

## Educational Programs for Elementary Students with Learning Disabilities: Can They Be Both Effective and Inclusive?

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One of the most controversial issues in special education over the last 40 years has been the extent to which students with learning disabilities (LD) should be educated in general education classrooms. Recent mandates in federal law requiring that all students with disabilities have access to the general education curriculum and make adequate yearly progress relative to this content have intensified this debate. In this article, a brief summary of research regarding the nature of instruction that produces significantly improved educational outcomes for students with LD is provided. This is followed by a review of research related to the delivery of this high-quality instruction in inclusive, general education classrooms and in resource settings. We conclude that this research provides the foundation for reconsidering full inclusion and how services are delivered for elementary students with LD.

The LRE mandate in the Individuals with Disabilities Education Act (2004) provides a clear preference for educating students with disabilities in general education classrooms. More specifically, this mandate states that students with disabilities should only be educated in separate, special education settings if their disability is so severe that it cannot be addressed in the general education classroom with supplementary aids and services. Since the LRE mandate was originally included in federal legislation in 1975, it has provided the legislative support for the movement toward educating students in inclusive, general education settings. These settings have been defined as general education classrooms in which students with disabilities are valued and active participants and are provided supports that give them an opportunity to succeed (McLeskey, Rosenberg, & Westling, 2010).

In principle, the LRE mandate and inclusion are widely supported by parents, researchers, school professionals, and advocates for students with disabilities (Fuchs & Fuchs, 1998a; McLeskey, 2007; Scruggs & Mastropieri, 1996; Zigmond, 2003). However, the implementation of this mandate in practice has been and remains a very contentious and divisive issue among special education professionals and stakeholders (Fuchs & Fuchs, 1994; Kauffman, 1993; McLeskey, 2007; Zigmond, 2003; Zigmond, Kloo, & Volonino, 2009). The two central issues that have formed the crux of this controversy relate to how much of the school day students are included in general education settings, and the extent to

which these placements produce desirable student outcomes (McLeskey, 2007; Waldron & McLeskey, 2009).

These issues have been the subject of especially passionate debate related to the education of students with learning disabilities (LD). From one perspective, advocates have suggested that the relatively mild problems exhibited by students with LD could be addressed in the general education classroom through the collaborative efforts of general and special educators, eliminating the need for pulling students out of general education for resource class instruction (Reynolds, Wang, & Walberg, 1987; Sailor & Roger, 2005; Skrtic, Harris, & Shriner, 2005; Will, 1986). In response to these calls for full inclusion, other professionals have raised questions about the feasibility and effectiveness of these programs for addressing the academic needs of students with LD (Fuchs & Fuchs, 1994; Fuchs, Fuchs, & Stecker, 2010; Zigmond, 2003; Zigmond et al., 2009).

In spite of the controversy that exists surrounding the effectiveness of inclusive programs, data from the U.S. Department of Education (2010) reveal that, over the last two decades, the number of students with LD who are educated in general education classrooms for most of the school day has increased substantially. For example, in 1989–1990, about 22 percent of these students were educated in a general education setting for 80 percent or more of the school day (McLeskey, Hoppey, Williamson, & Rentz, 2004). By 2007–2008, this proportion had increased to 62 percent (U.S. Department of Education, 2010). This dramatic increase in inclusive programs has led some to conclude that in most parts of the United States, the preferred model of service delivery for students with LD is now “full inclusion with co-teaching” (Zigmond et al., 2009, p. 196).

Given the controversy regarding full inclusion, much research has been conducted regarding the effectiveness of these programs compared to resource or pullout programs for students with LD. Reviews of this research (Carlberg & Kavale, 1980; Epps & Tindal, 1988; Freeman & Alkin, 2000; Leinhardt & Pally, 1982; Lindsay, 2007; Madden & Slavin, 1983; Manset & Semmel, 1997; Salend & Duhaney, 1999, 2007; Sindelar & Deno, 1978) have been very consistent, indicating that some students obtain better achievement outcomes in inclusive general education settings, while others do better with part-time resource support. For example, Manset and Semmel (1997) reviewed the effectiveness of several model full inclusion programs and concluded that, while some of these programs produced improved academic outcomes for students with mild academic disabilities when compared to students in resource programs, other inclusive programs produced unimpressive results. Similarly, Epps and Tindal (1988) reviewed the effectiveness of resource programs and reported that the effectiveness of these programs has not been demonstrated, although some investigations revealed that resource programs were superior to full-time placement in general education classrooms. Others have reached similar conclusions (Carlberg & Kavale, 1980; Freeman & Alkin, 2000; Leinhardt & Pally, 1982; Lindsay, 2007; Madden & Slavin, 1983; Salend & Duhaney, 1999).

A second conclusion of most of these reviews is that the student outcomes in inclusive and resource classes are variable because of the unevenness in the quality of instruction that is provided in these settings. More specifically, Epps and Tindal (1988) note "It is not the setting itself, then, but instructional variables within these settings that largely influence student achievement" (p. 228). Similarly, Leinhardt and Pally (1982) state that the "setting itself is not the primary issue of importance, rather it is what happens in the setting" (p. 574). They go on to note that a setting does not eliminate or guarantee the presence of effective instructional practices, as most important variables can occur in most settings.

These findings suggest that both inclusive and resource programs *can* be used to improve academic outcomes for elementary students with LD, if high-quality instruction, designed to meet individual student needs is delivered in these settings. Key questions that are raised by these reviews relate to the nature of "high-quality" instruction, and where it can be effectively delivered. We contend that research that has been conducted over the last decade provides evidence that this instruction is best delivered in part-time, separate special education settings, and that full inclusion is not a feasible alternative for meeting the basic academic needs in reading and math for most students with LD.

In the following sections of this article, we provide a summary of research to support this contention. Initially, we address research related to the characteristics of high-quality instruction that is needed if elementary students with LD are to make adequate academic progress. This is followed by a summary of research related to whether this instruction can be delivered in inclusive, general education classrooms. Finally, we review research regarding the extent to which high-quality instruction has been delivered in part-time, special education resource settings. Research related to each of

these questions should provide insight into the new continuum of services that seems to be emerging for elementary students with LD (Fuchs et al., 2010), as educators attempt to create programs for these students that are both effective and inclusive.

### WHAT IS "HIGH-QUALITY INSTRUCTION" THAT PRODUCES SIGNIFICANT EDUCATIONAL PROGRESS FOR MANY ELEMENTARY STUDENTS WITH LD?

Over the last decade, research has revealed that many elementary students with mild academic disabilities (mostly students with LD) can make significant academic gains when provided high-quality instruction in part-time, separate settings (Foorman & Torgesen, 2001; Gersten et al., 2009a, b; Holloway, 2001; Marston, 1996, 2001; Torgesen, 2002; Torgesen et al., 2001; Vellutino, Scanlon, Small, & Fanuele, 2006). Furthermore, these gains are often significantly greater than gains that are experienced by most students with similar difficulties who are educated in high-quality, full-time inclusive settings (Marston, 2001; McLeskey & Waldron, 2010; Torgesen et al., 2001; Torgesen, 2009; Vellutino, Scanlon, Small, & Fanuele, 2006; Waldron & McLeskey, 1998). Perhaps most importantly, this research reveals that, for as many as 40–50 percent of these students, significant academic gains result in catching up with grade-level peers (Torgesen et al., 2001; Torgesen, 2009; Vellutino et al., 2006).

To achieve these results, research indicates that this high-quality instruction (i.e., instruction that has strong research support for significantly improving academic outcomes for students with LD) should be more intensive than instruction that is typically offered in general education classrooms (Gersten et al., 2009a, 2009b; Fletcher & Vaughn, 2009). This more intensive instruction explicitly focuses on a small group of targeted, high-priority skills and concepts, which are taught directly with sufficient time for instruction and using practices such as modeling and guided practice to ensure student mastery (Foorman & Torgesen, 2001; Gersten et al., 2009b). The level of intensity of this high-quality instruction is increased by providing instruction to smaller groups of students and by providing more instructional time that is in addition to high-quality general education instruction (Gersten et al., 2009b). Group sizes of 1–3 have generally been shown to be most effective (Elbaum, Vaughn, Hughes, & Moody, 2000; Iverson, Tunmer, & Chapman, 2005; Vaughn et al., 2003), while additional instructional time typically requires 40–60 minutes per day, 4–5 days per week (Fletcher & Vaughn, 2009; Torgesen, 2002).

A teacher with a high level of specialized skills should deliver this instruction (Brownell et al., 2009; Fletcher & Vaughn, 2009; Gersten et al., 2009a). For example, research by Brownell and colleagues (2009) revealed that student reading gains were influenced by teacher knowledge and skill related to behavior management, decoding practice, and providing instruction that is engaging and explicit. Moreover, these skills are not typically included in general education teacher education programs, but are more frequently part of the specialized knowledge and skills that are included in

special education teacher education programs (Brownell et al., 2009; Brownell, Ross, Colon, & McCallum, 2005).

Research has documented that high-quality or effective instruction should have several qualities related to student grouping, instructional design, delivery of instruction, independent practice, and progress monitoring (Fletcher & Vaughn, 2009; Foorman & Torgesen, 2001; Gersten et al., 2009a, b; Rosenshine & Stevens, 1986; Swanson, 2001, 2008; Swanson & Hoskyn, 1998; Torgesen, 2000, 2002). These qualities are included in Table 1 and suggest that this instruction is intensive, explicit, should be delivered to small groups, and should be closely monitored. While some have contended that this type of instruction can be delivered in inclusive, general education classrooms (Sailor & Roger, 2005; Skrtic et al., 2005; Will, 1986), others have taken the position that separate class settings are required for delivering this instruction (Fuchs & Fuchs, 1998; Torgesen, 2002; Zigmond et al., 2009). Research related to the settings in which this instruction may be most effectively delivered is summarized in the following sections.

### CAN THIS HIGH-QUALITY INSTRUCTION BE DELIVERED IN AN INCLUSIVE CLASSROOM?

A question that advocates for inclusion might ask is whether this high-quality, intensive instruction can or should be delivered in a general education classroom. Research suggests that this type of instruction is more intensive and explicit than instruction that has typically been provided in general education classrooms (Foorman & Torgesen, 2001; Torgesen, 2002; Zigmond, 2003; Zigmond et al., 2009). More specifically, research conducted on inclusive classrooms has revealed that intensive, explicit instruction that meets the

specialized needs of students with disabilities is rarely provided in general education classrooms (Fuchs & Fuchs, 1998; McLeskey & Waldron, 2000, 2002a; Waldron & McLeskey, 1998; Zigmond & Baker, 1996) and that many general education classroom teachers take the perspective that they do not have the time nor the skills to deliver this specialized instruction (McLeskey & Waldron, 2002a; Zigmond & Baker, 1996).

The adaptations that teachers make in inclusive classrooms for students with LD, as well as the extent to which these teachers use intensive, explicit instruction have been studied by several researchers (Baker & Zigmond, 1990, 1995; Fuchs, Fuchs, Hamlett, Phillips, & Karns, 1995; Fuchs & Fuchs, 1998; McIntosh, Vaughn, Schumm, Haager, & Lee, 1993; McLeskey & Waldron, 2002a; Wang, 1989; Zigmond & Baker, 1994, 1995, 1996). For example, Zigmond and Baker (1995) addressed this issue by conducting case studies in five inclusive elementary schools in different parts of the country. They found that teachers in these schools tended to make routine adaptations in their general education classrooms to make the curriculum more manageable for students with LD. These adaptations included reduced workload, altered assignments, adjustment of homework requirements, and accommodations on tests. These adaptations were invariably used with the entire class, and not for just students with LD.

This research further revealed that teachers found it very difficult to provide focused, intensive instruction for students with LD in the general education classroom (Zigmond & Baker, 1995). These researchers concluded that the inclusive classrooms where they observed were more amenable to change with regard to the *how* of instruction (materials, instructions, structure), but the *what* of instruction (curriculum, pacing) was less amenable to change. Thus, students were not

TABLE 1

Components of High-Quality, Intensive Instruction for Elementary Students with Learning Disabilities

- 
- a. Grouping
- Instruction should be provided to small groups of students (e.g., from one to three students for optimal results)
  - Students should have similar instructional needs
- b. Instructional Design
- Instruction should focus on a small group of clearly defined skills and/or concepts
  - Instruction should be provided using an instructional sequence and materials that meet individual student needs
  - Instruction should be well structured and provide explicit information with concrete examples, models, and demonstrations
- c. Delivery of Instruction
- Allow an appropriate pace and sufficient time for student mastery of targeted skills, with redundant instruction as necessary
  - Provide cognitive support through the use of carefully sequenced lessons, control of task difficulty, and providing models and scaffolding that ensure a high level of student success
  - Provide emotional support through encouragement, feedback, and high levels of student success
  - Provide students with opportunities to practice and respond (i.e., guided practice)
- d. Independent Practice
- Provide practice directly related to the skills being taught
  - Students should achieve a high success rate during independent practice
  - Independent practice should be actively supervised
  - Independent practice should continue until responses are automatic
- e. Progress Monitoring
- Monitor student progress weekly or biweekly to evaluate the effectiveness of the intervention, and ensure students are making sufficient progress
  - Provide students with feedback regarding their individual progress
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Sources: Fletcher and Vaughn (2009), Foorman and Torgesen (2001), Gersten et al. (2009a, b), Rosenshine and Stevens (1986), Swanson (2008), Swanson (2001), Swanson and Hoskyn (1998), Torgesen (2000, 2002).

provided with the intensive, high-quality instruction that they needed that could result in significant improvements in their academic skills. Rather, they were provided with a very good general education (Zigmond & Baker, 1995, 1996).

The research of Fuchs and Fuchs resulted in similar findings (D. Fuchs & L. Fuchs, 1998; L. Fuchs & D. Fuchs, 1998b; Fuchs, Fuchs, & Bishop, 1992; Fuchs et al., 1995), as they found few examples of specialized adaptations for students with LD in general education classrooms (Fuchs et al., 1992). Similar to the research of Zigmond and Baker (1995), Fuchs, Fuchs, and colleagues found that teachers tended to make more minor or routine adaptations, such as reduced expectations or extended timelines, but few specialized adaptations to address difficulties these students had in their classes. Moreover, even after providing support to restructure the general education setting, Fuchs, Fuchs, and colleagues (1995) found that teachers made more routine adaptations, but continued to make few specialized adaptations to meet individual student needs.

McLeskey and Waldron (2002a) investigated the types of adaptations general education teachers made in well-designed inclusive settings, and their findings were strikingly similar to previous research. These researchers found that teachers in these inclusive classrooms made many routine adaptations such as changing expectations, altering grading criteria, and using flexible within-class grouping. However, the teachers did not "report making specialized instructional adaptations, similar to those used in separate, special education classrooms. Indeed, teachers in these schools actively rejected the idea that special education should be replicated in the general education classroom, as they felt that these methods did not fit into the ebb and flow of the general education classroom" (p. 51).

Finally, evidence seems to reveal that, in most instances, even if a special education teacher is available as a co-teacher in the general education classroom, high-quality, intensive instruction is most often not delivered in the general education classroom (Murawski, 2006; Murawski & Swanson, 2001; Scruggs, Mastropieri, & McDuffie, 2007; Volonino & Zigmond, 2007). While a special educator working as a co-teacher could theoretically provide this instruction, research evidence shows that in most cases, this does not occur (Volonino & Zigmond, 2007). Observations in these classrooms have shown that responsibility for teaching the content typically remains with the general education teacher, while the special educator "provides scaffolding and support to help learners access the content" (Volonino & Zigmond, 2007, p. 298).

What these investigations share is the finding that general education teachers make few specialized adaptations in their classrooms to meet the specific needs of students with LD. What these inclusive classrooms provided was a very good general education (McLeskey & Waldron, 2002a; Zigmond & Baker, 1995, 1996), but not the highly specialized instruction that was previously described and that is often needed by elementary students with LD. McLeskey and Waldron conclude by commenting that this line of research "raise(s) serious doubts about the feasibility of using highly specialized, 'special education' methods in the general education classroom. Moreover, these investigations suggest that meth-

ods that fit into the routine of the general education classroom (Gersten, Vaughn, Deshler, & Shiller, 1997) are much more likely to be used by teachers in inclusive classrooms" (p. 52).

### **CAN SPECIAL EDUCATION RESOURCE CLASSES, AS CURRENTLY CONFIGURED, BE USED TO DELIVER HIGH-QUALITY, SPECIALIZED INSTRUCTION TO STUDENTS WITH LD?**

Special education resource classes in elementary schools are intended to be settings where students with disabilities are provided high-quality instruction focused on their particular needs, which helps them catch up with peers in basic skill areas (Bentum & Aaron, 2003; Dunn, 1968; Marston, 1996, 2001; Wiederholt & Chamberlain, 1989; Zigmond & Baker, 1996). As we have previously noted, research supports the perspective that we know how to design instruction that results in significantly improved academic achievement for many elementary students with LD (Foorman & Torgesen, 2001; Gersten et al., 2009a,b), and that this effective instruction can be delivered in resource classes with the support of outside experts (Marston, 1996, 2001; Torgesen, 2002, 2009). In spite of this knowledge, much evidence indicates that these practices are rarely used in resource settings. Two groups of investigators have examined resource settings to determine why the lack of success of these settings seems to be so widespread.

Allington and McGill-Franzen (Allington & McGill-Franzen, 1989a, 1989b; McGill-Franzen & Allington, 1990, 1991) examined the quality of instruction provided in special education resource programs in response to students who failed to make adequate progress in reading. Their general conclusion was that no value was added by instruction in resource settings, which tended to supplant rather than support reading instruction in the general education classroom. The major problems with instruction in resource settings included:

- (1) Lower-quality instruction. Much of the instruction provided in resource classes was found to be undifferentiated, and thus was not tailored to individual student needs. Compared to general education instruction, resource class instruction was found to be less intensive and included less active instruction and more seat work.
- (2) Little coordination with general education. Instruction in resource classes was rarely connected to the general education curriculum. Different materials were used across the two settings, which were often based on different theories of reading instruction. This often resulted in fragmented learning experiences that tended to trivialize learning and waste the time and lower the motivation level of students.
- (3) Less instructional time. Instruction in resource classes tended to supplant rather than supplement instruction in the general education setting. Thus, these students missed reading instruction in general education when



they were in resource classes. Furthermore, students in resource settings tended to spend less time actively engaged in reading, were provided less direct instruction, and spent more time doing independent work.

- (4) Unclear accountability. When responsibility for teaching students to read is dispersed across two or more professionals, professional accountability for ensuring that these students learn to read tends to be reduced, as responsibility for student outcomes is diluted.

Allington and McGill-Franzen (1989b) found that a major contributing factor to the low-quality instruction in resource settings was the heavy caseloads of teachers. Others have confirmed this finding, as caseloads seem to have only increased over the last two decades (Bentum & Aaron, 2003; Moody, Vaughn, Hughes, & Fischer, 2000; Russ, Chaing, Rylance, & Bongers, 2001; Vaughn, Moody, & Schumm, 1998; Vaughn, Hughes, Moody, & Elbaum, 2001; Vaughn, Levy, Coleman, & Bos, 2002; Zigmond & Baker, 1996). Thus, special education teachers in resource classes are often expected to provide instruction to a large, heterogeneous group of students across several grade levels, making it difficult if not impossible to provide the high-quality instruction these students need to learn to read or to learn other basic skills.

More recent research by Vaughn and colleagues that addressed reading instructional practices for elementary students with LD resulted in strikingly similar findings (Moody et al., 2000; Vaughn et al., 1998; Vaughn et al., 2002). For example, these researchers found that the quality of instruction in resource settings was low, as students were primarily provided whole-group instruction, with little differentiated instruction or materials that were tailored to individual student needs. Much time was spent on independent seatwork and worksheets, and not on direct instruction or reading text. Furthermore, reading instruction in these settings was often disjointed and inconsistent, and not aligned with reading instruction in general education. Finally, students in resource settings were found to generally receive less reading instruction, as teachers infrequently spent time directly teaching reading, and much time was wasted when students were out of class, waiting, or off task.

Vaughn and colleagues attribute much of the problem in resource classes to untenable class sizes. For example, they found that resource classes averaged 13–15 students across investigations, and the range of reading levels of these students varied from 3 to 4 years (Moody et al., 2000; Vaughn et al., 1998). They noted that teachers were overwhelmed by their caseloads, which made it impossible to provide the specialized instruction that students need to make adequate progress academically (Moody et al., 2000; Vaughn et al., 2001). Additional factors that contributed to the lack of time available for resource room teachers to provide high-quality instruction included high levels of paperwork and responsibilities for working with general education teachers in inclusive classrooms (Vaughn et al., 2001).

Reviews of research on the quality of instruction in resource settings support these findings (Swanson, 2008; Vaughn et al., 2002). For example, Vaughn et al. reviewed

observational studies of reading instruction for students with LD and emotional behavioral disabilities. They found that there were few differences between reading instruction in general and special education settings, and the overall quality of this instruction was low. In resource settings, reading instruction was seldom differentiated based on student needs, and individualized instruction was rarely provided. Furthermore, this research revealed that reading instructional time was not increased when resource settings were used, and that much time in these settings was spent doing independent seatwork and completing worksheets. Similarly, Swanson (2008) found that resource teachers are often engaged in nonreading activities (e.g., classroom management, transitions) and spend most of their class time on undifferentiated seatwork rather than direct instruction of reading.

In sum, similar conclusions were reached across this research (Allington & McGill-Franzen, 1989a,b; McGill-Franzen & Allington, 1990, 1991; Moody et al., 2000; Swanson, 2008; Vaughn et al., 2001; Vaughn et al., 2002; Vaughn et al., 2003; Vaughn et al., 1998). In general, resource rooms do not provide students with disabilities an increased quantity and higher quality of instruction that they need to significantly improve academic achievement levels. A key issue preventing teachers from providing this instruction is large caseloads, which often require instruction of small classes (13 to 15 students) in resource settings, making it difficult to provide differentiated or individualized instruction.

These findings led Vaughn and colleagues (2002) to state that “[w]asting time on instruction that is not focused on intensive and explicit instruction must come to an end, particularly in special education settings” (p. 11). We concur with this perspective. Most resource settings, as currently configured, are largely a waste of time and resources and have failed to deliver the high-quality instruction that is desperately needed by students with mild disabilities to learn the basic skills they need to be successful in school.

## DISCUSSION AND IMPLICATIONS

This review suggests that research conducted over the last decade addressing the value added by delivering high-quality, intensive instruction to students with LD provides the foundation for reconsidering full inclusion and how services are delivered for elementary students with LD. More specifically, four key findings emerged from the research that has been summarized in this article.

- The characteristics of intensive, high-quality instructional methods have been identified (see Table 1) that can be used to significantly increase the academic achievement levels in reading and math for many elementary students with LD (Fletcher & Vaughn, 2009; Foorman & Torgesen, 2001; Gersten et al., 2009a,b).
- High-quality inclusive classes provide a very good general education, which meets many of the needs of elementary students with LD (Fuchs & Fuchs, 1998; McLeskey & Waldron, 2002a; Zigmond, 2003; Zigmond & Baker, 1996).

- For most elementary students with LD, instruction in a high-quality, inclusive class is not sufficient to ensure the acquisition of important reading and/or math skills, and it is unlikely that the high-quality, intensive instruction that is needed to accelerate instructional growth for these students can be delivered in most inclusive classrooms (Foorman & Torgesen, 2001; Torgesen et al., 2001; Waldron & McLeskey, 1998, 2009; Zigmond et al., 2009).
- Special education resource classes, as currently configured, often are not equipped to provide the high-quality, intensive instruction that is needed to accelerate academic growth for elementary students with LD (Bentum & Aaron, 2003; Vaughn et al., 2002; Zigmond & Baker, 1996).

This research reveals that full inclusion is insufficient to meet the needs of most elementary students with LD. Unfortunately, the research reviewed herein also reveals that while we know *what* to do to address the academic needs of many elementary students with LD, special education resource classes often fail to deliver the high-quality, intensive instruction that these students need. Given these findings, significant changes are needed in special education service delivery to ensure that elementary students with LD receive the high-quality, intensive instruction that they need to significantly improve their educational outcomes.

The changes that are needed to meet the needs of students with LD entail both improving instruction in general education classrooms (i.e., ensuring that effective, inclusive classrooms are developed that accommodate a diverse range of student needs) and developing service delivery options that support special education teachers in delivering high-quality, intensive instruction in part-time special education classes (Fuchs, Fuchs, Craddock, Hollenbeck, & Hamlett, 2008; Waldron & McLeskey, 2009, 2010). Special education instruction must improve for obvious reasons—this instruction should add value to the education of students with LD, and currently this often does not occur. It is also especially important that improved education is provided to these students in general education classrooms, given that most students with LD spend most of the school day in these settings. More specifically, approximately 62 percent of students with LD spend most of the school day (80 percent or more) in general education classrooms, while 90 percent of students with LD spend a large portion of the school day (40 percent or more) in these settings (U.S. Department of Education, 2010).

If significant changes are to occur in general and special education to provide high-quality instruction for students with LD, several assumptions about the education of these students must change (see Table 2). The assumptions in Table 2 suggest that all students with LD have a right to be included in their local schools and in general education classrooms, as well as a right to reasonable and appropriate outcomes. These assumptions also explicitly move away from an emphasis on full inclusion, and assume that most students with LD will need intensive, high-quality instruction, which may often be provided in a separate setting, to make sufficient academic progress. Finally, the use of progress monitoring systems to determine program effectiveness suggests that educating students with LD in separate settings should *only* be done when this instruction improves student outcomes relative to general education placements and adds value to the educational programs for students with LD. More specifically, removing an elementary student from a general education classroom and placing him in a resource class with 10 other students who have a broad range of academic difficulties is very unlikely to improve educational outcomes. However, providing intensive, high-quality instruction to a small group of students with similar academic needs is very likely to improve educational outcomes.

Applying the assumptions in Table 2 in schools will require significant changes in how teachers and administrators think about schools and how schools operate (Fullan, 2007; Hancock, 2010; McLeskey & Waldron, 2000, 2006). Unfortunately, much of what we have learned about school improvement has revealed that the changes needed to develop effective, inclusive programs will not “travel of their own volition” and be adopted by general and special educators, even if they are evidence-based, result in improved educational outcomes, and are viewed as good ideas (Fullan, 2007). Furthermore, they cannot simply be added onto current school programs, as this will result in superficial change which is not sustained and programs that fail to produce desired outcomes (Fullan, 2007; McLeskey & Waldron, 2006; Waldron & McLeskey, 2010), similar to add-on special education resource programs. In Table 3, we describe several critical considerations regarding the development of effective, inclusive programs for elementary students with LD.

As we indicate in Table 3, the previously described assumptions and research on school change suggests that the development of effective, inclusive schools requires that the entire school community engage in comprehensive, long-term school change activities (Fullan, 2007; McLeskey &

TABLE 2  
Basic Assumptions—Providing Effective, Inclusive Programs for Elementary Students with Learning Disabilities

1. Inclusion and program effectiveness should be equally valued, as we strive to create schools that are both equitable and excellent.
2. Inclusion should not be defined as a “place” where instruction occurs. Rather, inclusion should be defined as including students with disabilities as valued members of the school community (McLeskey et al., 2010).
3. Our expectations regarding inclusive, general education classrooms should be that a high-quality *general education* will be provided, but we should not expect that high-quality, intensive special instruction will be delivered in most of these settings.
4. Most elementary students with learning disabilities require intensive, high-quality instruction in a part-time special education setting that is delivered by a teacher with specialized skills to make adequate academic progress in basic skill areas.
5. Progress monitoring systems should be used to determine the effectiveness of programs and placements.

TABLE 3  
 Considerations for Developing Effective, Inclusive Schools for Elementary Students with Learning Disabilities (LD)

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1. Comprehensive school change is required to develop effective, inclusive schools. Add on programs are not sufficient and will not be sustained.
  2. Students with learning disabilities must be supported by a collaborative model in which general and special educators share a collective responsibility for the success of each student.
  3. Teachers should work together as part of a learning community to support each other in developing the necessary skills to teach all students; to provide effective instruction to all students; and to monitor the effectiveness of instruction and the progress of students (Waldron & McLeskey, 2010).
  4. A continuum of supports should be provided to all the students to ensure that they make adequate academic progress. High-quality, multi-tiered instruction may be an important component of this continuum of supports.
  5. Special education teachers who teach elementary students with learning disabilities should limit their role to:
    - a. Providing focused, high-quality instruction to students with LD in basic skill areas (i.e., reading, writing, and mathematics).
    - b. Supporting classroom teachers to ensure that high-quality general instruction is provided.
  6. Progress monitoring systems should be used to determine the effectiveness of programs and placements, as well as to monitor individual student progress.
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Waldron, 2000, 2006; Waldron & McLeskey, 2010). To create these schools, general and special educators must work collaboratively on school-wide change efforts that address improving academic outcomes for all students across both general and special education settings (Farrell, Dyson, Polat, Hutcheson, & Gallannaugh, 2007; Hancock, 2010; Waldron & McLeskey, 2010). These collaborative activities should result in changes in the culture and structure of the school (Fullan, 2007; McLeskey & Waldron, 2006), and the development of professional learning communities that provide a setting where general and special teachers are collaboratively accountable and actively engaged in improving outcomes for all students (Waldron & McLeskey, 2010).

Previous school improvement research has revealed that the changes that are needed to achieve these outcomes must be deep and multidimensional, resulting in the use of new or revised materials, different teaching approaches, different roles and responsibilities for teachers, changed organizational structures for delivering instruction, and the alteration of teacher beliefs and understandings about their work (Fullan, 2007; McLeskey & Waldron, 2000, 2002b, 2006). If schools are to be effective and inclusive, these activities must result in significant changes in core instruction that is delivered in general education classrooms, as well as significant changes in how special education instruction is delivered and what type of instruction is delivered in these settings.

One of the basic changes that is needed to support students with LD in schools that are both effective and inclusive relates to the role of special education teachers. As we noted previously, most of these teachers instruct large groups of students in resources classes, have heavy caseloads, and have very limited time to collaborate with general educators. This results in special education service delivery that is often ineffective and an inefficient use of the time of these highly trained professionals. To ensure more efficient use of the special education teachers' time and more effective practice, the role of these teachers should be limited to providing focused, high-quality instruction for limited periods of time (e.g., 30 minutes to 1 hour) to small groups of students with LD (e.g., 1–3 students) in basic skill areas (i.e., reading, writing, mathematics), and supporting classroom teachers to ensure that high-quality instruction is provided in general education settings.

It is important to note that these recommendations are not new. Over 40 years ago, Dunn (1968) recommended that elementary special education teachers of students with mild disabilities focus on teaching the "3R's, especially written language" (p. 18), and general education teachers provide "instruction in science and social studies, while specialists would instruct in such areas as music and art" (p. 18). Furthermore, several influential articles in special education (Deno, 1970; Reynolds et al., 1987; Will, 1986) have recommended that special educators serve as a form of "developmental capital" (Deno, 1970) to improve instruction in general education classrooms.

Obviously, this recommendation is also similar to those that have been made in recent years as special educators work with classroom teachers to improve instruction in general education settings as part of a multitiered approach to instruction (Fuchs et al., 2008; Gersten et al., 2009a). Emerging evidence reveals that this collaborative work with general education has the potential to significantly reduce the number of students who are identified with LD (e.g., Torgesen, 2007, 2009) and also can significantly improve the educational achievement level of students with LD (e.g., Fuchs et al., 2008).

These changes suggest the need for a new type of continuum that guides the work of elementary teachers of students with LD. Rather than conceptualizing the service delivery continuum as a series of places or classrooms, some have begun to think of this delivery system as a continuum of supports or tiers of instruction (Fuchs et al., 2010; Hancock, 2010). A continuum that addresses this emerging perspective on service delivery has been proposed and is being implemented in Alberta, Canada (Alberta Education, 2010; Bhardwaj et al., 2009; Hancock, 2010) and is illustrated in Figure 1.

In this new service delivery continuum, three increasingly specialized types of supports are provided for students with LD (adapted from Alberta Education, 2010). Universal Supports are provided in the general education classroom with the entire class and benefit all students. This may include supports such as differentiated instruction or providing a wide range of reading materials in the classroom. Targeted Supports are used to benefit students who struggle with learning basic academic skills and may include supports such as explicit instruction in small groups, peer tutoring, or extended

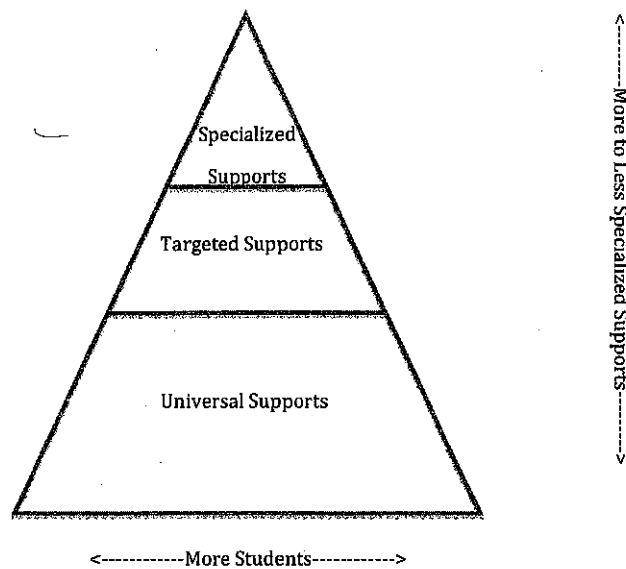


FIGURE 1 A continuum of supports for elementary students with learning disabilities (adapted from Alberta Education, 2010).

opportunities for guided practice. Finally, Specialized Supports are designed to meet the needs of a small group of students who have specialized needs and who do not respond and significantly improve their academic skills when Universal or Targeted Supports are used. This may include Specialized Supports such as explicit teaching of specific skills in small groups or one-to-one, or the use of evidence-based instructional materials/programs.

As Figure 1 indicates, most student needs would be addressed with Universal Supports (about 80–85 percent of students), while fewer students would need Targeted Supports (about 10–15 percent), and a small group of students (about 1–5 percent) would need Specialized Supports. Universal and Targeted Supports would typically be provided in a general education classroom by a classroom teacher, while Specialized Supports would most often be provided by a special education teacher in a separate setting. Furthermore, as was noted previously, a systematic progress monitoring system should be used to determine the effectiveness of supports and ensure that these activities add value to the education of students with LD.

This continuum reflects a significant change in how service delivery is characterized. The current service delivery continuum is conceived of as a series of places and assumes that separate classrooms will be available for each location on the continuum. In contrast, this new continuum describes a series of increasingly specialized and intense supports that are provided to students with disabilities. This new continuum better reflects current knowledge regarding effective practices for meeting the needs of elementary students with LD and also provides a framework for elementary special education teachers as they work with general education teachers to improve classroom instruction and provide effective, intensive, small-group instruction to students with LD.

In conclusion, those who were optimistic that the needs of all elementary students with LD could be successfully ad-

ressed in full inclusion classrooms have been largely disappointed. Well-designed inclusive classrooms provide a very good general education and meet many of the needs of students with LD, but have not proven sufficiently malleable to offer the high-quality, intensive instruction needed by most elementary students with LD to achieve desired educational outcomes (McLeskey & Waldron, 2010). Furthermore, resource classes, as they are currently implemented in most settings (i.e., with a large, heterogeneous group of students), have largely been ineffective in facilitating the delivery of high-quality, intensive instruction that improves educational outcomes for elementary students with LD.

In spite of these shortcomings in the past, special education seems to be nearing a tipping point regarding the delivery of effective services that significantly improve student outcomes, particularly for elementary students with LD. Research has identified instructional methods that may be used to significantly improve educational outcomes for these students, especially in the areas of reading (Gersten, 2009b; Torgesen, 2009) and mathematics (Fuchs et al., 2008; Gersten et al., 2009a). In addition, approaches are emerging that combine the best features of inclusive programs and models of multitiered instruction that show great promise for providing direction regarding how these effective practices may be delivered (Fuchs et al., 2008; Fuchs & Fuchs, 2007; Sugai & Horner, 2009). These developments, coupled with a significant body of research on school change (Fullan, 2006, 2007; Waldron & McLeskey, 2010), are cause for great optimism that significant improvements are on the horizon that will result in long-sought advances in educational services and outcomes for students with LD.

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