

Supporting Young Children with Disabilities

Kathleen Hebbeler and Donna Spiker

Summary

What do we know about young children with delays and disabilities, and how can we help them succeed in prekindergarten through third grade?

To begin with, Kathleen Hebbeler and Donna Spiker write, identifying children with delays and disabilities to receive specialized services under the Individuals with Disabilities Education Act poses several challenges. First, even though eligibility is based on 14 disability categories listed in the law, each state determines its own criteria for those conditions. Second, young children—especially those with disabilities—are hard to assess. Third, deciding where to draw the line for eligibility along a continuum of functioning is a matter of policy rather than science. In recent decades, the authors note, the concept of disability has been moving away from a medical model that sees disability as an impairment that resides in the child and toward a framework that emphasizes children’s functioning and interaction with their environments.

The authors review effective ways to support development and learning among young children with disabilities, including language and social skills interventions, preschool curricula, instructional and other practices, and multi-tiered systems of support. Then they examine a critical policy issue: the inclusion of young children with disabilities in regular education classrooms. One critical finding is that high-quality instruction in general education classrooms is a major factor in good educational outcomes for children with disabilities, and for their successful inclusion from preschool to third grade. Moreover, improving the quality of general education benefits all children, not just those with disabilities.

Hebbeler and Spiker also examine what we know about the transitions young children with disabilities make from one setting to another—for example, from prekindergarten to kindergarten. Here they conclude that we need far more research if we’re to understand what makes such transitions successful.

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For nearly all children, the time between turning three and completing third grade involves adjusting to new environments. Some children go from preschool to kindergarten, and then on to first, second, and third grade. Others go to more than one preschool or child-care setting, or even change schools. Unfortunately, some young children in the United States still don't attend preschool at all, so their first major transition is from home to kindergarten. What happens in each of a child's environments, including the home, plays a critical role in what that child will know and be able to do by the end of third grade. This is especially true for children with developmental challenges—delayed development, atypical development, or physical impairments that limit their ability to experience the world around them. These children require specialized support to achieve their full potential. It's well established that children who receive such support early in life are more likely to do well later.¹

This article focuses on children with delays and disabilities and the kinds of services and support these children need from preschool through third grade to experience good outcomes. We begin by discussing how young children with disabilities are identified, the challenges of identification, and a new framework for describing disability. We follow this with a summary of what is known about effective interventions to support development and learning in this population. The third section addresses a critical policy issue: the inclusion of young children with disabilities in regular education classrooms. The fourth section discusses what is known about supporting children as they transition from one setting

to another across the preschool to third grade span.

Identifying Children with Disabilities

Children Served Under the Individuals with Disabilities Education Act

Many US children with delays and disabilities receive specialized services under the Individuals with Disabilities Education Act (IDEA). This federal law was passed in 1975 and has been amended several times since. The 1986 amendments granted children aged three, four, and five the same rights the original law had given to school-age children with disabilities. These include the right to a free public education in the least restrictive environment appropriate to the child's needs. Each eligible child must have an Individualized Education Program (IEP). The IEP's required components include annual goals and a statement of the special education and related services the child will receive. To be eligible for special education, a child must have one of 14 disabilities identified in the law (see table 1), as well as an educational need that would benefit from special education.

In fall 2013, about 745,000 three- to five-year-old children, or 6.0 percent of US children in that age range, were receiving services under IDEA. By comparison, about 5.8 million children aged 6 through 21 were receiving IDEA services, representing 8.5 percent of that population. Among three- to five-year-olds, most were found eligible for special education services because of a primary disability of speech or language impairment, or a developmental delay. The next most common disability was autism. Among six- to nine-year-olds

Table 1. Primary Disability of Children Aged 3–5 and 6–9 Served under IDEA Part B by Disability Category, Fall 2013.

Disability Category	Percent of Total	
	Children 3–5	Children 6–9
Speech or language impairment	44.2	40.7
Developmental delay	37.1	7.8
Autism	8.4	9.2
Other health impairment	3.0	10.2
Intellectual disability	1.9	4.4
Hearing impairment	1.2	1.2
Specific learning disability	1.2	20.2
Multiple disabilities	1.1	1.6
Orthopedic impairment	0.9	0.9
Emotional disturbance	0.4	3.1
Visual impairment	0.4	0.4
Traumatic brain injury	0.2	0.3
Deaf-blindness	Not available	Not available

Source: Data from U.S. Department of Education, ED Facts Data Warehouse, IDEA Part B Child Count and Educational Environments Collection (2013–14). Data extracted as of July 3, 2014, from file specifications 002 and 089.

receiving IDEA services, the most frequent primary disability categories were speech or language impairment, specific learning disability, other health impairments, and autism.

These data conceal several challenges in identifying children for IDEA services. First, even though eligibility is based on the disability categories listed in the law, each state determines its own criteria for those conditions. For example, a state may use the developmental delay category with children older than five, but only 15 states do so through age nine.² As a result of such differences, we see striking variation across states in the percentage of children who receive services. In 2013, the share of preschoolers receiving special education ranged from a low of 3.6 percent in Texas to a high of 10.7 percent in Arkansas. Among

older children, the range runs from 6.2 percent in Hawaii to 11.5 percent in New Jersey.³ No evidence suggests that these differences result from differences in the nature of these states' populations. Rather, they are the result of policy choices.

Young children—especially those with disabilities—are difficult to assess.

The second challenge in identifying children for IDEA services stems from the fact that young children—especially those with disabilities—are difficult to assess. However, assessment results are a major determinant of eligibility for IDEA services for children with the most

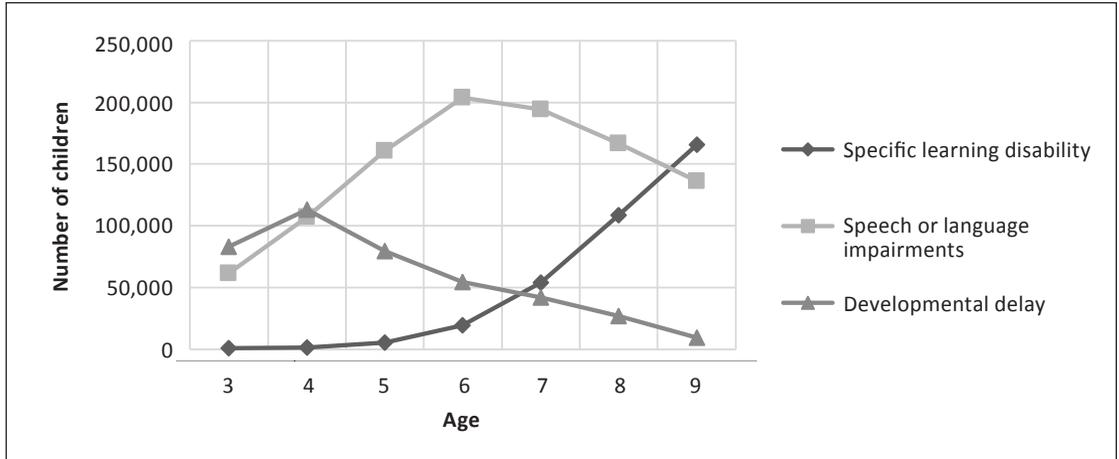
common disabilities. State eligibility criteria are based on quantitative measures, such as the extent of a child's developmental delay, that are derived from assessment tools. The level of precision required for an eligibility decision far exceeds the capabilities of current assessment tools, which renders the process scientifically indefensible. Furthermore, many tools used to assess children aren't consistent with practices recommended by professional organizations.⁴

The question of who gets served is further complicated by the fact that disability and delay lie at one end of a continuum of functioning. Most of the continuum is considered typical development. At some point along that continuum, functioning falls so far below what's expected for a given age that a child's development is considered to be delayed or atypical. Deciding where to draw that line for eligibility purposes is a matter of policy, not science. The language skills of a child who scores slightly above the eligibility criteria differ very little from the skills of a child who scores slightly below them. Both children would likely benefit from intervention. But resources are limited, so the states must set criteria to determine who will and will not be served. The question is whether the criteria, as well as the way identification procedures are carried out, should be more equitable from state to state.

Identifying a learning disability by using the gap between a student's ability (as measured by an IQ test) and his or her achievement levels has been widely criticized as atheoretical, inconsistent, unfair, and costly.⁵ Dissatisfied with that discrepancy model, many school districts have adopted a model called *multi-tiered systems of*

support (MTSS), in which intervention becomes more intense as students move through tiers of instruction. Students who don't make progress with high-quality instruction in a general education setting (tier 1) receive more intensive evidence-based interventions, either in small groups (tier 2) or individualized (tier 3). MTSS models rely on regularly monitoring student progress and using data to decide which students need additional support and special education. Such models, which have been used to identify and support students with learning disabilities and behavior problems, represent a promising approach for determining eligibility for special education among some subgroups of children with disabilities. We'll return to MTSS when we discuss interventions.

Interestingly, the number of children with different disabilities changes as children get older, as some are newly identified and others are considered to no longer have a disability. In fact, the proportion of children with different disabilities served under IDEA varies from one age to the next. The number of children receiving special education increases for each year of age between three and nine. In 2013, almost three times as many nine-year-olds as three-year-olds received special education (487,000 vs. 173,000).⁶ Much of the increase occurs as more students are identified with learning disabilities across the early grades. The number begins to climb at age six and rises each year, as figure 1 shows. By contrast, the number of children with speech or language impairment peaks at age six and then decreases each year; at age nine it's surpassed by the number of children with learning disabilities. Finally, the number of children identified as having developmental delays drops continuously

Figure 1. Number of Children Served under IDEA by Age and Disability Category: 2013–14

Source: Data from U.S. Department of Education, ED Facts Data Warehouse, *IDEA Part B Child Count and Educational Environments Collection* (2013–14). Data extracted as of July 3, 2014, from file specifications 002 and 089.

between ages four and nine. However, some of this decline occurs because most states don't use developmental delay as an eligibility category for six- to nine-year-olds.

We could speculate that some children who are classified with speech and language delays in preschool are simply reclassified as having a learning disability in elementary school. A longitudinal descriptive study that followed children who received special education from preschool onward found that about 16 percent left special education each year. According to that study, the year-to-year decline in speech and language impairments reflects the fact that these children are no longer receiving special education.⁷ A critical question is whether children who are identified as having a learning disability when they experience academic difficulty in early elementary school could have been identified and served earlier.

ICF-CY: A New Approach

The identification of children for IDEA services follows a medical model that identifies and describes disability based on categories, such as deafness or intellectual disability. The categorical approach sees disability as a condition that resides in the child. It also masks the extreme variation within each category. Although disability lies at one end of a continuum of human functioning, we see large differences among children with the same diagnosis. These differences have significant implications for identification, service delivery, and research. Children with the same diagnosis can differ in many ways, for example in the severity of delays and functioning levels, rates of skill acquisition, health status and conditions, social and behavioral characteristics, and, ultimately, developmental and educational outcomes.

Over the past few decades, the concept of disability has moved away from a medical model and toward a framework that emphasizes an individual's functioning and

interaction with the environment, rather than impairment. The new approach adopts a social model of disability, recognizing that society—through policies and environmental adaptations—either facilitates or impedes the way individuals participate in daily activities. This framework is reflected in the World Health Organization’s *International Classification of Functioning, Disability and Health—Children and Youth* (ICF-CY), a taxonomy for classifying functioning that focuses on the way health conditions interact with personal and environmental factors.⁸ The ICF-CY overcomes many of the medical model’s shortcomings by characterizing functioning along multiple dimensions. It also captures the extent to which a child’s environment supports participation in daily activities. In this framework, disability doesn’t reside in the child; rather, it’s a function of the child and the child’s environment.

Consider, for example, the experiences of two children who communicate by signing. One attends a child-care center where the caregivers sign; the other attends a center where they don’t. Caregivers who sign provide the first child with the same learning and communication opportunities that spoken language provides to children who hear. The second child experiences a world with far fewer learning opportunities because no one can communicate with her. Or consider the contrasting experiences of two children who use wheelchairs. One lives in a single-story house with easy access to a backyard. The other lives in a second-floor apartment of a building with no elevator. Although these children may have exactly the same degree of hearing loss or motor impairment, their environments offer very different levels of access to learning opportunities.

Viewing disability in this way means examining the extent to which a child can or cannot participate with family members and peers in day-to-day activities at home, at preschool, and in the early primary grades. Environments that aren’t adapted to meet children’s level of functioning restrict their participation in everyday activities, thus impairing their ability to develop and learn. Missing opportunities to learn is especially harmful for young children because it limits their future ability to fully participate in everyday activities. For children with disabilities, a critical environmental factor that heavily influences their future participation is access to the specialized services they need to promote development and learning in their preschool years so they can succeed in elementary school.

Many aspects of the environments children experience are determined by policy choices.

The ICF-CY’s emphasis on the role played by environment in childhood disability has significant policy implications related to prevention and intervention. Many aspects of the environments children experience are determined by policy choices. A horrific example of the relationship between policy and disability is the severe cognitive and social delays experienced by children placed in Romanian orphanages.⁹ These children, who spent their early years in extremely deprived conditions, suffered permanent damage to their functioning as a result. In the United States, risk factors such as lack of prenatal care, environmental toxins, and toxic stress contribute to developmental

problems.¹⁰ On the other hand, wheelchair ramps, assistive technology, and effective educational and therapy services are positive environmental features that can reduce the extent to which a limitation of body structure or function impairs a child's ability to develop and learn. The special education services provided under IDEA are a powerful example of a policy that has positively altered the day-to-day environments of children with disabilities. However, implementation challenges still exist, such as providing consistent access to quality services, securing sufficient funding, and achieving good outcomes for all recipients.¹¹

We don't know how many US children would be identified with a disability using the ICF-CY or another more functional approach. One study, the 2005 Survey of Income and Program Participation, combined a medical and functional approach, defining disability for three- to five-year-olds in three ways: as developmental delay; as difficulty walking, running, or playing; or as difficulty moving arms or legs. The study found that, according to parents' reports, these characteristics applied to 3.8 percent of the population. For six- to 12-year olds, the definition was expanded to include more categories (for example, autism and cerebral palsy), producing an estimate of 12.8 percent for this age group. In 2008–09, the National Health Interview Survey asked parents about both limitations (such as whether their children needed help bathing or showering) and diagnostic categories, yielding an estimate that 4.7 percent of children under six and 9.5 percent of children aged six to 11 had disabilities.¹²

In addition to its implications for identifying children with disabilities and delivering services to them, the ICF-CY can also help guide research on the development and learning of children with disabilities. Research based on categorical designations (such as cerebral palsy, spina bifida, or learning disability) is likely to continue, but researchers also need to describe children's functioning across multiple dimensions to more clearly communicate which children are covered by the findings. Intervention researchers in particular need richer descriptions of their subjects—using a perspective derived from ICF-CY—to make their findings easier to generalize to a broader population and translate into practice.

Effective Interventions

The field of research into how effectively interventions support the learning and development of young children with disabilities goes back 60 years. In fact, many of today's interventions have their roots in model demonstration projects funded in the 1960s. Although our knowledge about which practices are effective continues to grow, much remains to be done. Given the diverse needs of children with disabilities, it's not surprising that many studies have found that specific interventions or services can achieve specific outcomes for specific subgroups of children. For example, physical therapy can help children with motor delays, while applied behavior analysis can help children with autism. But we don't know whether some of these practices can be effective for other outcomes or other subgroups.

It's difficult to conduct research on the effectiveness of various interventions for children with disabilities. One challenge

is the fact that all children are entitled by law to individually determined services, which eliminates the possibility of random assignment and the creation of a control group that receives no treatment. Other challenges include the extreme heterogeneity of the population, even among children categorized as having the same disability; assessment tools that haven't been validated for use with children with disabilities; and the recruitment of sufficiently large samples for studies of low-incidence disabilities.

Even studies with random assignment that use a treatment-as-usual control group are logistically difficult to fully implement, because knowledgeable parents often seek potentially beneficial treatments, and researchers can't control this.¹³ To tackle some of these challenges, research in special education often uses single-case designs to examine how interventions affect children's learning and behaviors. These single-case designs have been widely used with applied behavior analysis (which we describe later). They provide strong evidence when comparable results are found across children in one single-case study or from multiple single-case studies of an intervention with different types of children or in different settings.¹⁴

It wouldn't be possible for this article to cover the entire body of knowledge on effective practices and programs for children with disabilities. Instead, we've elected to highlight several research areas to illustrate the types of studies conducted by researchers on promoting positive social and academic outcomes for children with disabilities in preschool and the early elementary grades.

Foundational Role of Applied Behavior Analysis

From the 1960s to the 1980s, many studies examined whether behavior modification or stimulus-response approaches, also known as *applied behavior analysis* (ABA), could affect specific behaviors displayed by children with disabilities. Studies have shown that ABA techniques, which use reinforcement principles and stimulus-response models of learning, can help establish desired behaviors as well as consolidate and generalize them.¹⁵ Most ABA studies have been highly controlled investigations of specific practices, rather than evaluations of a type of service or a program, often using rigorous single-case designs.

Early studies focused on discrete behaviors because, at the time, most researchers believed that children with disabilities couldn't learn many of the skills that typically developing children master, such as reading. Further research showed this belief to be wrong. Those early ABA studies examined atypical behaviors that interfered with children's ability to learn typical skills—for example, self-stimulation behaviors or lack of interest in others. But other researchers and practitioners criticized the interventions for focusing on isolated skills that didn't generalize to everyday situations or weren't particularly useful for helping children function in everyday settings.

As a result of this criticism—and consistent with the functional views of disability that we described earlier—more recent ABA research has focused on teaching meaningful behaviors. For

example, a method called *pivotal response training* emphasizes a child's motivation to learn by explicitly teaching attention and self-regulation behaviors that help them "learn to learn." These behaviors include initiating and maintaining social interactions, attending to the same thing at the same time with another person (for example, looking at a toy together), and responding to multiple cues. Many ABA studies focus on a single type of disability, most commonly autism or intellectual disability, although some focus on a specific curriculum. The next sections highlight how ABA practices, along with research on child development, underlie much of the research on interventions for young children with disabilities.

Language and Social Skills Interventions

Many young children with disabilities struggle with language and communication. Poor language development is especially problematic because language skills are the foundation for learning to read and for successful interactions with peers. Researchers examining practices and strategies to promote communication skills have focused on teaching children sounds, words, and so on, often using ABA methods. Interventions have emphasized improving the quantity and quality of language input based on what we know about language development in typical children. Practices that support highly responsive and functional conversations in natural contexts, with both peers and adults, have been shown to promote children's communication and cognitive skills.¹⁶ Many studies have been conducted on these practices; some have

had single-case designs, but randomized controlled trials (RCTs) have been limited.

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Likewise, children with disabilities often have trouble interacting competently with peers and adults—the important social partners from whom they learn skills and with whom they must connect to fully participate in everyday settings. *Social skills training* uses behavioral approaches to teach children age-appropriate social competencies such as communication, problem-solving, decision-making, self-management, and relating to peers. A review of 23 studies involving three- to five-year-olds with disabilities showed that social skills interventions can increase positive social interactions and reduce problem behaviors.¹⁷ This review included studies with multiple- and single-group designs, some of which used quasi-experimental methods, but none were RCTs.

Social skills training can take place in both regular and special education classrooms, and a variety of approaches have been developed. For example, teachers may use a structured approach to explain to students how to perform a desired behavior, giving examples and reinforcing targeted behaviors through questions, answers, and other feedback. In a more nuanced approach, often referred to as *incidental teaching*,

teachers respond to students' own utterances, interactions, and behaviors to encourage the desired social skills (for example, by rewarding positive play).

Limited but promising research backs *peer-directed interventions*, which use peers in natural settings as the primary interventionists to promote social communication in children with disabilities.¹⁸ Typically developing peers who have learned strategies to promote social communication interactions are paired with children with disabilities during play. In some interventions, peers learn strategies to increase interactions, engagement, and communication (such as making requests, paying attention to others, and taking turns).

Preschool Curricula

Few curricula have been developed specifically for young children with disabilities. One curriculum with evidence of effectiveness from an RCT is Teaching Early Language and Literacy (TELL). This approach involves a set of instructional sequences, scripted teaching activities, and materials for activities to build oral language and early literacy.¹⁹ The Incredible Years curriculum—which focuses on acquiring social skills and reducing behavior problems, positive parenting, and improved classroom management for students in preschool through early elementary school—has a strong research base, including RCTs.²⁰ The Incredible Years training programs for children, parents, and teachers can be used independently or in combination. Supported by professional development materials to train teachers, therapists, and parents, Incredible Years has been used

successfully in classrooms, clinical settings, and parent groups.

Interestingly, preschool curricula created for typically developing children have not been well studied to see whether they're effective for children with disabilities. Because so many children with disabilities attend regular preschools, this is an important area for future research.

Instructional Practices

What constitutes high-quality instruction for children with disabilities? Research has identified a number of components.²¹ During the preschool years, one important goal is to promote early literacy—oral language, phonological awareness, print awareness, and letter knowledge. These skills are the foundation for later instruction in formal literacy and reading. Practices that support early literacy for typically developing children apply equally well to young children with disabilities—reading books, for example, and teacher-child interactions that focus on asking questions and making predictions to facilitate language development.²²

However, for children with disabilities to generalize the skills they learn and maintain them over time, they often need instructional practices that are more intense or longer in duration than those that work for typically developing children.²³ Unfortunately, researchers have mainly examined children who receive language and communication interventions delivered by specialists, either in clinics or in small groups within classrooms. We need to know whether teachers can feasibly and effectively implement these same interventions in classroom settings. We also need more research about the appropriate

balance between child-directed and teacher-directed activities—that is, activities in which teachers impart specific literacy skills that children then practice with their peers in play and during other developmentally appropriate classroom activities throughout the day.²⁴

We also have good evidence of effectiveness for *naturalistic instruction*, in which teachers use naturally occurring settings and activities as the context for teaching interactions. We've seen that this approach can help children learn new social, language, motor, self-help, and pre-academic skills, but no studies have used RCTs.²⁵ An example is *embedded instruction*—an activity-based intervention that occurs during everyday activities such as play or routines such as feeding, bathing, or dressing. Adults deliberately arrange the environment and materials to support a child's development and elaborate on child-initiated behaviors to build a child's skills.

Practices Recommended by the Division for Early Childhood

To support the use of evidence-based practices in the field, the Division for Early Childhood of the Council for Exceptional Children—an international organization for those working with and on behalf of young children with disabilities—has identified 66 recommended practices for people who work with young children with disabilities and their families.²⁶ These practices reflect the best available empirical evidence as well as the consensus of professionals in the field in eight areas—seven for practitioners and one for program leaders.

For practitioners, the recommendations cover assessment, environment, families, instruction, interaction, collaboration,

and teaming (regular communication and interactions among practitioners from multiple disciplines). The practices encompass the most effective ways to improve learning outcomes and promote the development of young children (aged zero to five) who have or are at risk for delays and disabilities. The recommendations build on developmentally appropriate practices that are recognized within the early childhood special education community as necessary but not sufficient for children who are experiencing developmental challenges.²⁷ These recommended practices are not specific to a particular disability and can be delivered in all settings, including general early childhood programs.

Multi-Tiered Systems of Support

As we've said, over the past decade school systems have been moving toward multi-tiered systems of support for children who face learning and behavioral challenges, including children with disabilities. MTSS, also known as *response to intervention*, has no single definition, but most descriptions share the components we described earlier: tiers of instruction, with intervention becoming more intense as students move up the tiers; high-quality instruction in general education settings; continuous measurement of students' learning and progress; a set of data-based decision rules to identify which students need intervention, and at which level; individualized evidence-based interventions; and consideration of special education services for students who don't make sufficient progress.²⁸

The Division for Early Childhood, the National Association for the Education of Young Children, and the National Head Start Association have jointly described

the four core features of a response to intervention approach in early childhood as: multi-tiered systems of teaching and caregiving practices; a high-quality curriculum; ongoing assessment and monitoring; and collaborative problem-solving among team members.²⁹

The MTSS approach recognizes that poor teaching can contribute to a child's learning problems.

At each tier, evidence-based approaches are central to effectiveness. For example, Tier 1 in an MTSS approach—the general education classroom—uses evidence-based curricula that give all children the chance to succeed with good instruction. When monitoring shows that children aren't succeeding, tier 2 methods are brought in, such as more frequent or longer instruction, learning in smaller groups, or instructors with more specialized expertise.³⁰ The MTSS approach recognizes that poor teaching can contribute to a child's learning problems; its emphasis on high-quality instruction in the general education classroom as part of an identification framework is consistent with the functional approach to disability. Some researchers believe that the MTSS approach may ultimately influence how many children are identified for IDEA services, and may also change the nature, placement, intensity, and timing of the services they receive.³¹

Emerging evidence shows that the MTSS approach improves academic and behavioral outcomes. But we need more research, especially about how districts

are implementing MTSS. Some studies show that in kindergarten through third grade, interventions with a multi-tiered framework can help struggling readers improve.³² Other studies—of entire school districts that have successfully implemented MTSS models—report improved academic achievement in reading, math, and language arts.³³

However, a more recent national study that used a regression discontinuity design—a research design that takes advantage of the fact that students who fall just below the cutoff score on a screening test receive services, while those just above the cutoff don't—failed to show positive impacts on reading in the early elementary grades.³⁴

One MTSS model with strong evidence of effectiveness, including evidence from RCTs, is called Positive Behavioral Interventions and Supports (PBIS).³⁵ Designed for kindergarten through 12th grade, PBIS uses school-wide problem-solving models to discourage inappropriate behavior by teaching and reinforcing appropriate behaviors. PBIS has been shown to reduce behavior problems, improve social skills, and improve the school climate—that is, the subjective experience of a school that includes norms, values, and expectations that help children and adults feel socially, emotionally, and physically safe. Taken together, these factors allow for more and better opportunities for high-quality academic instruction.³⁶ With PBIS, a range of interventions are systematically applied based on the students' demonstrated level of need. The program explicitly addresses the environment's role in the development and improvement of social and behavior problems. PBIS is also being combined with school-wide literacy interventions;

recent research on PBIS is focusing on how to sustain school-wide positive behavioral interventions and supports.³⁷

Early childhood programs, too, are increasingly using multi-tiered approaches.³⁸ The expansion of MTSS among younger children isn't driven by the desire to better identify students with learning disabilities, as it is with the school-age population. Rather, multi-tiered models are promoted as a way to meet preschool children's diverse needs, especially given the current emphasis on including young children with disabilities in regular early childhood programs (a topic we discuss in the next section).

One MTSS approach for early childhood is called the Pyramid Model. A collection of evidence-based practices to increase social-emotional skills and decrease challenging behaviors in preschool classrooms, it uses three tiers of increasingly intensive interventions.³⁹ The practices were identified by systematically reviewing the research on prevention and intervention practices that led to positive social-emotional outcomes and fewer challenging behaviors in young children, both with and without disabilities. In the community preschool programs where it has been implemented, the model has been found to increase children's pro-social behaviors and to reduce behavior problems in a study that used a single-case design.⁴⁰

Research has also shown that teachers can be coached to implement the Pyramid Model with fidelity. The model's developers have reported positive social and behavioral outcomes in children from one RCT, but they admit that more RCTs are needed. They also acknowledge that we should learn more about the types of professional

development and other factors that can help to effectively implement and sustain the model.⁴¹

In general, although multi-tiered models have shown positive effects, we need more research to guide their implementation in early childhood.⁴² Indeed, all the features of MTSS in early childhood need more study. For example, what are the best approaches for universal screening and for monitoring progress? Which decision-making models best identify the children most likely to benefit from more-intensive interventions? And how should we set the hierarchy of more-intensive and supplemental instructional techniques for children who don't make good progress with the less-intensive approaches?⁴³

Including Children with Disabilities

The drive to educate children with disabilities alongside typically developing children has been one of the most remarkable changes in preschool programs and the early elementary grades over the past several decades. This progress has been achieved by parent advocacy and the legislative requirement that children with disabilities must be educated in the least restrictive environment. Opening the doors of general education classrooms gives children with disabilities access to the general early childhood or elementary curriculum, typical peers, and more of the typical activities available to other children. The practice thus holds a promise of better academic and social outcomes. Inclusion, by focusing on full participation and the necessary supports to allow that participation, is also consistent with the ICF view of disability.

In 2013, however, despite IDEA's longstanding mandate for placement in

the least restrictive environment, more than one-third of preschool children with disabilities (34.2 percent) spent no time in a general early childhood program. Instead, they received their special education services in a separate class or other setting.⁴⁴ Recently, the US Department of Education and the Department of Health and Human Services released a set of recommendations reaffirming the importance of including young children with disabilities in high-quality early childhood programs alongside their typically developing peers.⁴⁵

Inclusion is more than placement. It must give young children with disabilities a sense of belonging and membership, and access to positive social relationships—as well as development and learning.

But inclusion is more than that. A joint position statement from the Division for Early Childhood and the National Association for the Education of Young Children defines three components of inclusion: access—that is, a wide range of typical environments and the use of universal design to support full access; participation, including methods that support and promote children's full participation, such as embedded instructional approaches; and supports—infrastructure to support staff, such as appropriate professional-development opportunities and specialized services in the setting.⁴⁶ According to that position

statement, inclusion is more than placement. It must give young children with disabilities a sense of belonging and membership, and access to positive social relationships—as well as development and learning.

Beginning in the 1980s, experimental preschool programs demonstrated that children with disabilities could learn alongside typically developing peers while both groups made good progress. That finding has since been replicated in many other studies.⁴⁷ A review of 22 studies conducted by the 1990s found that preschool-age children with disabilities who are served in inclusive rather than segregated settings have better outcomes on standard measures of development, social competence, play behavior, and engagement.⁴⁸ Of the 22 studies reviewed, 18 used group designs but only six used RCTs.

A more recent research synthesis concluded that children in inclusive classrooms need specialized instruction to achieve good child outcomes. It also found that families of children with disabilities generally view inclusion favorably, although some of them worry about the quality of early childhood programs and services; that early childhood professionals may not be adequately prepared to serve young children with disabilities enrolled in inclusive programs; and that a variety of factors—such as policies, resources, and beliefs—influence whether inclusion is accepted and how well it's implemented.⁴⁹

We know little about what happens to children with disabilities who have experienced inclusive programming in preschool after they enter kindergarten.

One small study that began following such children in kindergarten found that after five years, only 60 percent of them remained in some form of inclusive placement.⁵⁰ Another study found that a significant number of children with mild developmental delays who had been fully included in preschool and kindergarten were not in an inclusive placement by first and second grade.⁵¹

Many factors influence the success of inclusion in the early grades. Are paraprofessionals or aides available to work with the child? Does the child's family advocate for inclusive placement? Do the teachers have the appropriate knowledge and attitude about serving children with disabilities? Moreover, at the elementary level, it's easier and more common to include children with milder disabilities in general education classrooms than children with more significant disabilities.⁵² Clearly, we need more research on promoting successful inclusion. Because principals play an important role in supporting inclusive programming in elementary schools, training in special education should be part of their higher education preparation and professional development.⁵³

Making Transitions

For young children with disabilities and their families, transitions can be challenging. If a child's disabilities are identified before age three, the family will face moving the child from an infant-toddler program to a preschool program. The shift from mainly home-based services to a group preschool setting will require the child to have certain social, behavioral, and communication skills to meet the demands of the new setting. For many families the transition occurs relatively

quickly, as children are often identified for early intervention (services from birth to age three) only after 15 months of age.⁵⁴ For children who receive special education services in preschool, the next transition is to kindergarten, with an accompanying shift to higher academic expectations. Interestingly, IDEA regulations have requirements that cover the transition from early intervention to preschool, but none covering the transition to kindergarten.

That transition is widely recognized as a major life experience for young children. In response, schools have increasingly implemented practices to support successful transition.⁵⁵ A national study of preschool special education recipients found that on average kindergarten teachers used 5.4 different transition practices. The same study showed that special education teachers provided more support than regular education teachers. More than 80 percent of kindergarten teachers reported that they received children's records and other information from the children's preschool programs, and that their schools encouraged parents and guardians to meet the child's new teachers. Smaller districts, wealthier districts, and suburban and rural districts offered more support than larger, poorer, and urban districts. Parents and teachers alike reported that when the school took steps to facilitate the transition, the process was easier for children. Overall, 16 percent of parents said that the transition to kindergarten was somewhat or very hard for their child. But that figure was as high as 51 percent for children whose primary disability was emotional disturbance.⁵⁶

We need far more research on the factors that lead to successful transitions for young children with disabilities. We also need to

refine the definition of what constitutes a successful transition.⁵⁷ Until now, research has focused on the transition from preschool to kindergarten, and mostly looked at transitions for typically developing children. Young children with disabilities don't just make major life transitions, going from early intervention to preschool and from preschool to kindergarten. Many also make smaller transitions daily or several times a week—for example, when they go from a preschool in the morning to a child-care home in the afternoon. This complexity has led to calls for more research about the best ways to smooth these transitions and improve transition policies and practices.⁵⁸ Support for transitions is another example of how environmental factors can mitigate the impact of a child's developmental challenges.

Conclusions

Recent developments—such as the renewed emphasis on inclusion and multi-tiered support systems to provide specialized intervention to all children who are struggling—are blurring the distinction between regular and special education.⁵⁹ High-quality instruction in general education classrooms, the first tier in an MTSS, is a major factor in good educational outcomes for children with disabilities, and for their successful inclusion from preschool to third grade. Efforts to improve the quality of general education, such as statewide quality rating and improvement systems and various K–3 educational reform initiatives, will benefit all children, including those with disabilities. Creating environments that support social development and help children learn new skills both remediates

and prevents learning and behavior problems.

Providing high-quality learning environments is consistent with the newer concept of disability, which emphasizes functioning and sees disability as the interaction between the individual and the environment. Educational environments from preschool to third grade aren't neutral factors when it comes to existing and emerging disabilities. These environments contribute positively or negatively to the way children will function—and even, for some children, to whether they are considered disabled at all.

The past 50 years have seen substantial research on effective instruction and interventions for young children with disabilities. We still have much to learn, of course, especially with regard to what works best, and for whom. We need to ensure that preschools and classrooms around the country use evidence-based practices. Implementation science provides a framework for improving the quality of tier 1 environments, and also for increasing the frequency and fidelity with which evidence-based practices are implemented.⁶⁰

We also need comprehensive approaches to professional development that are coordinated with the general education community. More effective general education and special education teachers will allow children with disabilities to receive the individualized services that IDEA requires, and will benefit all children. New models of teacher training, both preservice and professional development, will require more collaboration across general and special

education, as well as supportive leadership. If all children are to reap the benefits of effective teaching, professional development needs to be seen as an essential feature of schools' organizational systems. Professional development must support such innovative approaches as co-teaching, coaching, consultation models, professional learning communities, and communities of practice. It must also encourage new ways of teaching, of classroom staffing, and of classroom organization.

Finally, teachers and other staff need support in their efforts to truly individualize instruction for all children, including those with disabilities and learning or behavioral challenges. Appropriate education for children with disabilities is not just an issue of where they are, but also of what is happening to them. Effective educational practices from preschool through third grade are essential to the full participation of children with disabilities—now and in the future.

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