachers who agreed to implement each of the four instructional practices for a minimum of nine weeks each (one practice was taught each nine-week period over a 36-week school year); (c) providing ongoing coaching and support on a once-a-week basis to all participating teachers to ensure that the instructional practices could be implemented in their classrooms; and (d) providing a bimonthly meeting for participating teachers to discuss successes and problem solve difficulties with the implementation of the instructional practices.

Was the researcher-teacher group successful? If success were measured solely on the basis of teachers' reactions to the program and the instructional practices, the program would be viewed as a huge success. All the teachers perceived that the year-long program was one of

the most, if not *the* most, important experiences in their entire teaching careers. Collin's comment at the end of the year represented the comments of most of the teachers, "I really feel like this has been a breakthrough year for me as a teacher because of what I have learned from the project. It has been really productive. I have learned so much and it is clear to me that everyone is benefiting. The ESE [exceptional student education] students are gaining a lot from the strategies I have taught. I mean, it's incredible. I have wonderful stories to tell about all of them." Furthermore, teachers received considerable reinforcement from their students who indicated that they liked the instructional practices and felt that they had learned a lot from them.

Overall, we felt we had identified instructional practices that met teachers' needs, worked jointly with teachers to tailor them so that they could implement them in their classrooms, and arranged for a community of teachers to provide ongoing support and solutions to each other about implementing these instructional practices. In terms of the components of an effective professional development program, this experience confirmed that we had found the right mixture of content and community. The teachers wanted to continue the project the next year just to ensure that they would have support as they further implemented the instructional practices. They were also eager to continue to learn other instructional practices.

Despite these very positive outcomes (having done this six times before, we viewed these outcomes as unusually positive), we still encountered difficulties and disappointments. First, despite our best efforts, resources, personnel, and support, two teachers implemented few if any of the instructional practices well. Two capable researchers worked with these teachers (individuals who had previously been successful in the same school system). The two teachers they worked with were consistently low implementers despite weekly classroom demonstrations of how the practices could be implemented, assistance in organizing students in pairs and groups when needed, and often the provision of all necessary materials. Perhaps we underestimate how difficult change is for some teachers (Ball, 1995).

Second, most teachers were unable to implement the instructional practices in ways that demonstrated deep understanding of the principles underlying the effectiveness of the practices. Teachers understood the procedures and implemented them effectively, but often had difficulties understanding when and how to make modifications, alter grouping practices for students, or meet the needs of an individual learner who required additional support. This may be because the extent of knowledge and experience needed fully to understand and implement most instructional practices in language arts to meet the special needs of students with LD is considerably greater than can be acquired even in a year-long intensive program (Englert & Tarrant, 1995). It may also be that these teachers have had no models for how this type of instruction should look, a problem that has also been found in project-based approaches to science education (Blumenfeld et al., 1994). Such models or visions have been identified as essential for teachers to enhance their craft (Doyle, 1990).

All of these teachers worked with special education teachers from their schools who participated in the same professional development program and who co-taught during reading and language arts. Our interviews and observations indicate that the special education teachers often were not able to serve as models for the general education teacher. Furthermore, it cannot be assumed that because the special education teacher is in the room, students with disabilities receive the assistance they need, nor that the special education teachers are able to transfer automatically the skills they have acquired as a resource room teachers in pull-out settings to the "pull-in" setting in the general education classroom. The special education teachers seemed as unsure as the general education teachers about how to adapt these instructional approaches for individual students with special needs in general education settings.

If this is the case, and our experiences document that it is, to prepare teachers adequately to be successful educators of students with LD, preservice and inservice training must be considerably more extensive, directed, and ongoing than those we have heretofore developed or implemented. Teachers must be provided with educational experiences that are extremely specific, provided with demonstration lessons in their classrooms, given opportunities to teach with feedback in their classroom settings, and pro-

vided release time for ongoing meetings with other teachers to discuss adaptations and alternative practices for their students.

Most preservice teacher education programs provide at most a single mainstreaming course. To hope that this will be sufficient to prepare teachers to meet the needs of all students with disabilities is not realistic. The idea that we can provide a day or two of inservice training once every few years simply will not yield changes in the instructional practices of most teachers (Malouf & Schiller, 1995; Marston, Deno, Kim, Diment, & Rogers, 1995; Peterson, 1995; Richardson, 1990). We cannot afford to fail to learn from previous experiences, where "...education reform issues fell short primarily because planners seriously underestimated teacher training needs" (McLaughlin & Marsh, 1978, p. 69).

Furthermore, teachers are bombarded with new curricula, materials, inservice workshops, videos, computer information, and catalogs. The task of sorting through all this is overwhelming. The tugs and pulls from new ideas from their school principal, the curriculum office, the state department mandates, the school board reform efforts, and the responsibilities of school committees keep most teachers feeling as though they are always shuffling critical issues around on their agenda. The needs of students with LD are "one concern among many for classroom teachers" (Gersten et al., 1995, p. 60).

In short, current models of professional development and dissemination have not worked and have given research a bad reputation (Kaestle, 1993). Little (1993) reminds us that "...the most promising forms of professional development engage teachers in the pursuit of genuine questions, problems, and curiosities, over time, in ways that leave a mark on perspectives, policy, and practice" (p. 133). As we and others engaged in the process have learned (e.g., Ball & Runquist, 1993; Blumenfeld et al., 1994; Englert & Tarrant, 1995; Harris, 1995; Richardson, Anders, Tidwell, & Lloyd, 1991), collaboration between researcher and teacher involves: (a) considerable time and investment (a year-long commitment from group members is minimal), (b) balancing multiple agendas including those of the researcher and the practitioner, and (c) achieving the delicate balance between practice knowledge and research knowledge. Even these intensive efforts often yield considerably varied

returns, with some teachers and their students benefiting enormously and others considerably less so.

Epilogue

An unanticipated, yet positive outcome occurred during the year following our year-long professional development program. Because of the enthusiasm of the participating teachers and the perceived gains in academic achievement by their students, the administration and other teachers at one of the schools decided that they would like to learn the four instructional practices. As a result, separate from our research efforts, the school contracted with us to provide professional development workshops and ongoing in-class support for all teachers at the school. One of the researchers from the study has been providing these services as a professor-in-residence. Implementation of the practices across the school has been high, with variation due primarily to the greater appropriateness of the procedures to particular grade levels.

Furthermore, participating teachers from the other school recruited teachers from their school to attend district-sponsored workshops on the instructional practices.

REFERENCES

Anders, P.L., & Richardson, V. (1991). Research directions: Staff development that empowers teachers' reflection and enhances instruction. *Language Arts, 68*, 316-321.

Baker, J.M., & Zigmond, N. (1995). The meaning and practice of inclusion for students with learning disabilities: Themes and implications from the five cases. *The Journal of Special Education, 29*(2), 163-180.

Ball, D.L. (1995). Blurring the boundaries of research and practice. *Remedial and Special Education, 16*(6), 354-363.

Ball, D.L., & Runquist, S.S. (1993). Collaboration as a context for joining teacher learning with learning about teaching. In D.K. Cohen, M.W. McLaughlin, & J.E. Talbert (Eds.), *Teaching for understanding: Challenges for policy and practice* (pp. 13-42). San Francisco: Jossey-Bass.

Blumenfeld, P.C., Krajcik, J.S., Marx, R.W., & Soloway, E. (1994). Lessons learned: How collaboration helped middle grade science teachers learn project-based instruction. *Elementary School Journal, 94*(5), 539-551.

Bogdan, R., & Biklen, S.K. (1992). *Qualitative research for education: An introduction to theory methods* (2nd ed.). Boston: Allyn and Bacon.

Cochran-Smith, M., & Lytle, S.L. (1992). Communities for teacher research: Fringe or forefront? *American Journal of Education, 100*, 298-324.

Cone, J.K. (1992). Untracking advanced placement English: Creating opportunity is not enough. *Phi Delta Kappan, 73*, 712-717.

Crandall, D.P., & Associates. (1982). *People, policies, and practices: Examining the chain of school improvement* (vols. 1-10). Andover, MA: The NETWORK.

Cunningham, P.M., & Cunningham, J.W. (1992). Making words: Enhancing the invented spelling-decoding connection. *The Reading Teacher, 46*(2), 106-115.

Delquadri, J., Greenwood, C.R., Whorton, D., Carta, J.J., & Hall, R.U. (1986). Classwide peer tutoring. *Exceptional Children, 52*(6), 535-542.

Doyle, W. (1990). Themes in teacher education. In W.R. Houston, M. Haberman, & J. Sikula (Eds.), *Handbook of research on teacher education: A project of the Association of Teacher Educators* (pp. 1-24). New York: Macmillan.

Englert, C.S., & Tarrant, K.L. (1995). Creating collaborative cultures for educational change. *Remedial and Special Education, 16*(6), 325-336, 353.

Gersten, R., Morvant, M., & Brengelman, S. (1995). Close to the classroom is close to the bone: Coaching as a means to translate research into classroom practice. *Exceptional Children, 62*, 52-66.

Gersten, R., & Woodward, J. (1992). The quest to translate research into classroom practice: Strategies for assisting classroom teachers' work with "at risk" students and students with disabilities. In D. Carnine & E. Kameenui (Eds.), *Higher cognitive functioning for all students* (pp. 201-218). Austin, TX: Pro-Ed.

Glaser, B.G., & Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.

Good, T., & Brophy, J. (1994). *Looking in classrooms* (6th ed.). New York: Harper and Row.

Graves, D.H. (1983). *Writing: Teachers and children at work*. Portsmouth, NH: Heinnemann.

Guba, E.G., & Lincoln, Y. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage.

Harris, K.C. (1995). School-based bilingual special education teacher assistance teams. *Remedial and Special Education, 16*(6), 337-343.

Jenkins, J., & Leicester, N. (1992). Specialized instruction within general education: A case study of one elementary school. *Exceptional Children, 58*(6), 555-563.

Kaestle, C.R. (1993). The awful reputation of education research. *Educational Researcher, 22*, 23-31.

Klingner, J.K., & Vaughn, S. (1996). Reciprocal teaching of reading comprehension strategies for students with learning disabilities who use English as a second language. *Elementary School Journal, 96*(3), 275-293.

Klingner, J.K., Vaughn, S., & Schumm, J.S. (1996). *Inclusion of students with disabilities: Roles and responsibilities of the LD specialist*. Manuscript submitted for publication.

Little, J.W. (Ed.). (1990). *Teachers as colleagues*. New York: Teachers College Press.

Little, J.W. (1993). Teachers' professional development in a climate of educational reform. *Educational Evaluation and Policy Analysis, 15*(2), 129-151.

Malouf, D., & Schiller, E. (1995). Practice and research in special education. *Exceptional Children, 61*, 414-424.

Marston, D., Deno, S.L., Kim, D., Diment, K., & Rogers, D. (1995). Comparison of reading intervention approaches for students with mild disabilities. *Exceptional Children, 62*, 20-37.

Mathes, P.G., Fuchs, D., Fuchs, L.S., Henley, A.M., & Sanders, A. (1994). Increasing strategic reading practice with Peabody Classwide Peer Tutoring. *Learning Disabilities Research and Practice, 9*, 44-48.

McLaughlin, M.W., & Marsh, D.D. (1978). Staff development and school change. *Teachers College Record, 80*, 69-94.

Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.

Peterson, A. (1995). Teacher-researcher compatibility: A view from both sides. *Remedial and Special Education, 16*(6), 364-367.

Richardson, V. (1990). Significant and worthwhile change in teaching practice. *Educational Researcher, 19*(7), 10-18.

Richardson, V., Anders, P., Tidwell, D., & Lloyd, C. (1991). The relationship between teachers' beliefs and practices in reading comprehension instruction. *American Educational Research Journal, 28*(3), 559-586.

Schumm, J.S., & Vaughn, S. (1991). Making adaptations for mainstreamed students: General classroom teachers' perspectives. *Remedial and Special Education, 12*(4), 18-27.

Schumm, J.S., & Vaughn, S. (1992). Planning for mainstreamed special education students: Perceptions of general classroom teachers. *Exceptionality, 3*, 81-98.

Schumm, J.S., & Vaughn, S. (1995a). Getting ready for inclusion: Is the stage set? *Learning Disabilities Research and Practice, 10*(3), 169-179.

Schumm, J.S., & Vaughn, S. (1995b). Meaningful professional development in accommodating students with disabilities. *Remedial and Special Education, 16*(6), 344-353.

Schumm, J.S., Vaughn, S., Haager, D., McDowell, J., Rothlein, L., & Saumell, L. (1995). General education teacher planning: What can students with learning disabilities expect? *Exceptional Children, 61*(4), 335-352.

Schumm, J.S., Vaughn, S., & Moody, S.W. (1996). *Grouping for reading instruction: Teachers' perceptions and practices*. Manuscript in preparation.

Semmel, M.I., Abernathy, T.V., Butera, G., & Lesar, S. (1991). Teacher perceptions of the regular education initiative. *Exceptional Children, 58*, 9-24.

Showers, B., Joyce, B., & Bennett, B. (1987). Synthesis of research on staff development: A framework for future study and a state-of-the-art analysis. *Educational Leadership, 45*(3), 77-88.

Simmons, D.C., Fuchs, L., Fuchs, D., & Mathes, P. (1995). Effects of explicit teaching and peer tutoring on the reading achievement of learning disabled and low-performing students in general education. *Elementary School Journal, 95*(5), 387-408.

Vaughn, S., Moody, S., & Schumm, J.S. (1998). Broken promises: Reading instruction in the resource room. *Exceptional Children, 64*(2).

Vaughn, S., & Schumm, J.S. (1994). Middle school teachers' planning for students with learning disabilities. *Remedial and Special Education, 15*(3), 152-161.

Vaughn, S., & Schumm, J.S. (1996). Classroom ecologies: Classroom interactions and implications for inclusion of students with learning disabilities. In D.S. Speece & B.K. Keogh (Eds.), *Research on classroom ecologies: Implications for inclusion of children with learning disabilities* (pp. 107-124). Hillsdale, NJ: Erlbaum.

Vaughn, S., Schumm, J.S., & Forgan, J.W. (1995). Instructing students with high-incidence disabilities in the general education classroom. In J.A. Welter (Ed.), *Communicating student learning* (pp. 12.269-12.307). Alexandria, VA: Association for Supervision and Curriculum Development.

Weinstein, R.S., Soule, C., Collins, F., Cone, J., Melhorne, M., & Simontacchi, K. (1991). Expectations and high school change: Teacher-researcher collaboration to prevent school failure. *American Journal of Community Psychology, 19*, 333-402.

Yin, R.K. (1991). Applications of case study research. Washington, DC: Cosmos Corp.

Zaragoza, N., & Vaughn, S. (1992). The effects of process writing instruction on three 2nd-grade students with different achievement profiles. *Learning Disabilities Research and Practice, 7*(4), 184-193.

Zigmond, N., & Baker, J. (1990). Mainstream experiences for learning disabled students (Project MELD): Preliminary report. *Exceptional Children, 57*, 176-185.

Zigmond, N., Jenkins, J., Fuchs, D., Deno, S., & Fuchs, L.S. (1995, December). When students fail to achieve satisfactorily: A reply to McLeskey and Waldron. *Phi Delta Kappan*, 303-306.

Zigmond, N., Jenkins, J., Fuchs, L.S., Deno, S., Fuchs, D., Baker, J.N., Jenkins, L., & Coutinho, M. (1995, March). Special education in restructured schools: Findings from three multi-year studies. *Phi Delta Kappan*, 531-540.