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REVIEW OF THE RESEARCH ON INCLUSIVE CLASSROOMS: ACADEMIC AND SOCIAL OUTCOMES FOR STUDENTS WITH AND WITHOUT DISABILITIES; BEST PRACTICES; AND PARENTS' PERCEPTIONS OF BENEFITS AND RISKS

At a Glance

Over the past few decades, an increasing number of schools across the U.S. have adopted inclusive education models in which students with disabilities (SWD) attend classes with their nondisabled peers. This Information Capsule summarizes the research on the academic and social outcomes of inclusion on students with and without disabilities. Most studies have found no significant difference between the academic achievement of SWD in inclusive classrooms and SWD in self-contained special education classrooms; however, no consensus has been reached regarding the impact of inclusion on nondisabled students' academic achievement. Most researchers have concluded that inclusive classrooms have a positive impact on disabled students' social outcomes, but the impact of inclusion on nondisabled students' social outcomes has not yet been determined.

Best practices for implementing inclusive classrooms are reviewed, such as obtaining buy-in from all stakeholders, basing placement decisions on each student's individual needs, and differentiating instruction. Because general education teachers in many cases were not adequately trained to teach SWD in their teacher preparation programs but have had to assume many of the responsibilities that were once held only by special education teachers, researchers have concluded that rigorous and ongoing professional development is essential to the success of inclusive classrooms.

Research conducted on parents' perceptions of the benefits and risks of inclusive classrooms is also summarized. Studies have found that parents of both disabled and nondisabled children have positive attitudes toward inclusion, but they also have concerns about inclusive classrooms. Parents of nondisabled children tend to have more concerns about inclusion than parents of disabled children. In addition, the perceptions of parents of both disabled and nondisabled children depend on the nature of the child's disability, with support for inclusive classrooms decreasing as the severity of the student's disability increases.

The Individuals with Disabilities Education Act (IDEA) mandates that students with disabilities (SWD) be provided with an education in the least restrictive environment. Most scholars have interpreted this to mean that SWD should be educated in general education classrooms along with their nondisabled peers whenever possible. If students require specialized services, these services are provided to them within the general education setting (Constantinescu & Samuels, 2016; Lampton et al., 2012; Hanover Research, 2011; Robbins, 2010; Rea et al., 2002; Rafferty et al., 2001; Wisconsin Education Association Council, 2001; Vaughn et al., 1998; Hocutt, 1996).

The Children's Hospital of Philadelphia Research Institute (2014) stated, "Clearly, inclusion does not mean putting students with disabilities in regular classrooms and hoping for the best. Students who are eligible for special education are entitled to any accommodations that are necessary to help them access the educational curriculum and meet the goals in their IEPs [Individualized Education Programs], and teachers of inclusion classrooms are entitled to any training and other supports that they require to support all students in their classrooms."

Over the past few decades, an increasing number of schools across the U.S. have adopted inclusive education models in which SWD attend classes with their nondisabled peers. Between 1989 and 2013, the percentage of SWD in general education classrooms for 80% or more of the school day increased from approximately 32% to nearly 62%. Some research shows that as many as 85% of SWD can succeed in general education classrooms when they are provided with the needed educational supports. Students with speech or language impairments, specific learning disorders, and other health impairments tend to spend the most amount of time in inclusive classrooms. Students with intellectual disabilities, multiple disabilities, and autism spend the least amount of time in inclusive classrooms (Mader, 2017; Hanover Research, 2011; Cole et al., 2002).

The issue of whether to educate SWD in inclusive settings or self-contained special education classrooms has divided educators, parents, and advocacy groups. Supporters of inclusion say that SWD have the legal right to be educated in the least restrictive environment and that separating them from their nondisabled peers is a form of segregation. They maintain that separate special education classrooms marginalize SWD by focusing on their weaknesses instead of their strengths (Constantinescu & Samuels, 2016; Csillag, 2014; Hanover Research, 2011; Vianello & Lanfranchi, 2011; Rea et al., 2002).

Proponents of inclusive classrooms focus on how they benefit the social development of students both with and without disabilities. They claim that inclusive classrooms provide SWD with increased social interactions, relationships, and networks; peer role models for academic, social, and behavioral skills; and a greater sense of belonging. Advocates also believe students without disabilities develop an increased appreciation and acceptance of individual differences; increased understanding and acceptance of diversity; and respect for all people (Hanover Research, 2011; Kids Together, Inc., 2010).

In contrast, critics of inclusion say it is not an appropriate strategy for certain SWD. They believe that inclusion places an unfair burden on general education teachers who do not have specialized knowledge of SWD and are often unprepared to meet disabled students' unique needs. They also express concern that SWD will not be provided with the same level of individualized attention they would receive in special education classrooms (Mader, 2017; Csillag, 2014; Lampton et al., 2012; Hanover Research, 2011; Leyser & Kirk, 2011; Fore et al. 2008; Rea et al., 2002; Vaughn et al., 1998; Hocutt, 1996).

Impact of Inclusion on the Academic Achievement of Students With Disabilities

Most studies have found no significant difference between the academic achievement of SWD in inclusive classrooms and SWD in special education classrooms. A few studies have found that inclusion has a positive effect on the achievement of SWD.

- Analysis of data from two high schools in the Southeastern U.S. found that grades 9-12 SWD in inclusive classrooms performed no differently on the reading and math portions of the Multilevel Academic Survey Test (MAST) than SWD in self-contained special education classes (Fore et al., 2008).
- Hurt (2012) studied SWD in grades 3-8 in four counties in Southwest Virginia. He found no significant differences in achievement, as measured by Virginia's Standards of Learning (SOL) assessment in reading and mathematics, for SWD who were placed in inclusion classrooms and those in pullout programs.
- A study conducted in six Indiana school districts found that SWD in inclusive classrooms made gains on the reading and mathematics subtests of the Basic Academic Skills Samples (BASS) test that were greater than or equal to the gains of SWD educated in self-contained special education classrooms (Cole et al., 2002).
- Rea and colleagues (2002) compared the academic performance of two groups of eighth grade SWD in a Southeastern school district. One group of students attended a middle school where they received all of their instruction in an inclusive classroom. The other group of students attended a middle school where they received additional small group or individual instruction with a special education teacher outside of the general education classroom (pullout model). The researchers found that SWD in inclusive classrooms achieved better outcomes on some measures than their peers in pullout programs and comparable outcomes on others:
 - SWD served in inclusive classrooms received significantly higher course grades in language arts, mathematics, science, and social studies than SWD in pullout programs.
 - SWD in inclusive classrooms earned significantly higher scores on the language and mathematics subtests of the Iowa Test of Basic Skills (ITBS) than SWD in pullout programs. However, there were no significant differences between the two groups of students' test scores in reading comprehension, science, and social studies.
 - Analyses of scores on the reading, mathematics, and writing subtests of the Literacy Passport Tests (LPT), including mean scores and pass-fail rates, revealed no significant differences between SWD in inclusive classrooms and SWD receiving pullout services.

- SWD in inclusive classrooms had significantly higher attendance rates than SWD in pullout programs. SWD in inclusive classrooms were absent from school an average of 5.6 days a year. In comparison, SWD in pullout programs were absent from school an average of 8.7 days per year.
- A study of elementary, middle, and high school SWD in a large urban school district in a Plains state concluded that placement in an inclusive classroom had a highly significant positive effect on student performance, as measured by students' reading and mathematics scores on the state's assessment. Results indicated that performance on state assessments increased in both reading and mathematics as students' level of inclusion increased (Robbins, 2010).

Impact of Inclusion on the Academic Achievement of Students Without Disabilities

No consensus has been reached regarding the impact of inclusion on nondisabled students' academic achievement. Some studies have found that placement in inclusive classrooms has a positive effect on nondisabled students' academic achievement, others have found that inclusion has no effect or even a negative effect on achievement, and still others have reported mixed results.

Examples of studies that have found inclusive classrooms have a positive impact on the academic achievement of nondisabled students include:

- A study conducted in 24 schools in six Indiana districts found that students without disabilities educated in inclusive settings made significantly greater academic progress than those educated in traditional general education classrooms. In mathematics, 61% of students without disabilities in inclusive settings made progress on the BASS, compared to 38% of students without disabilities in non-inclusive settings. In reading, 54% of students without disabilities in inclusive settings made progress on the BASS over the course of the school year, compared to 46% of students without disabilities in non-inclusive settings (Cole et al., 2002).
- Castro (2007) compared the academic achievement of nondisabled elementary students in inclusive classrooms and non-inclusive classrooms in a New Jersey school district. Students were in kindergarten through second grade. Results indicated that Terra Nova test scores and attendance rates were significantly higher for nondisabled students served in inclusive settings than for nondisabled students served in traditional general education classrooms.

Studies that have reported that inclusion has no effect on nondisabled students' academic achievement include:

- An analysis of nondisabled students' achievement in three school districts in Illinois, Missouri, and Pennsylvania found that their placement in inclusive classrooms did not have an impact on their academic performance, as measured by report card grades, national percentile ranks on standardized tests, student work samples, and teacher rating scales (Korenich & Fox, 2006, cited in Spence, 2010).

- Dessementet and Bless (2013) studied nondisabled Swiss elementary students (with an average age of eight years old) to determine if the inclusion of SWD in their classrooms had an impact on their academic achievement. The researchers concluded that the inclusion of students with mild or moderate intellectual disabilities in their classrooms did not appear to affect the academic progress of nondisabled students, regardless of whether they were low-, average-, or high-achieving.
- A few studies have also found that the average classroom time allocated and used for instruction, as well as the rate of interruption to planned activities, do not decrease when SWD are placed in general education classrooms (Whitbread, 2004; Katz and Mirenda, 2002; Hocutt, 1996).

Examples of studies that have concluded that inclusive classrooms have a negative impact on nondisabled students' academic achievement include:

- Neugebauer (2008) examined the relationship between the academic performance of nondisabled students in inclusive high school science and social studies classes compared to their counterparts in non-inclusive classrooms. She found that nondisabled students in non-inclusive classrooms performed at higher levels on the Texas Assessment of Knowledge and Skills (TAKS) science and social studies subtests than nondisabled students in inclusive classrooms.
- Fletcher (2010, cited in Constantinescu & Samuels, 2016) studied what he called the "spillover effects" of inclusion on nondisabled students. For his study, Fletcher used a nationally representative sample of students from the Early Childhood Longitudinal Survey – Kindergarten (ECLS-K). Findings indicated that having a classmate with an emotional disability was associated with lower test scores in reading and mathematics for kindergarteners and first graders who did not have a disability. The negative effects were larger for reading and had more of an impact on Black and Hispanic nondisabled students in low-income schools. Students in full inclusion classrooms were affected more than those in partial inclusion classrooms.
- Using data from the nationally representative ECLS-K, Gottfried and colleagues (2016, cited in Constantinescu & Samuels, 2016) reported that kindergarten students who had a classmate with an emotional or behavioral disability missed approximately half a day more of school than kindergarten students who did not have such a classmate. Based on teacher reports during the spring of the kindergarten year, the researchers found that the odds that a student was chronically absent were 1.42 times greater for students who had a classmate with an emotional or behavioral disability.

Studies that have reported mixed findings on the effect of inclusion on nondisabled students' achievement include:

- Robinson (2012) found mixed results when he studied the performance of nondisabled students in two New Jersey middle schools. In one school, nondisabled students placed

in inclusion classrooms scored lower than their nondisabled peers who were placed in general education classrooms on the reading and mathematics subtests of the New Jersey Assessment of Skills and Knowledge (NJ ASK). At the other school, however, there were no significant differences in the NJ ASK reading and mathematics test scores of students placed in inclusive and non-inclusive classrooms.

- Spence (2010) compared the academic performance of nondisabled students placed in inclusive classrooms and nondisabled students placed in general education classrooms. Academic achievement was measured by the Criterion-Referenced Competency Test (CRCT). All students attended a middle school in Georgia. No significant test score differences in reading achievement were found between the two groups of students. In mathematics, nondisabled students in inclusive classrooms scored lower than nondisabled students in general education classrooms.

More research is clearly needed to determine the impact of inclusion on nondisabled students' academic achievement. Constantinescu and Samuels (2016) recommended that future studies consider additional factors, such as the severity of a child's disability, the level of support available to teachers, and the particular inclusion model being implemented at the school.

Impact of Inclusion on the Social Outcomes of Students With Disabilities

Studies have found that SWD derive significant social benefits from attending inclusive classrooms. Advocates of inclusion believe these social benefits are sufficient reason to place SWD in general education classrooms (Hanover Research, 2011; Cole et al., 2002; Vaughn et al., 1998).

Henninger and Gupta (2014) noted that when SWD are separated from their nondisabled peers, they are "unable to observe appropriate social behaviors and are therefore less likely to achieve the fundamental social milestones that are linked to later success in school and life. The bottom line is that regular, sustained interaction in inclusive classrooms offers children with disabilities opportunities to observe, develop, expand, and generalize their social skills."

Researchers have reported that SWD placed in inclusive classrooms:

- Have more opportunities to learn and model socially acceptable, age-appropriate behavior;
- Have an enhanced sense of belonging;
- Maintain levels of self-esteem that are comparable to those of their nondisabled peers;
- Demonstrate better communication skills;
- Have increased social interactions with classmates;
- Are less likely to feel isolated from their peers; and
- Are more likely to develop friendships with nondisabled students (Henninger & Gupta, 2014; Lamport et al., 2012; Vianello & Lanfranchi, 2011; Fore et al., 2008; Shoger, 2006).

Impact of Inclusion on the Social Outcomes of Students Without Disabilities

While research clearly indicates that inclusion has a positive impact on the social outcomes of SWD, the impact of inclusion on nondisabled students' social outcomes has not yet been determined.

Some studies have found that inclusion can have a positive social impact on nondisabled students. Researchers have documented that nondisabled students placed in inclusive classrooms:

- Demonstrate greater respect for their disabled classmates;
- Increase their understanding of other children's needs;
- Become more comfortable around persons with disabilities; and
- Learn how to become friends with their disabled classmates (Mader, 2017; Henninger & Gupta, 2014; Hanover Research, 2011; Schoger, 2006; Wisconsin Education Association Council, 2001; Education World, n.d.).

On the other hand, some educators and researchers are concerned that SWD have a negative effect on nondisabled students' behavior and emotions. Gottfried and colleagues (2016, cited in Constantinescu & Samuels, 2016), for example, examined the social and behavioral effects of placing SWD in general education classrooms. Using the nationally representative ECLS-K database, the researchers found that nondisabled students with a greater number of SWD in their classrooms exhibited more behavioral problems (such as arguing, fighting, and disruptive behaviors), less self-control, and more anxiety and loneliness. The effects were largest for nondisabled students in classrooms with students with emotional and behavioral disabilities, and smallest for nondisabled students with high academic abilities, and for those in classes taught by an experienced teacher.

Best Practices in Inclusive Education

It is possible that inconsistencies in research findings may be caused by differences in the ways in which inclusion models are developed and implemented in schools. A summary of research-based best practices for implementing inclusive classrooms is provided below.

- **Planning.** Educating SWD in general education settings requires careful planning and preparation. Inclusive classrooms have been found to be more effective when educators predetermine which instructional strategies will be utilized and the types of accommodations students will require (Whitbread, 2004; Gould & Vaughn, 2000).
- **Stakeholder buy-in.** Research shows that principals, teachers, special education directors, parents, and community members should all be involved and committed to the successful implementation of inclusive education (Doménech & Moliner, 2014; Whitbread, 2004). The Wisconsin Education Association Council (2001) stated, "When considering a move from traditional/regular special education programming to a more inclusive approach, it is important that the entire school community be involved in a thoughtful, carefully researched transition. Dramatic top-down directives will polarize parents and teachers and will create environments that are hostile to any change."

- **Placement decisions based on each student's needs.** Experts caution that inclusion is not a one-size-fits-all intervention and placement decisions must be made on an individual basis with the student's best interests and learning needs in mind (Csillag, 2014; Robinson, 2012; Fore et al. 2008; Vaughn et al., 1998; Hocutt, 1996; Education World, n.d.). The Wisconsin Education Association Council (2001) quoted an expert on inclusion who argued that "trying to force all students into the inclusion mold is just as coercive and discriminatory as trying to force all students into the mold of a special education class or residential institution."

Questions to consider before placing SWD in inclusive classrooms include:

- Is the learning environment able to support the student's academic needs?
 - Can the student remain attentive and engaged in a classroom of 25-30 students?
 - Will there be sufficient opportunities for the student to practice his/her academic skills?
 - Will students be provided with opportunities to model social skills learned from their nondisabled peers? (Children's Hospital of Philadelphia Research Institute, 2014).
- **Differentiated instruction.** Inclusive classrooms have been found to be more effective when teachers engage in differentiated instruction. Differentiated instruction does not mean that each student is assigned separate, unrelated activities. Instead, students are provided with interrelated activities that tailor instruction to meet each student's individual needs (Csillag, 2014; Dixon & Zannu, 2014; Bender, 2002; Katz & Mirenda, 2002; Vaughn et al., 1998). Teachers can differentiate instruction in several ways:
 - The differentiated classroom is characterized by a **variety of instructional grouping patterns**. Small-group instruction and one-to-one arrangements (including peer tutoring and partner work) have been found to result in higher levels of engaged behavior than whole-class instruction or independent seatwork for students both with and without disabilities. Peer tutoring, in particular, has been shown to increase the achievement of SWD and nondisabled students and improve the quality of social interactions between students (Dixon & Zannu, 2014; Whitbread, 2004; Bender, 2002; Katz & Mirenda, 2002; Vaughn et al., 1998; Education World, n.d.).
 - Differentiated classrooms engage in a wide **variety of activities** in order to address students' different learning needs. Studies have found that the classroom participation and engagement of both disabled and nondisabled students increase when they have opportunities to use their preferred learning style (for example, visual, auditory, tactile, or kinesthetic) (Whitbread, 2004; Bender, 2002; Katz & Mirenda, 2002; Education World, n.d.).
 - In differentiated classrooms, teachers use **different assessment tools** for different students. Students' learning styles determine which products the

teacher accepts as demonstrations of learning. Bender (2002) noted that in differentiated learning classrooms, it is not uncommon for a unit of instruction to have four or five different types of culminating projects from which students may choose to demonstrate their knowledge, such as art projects, web-based research, multimedia projects, written reports, or oral reports.

- **Co-teaching.** Many inclusive classrooms use a co-teaching model and this teaching model has been shown to be highly effective in inclusive classrooms. Co-teaching is the partnership of a general education teacher and a special education teacher for the purpose of jointly delivering instruction to both disabled and nondisabled students in a general education setting. It is recommended that the general education teacher have deep knowledge of the subject areas and the special education teacher have expertise in effective instruction of SWD (Lamport et al., 2012; Hanover Research, 2011; Neugebauer, 2008; Wisconsin Education Association Council, 2001; Education World, n.d.).

Co-teaching has been found to be most effective when both teachers maintain responsibility for the whole class. The general education teacher should not be required to plan and teach all students all the time; the special education teacher's role should include teaching whole class, small group, and individual lessons on an ongoing basis (Lamport et al., 2012; Vaughn et al., 1998). Mader (2017) cautioned that co-teachers must be "careful not to fall into what educators say is a common trap: seeing general-education students as the responsibility of one teacher, and special-education students as the responsibility of the other."

- **Support for teachers.** Experts maintain that the provision of teacher training and support are critical to the success of inclusive classrooms (Mader, 2017; Children's Hospital of Philadelphia Research Institute, 2014; Csillag, 2014; Henninger & Gupta, 2014; Hocutt, 1996; Education World, n.d.).
 - **Professional development.** The increased popularity of inclusive classrooms has resulted in general education teachers assuming many of the responsibilities that were once only held by special education teachers. Therefore, researchers agree that successful inclusion depends on general education teachers receiving rigorous and ongoing professional development (Stidham, 2015; Blanton et al., 2011; Jenkins & Yoshimura, 2010; Rosenzweig, 2009). Areas of emphasis may include:
 - Instructional approaches for SWD;
 - Strategies for differentiating instruction;
 - Classroom management techniques;
 - Characteristics of different disabilities and how they affect student learning;
 - Supports and services available to SWD; and
 - Purpose, development, and implementation of the IEP (Mader, 2017; Csillag, 2014; Lamport et al., 2012; Jenkins & Yoshimura, 2010;

Rosenzweig, 2009; Dimitrios et al., 2008; Rea et al., 2002; Wisconsin Education Association Council, 2001; Hocutt, 1996).

Several researchers believe that general education teachers are not prepared to teach SWD because they were not adequately trained in their teacher preparation programs and some teachers have even reported themselves that their pre-service training was insufficient (Stidham, 2015; Blanton et al., 2011; Jenkins & Yoshimura, 2010; Rosenzweig, 2009). Cameron and Cook (2007) surveyed preservice general and special educators enrolled in separate four-year teacher preparation programs at a large Midwestern university. General education teachers reported taking an average of 1.5 courses focusing on inclusion or special education in their teacher preparation programs, compared to approximately 11 courses for special education teachers. Mader (2017) noted that educators say little has changed since Cameron and Cook's (2007) study was conducted.

- **Collaborative planning.** Researchers have concluded that collaborative planning between special education and general education teachers is essential to successful inclusive classrooms. They recommend that teachers be provided with time to co-plan lessons and determine the most effective instructional strategies for the SWD and nondisabled students in their classrooms (Lamport et al., 2012; Rosenzweig, 2009; Whitbread, 2004; Katz & Mirenda, 2002).
- **Low student-to-teacher ratios.** Some studies have reported that inclusive classrooms produce better student outcomes when they have low student-to-teacher ratios (Hanover Research, 2011; Wisconsin Education Association Council, 2001).

Parent Perceptions of Inclusive Classrooms

Two general findings emerged from the literature on parents' perceptions of inclusive education:

1. **Studies have found that parents of both disabled and nondisabled children have positive attitudes toward inclusion, but they also have concerns about inclusive classrooms. Parents of nondisabled children tend to have more concerns about inclusion than parents of SWD.**

A survey of parents of children with and without disabilities attending inclusive preschool programs in Alabama, Colorado, Oklahoma, and Texas reported that parents of both SWD and nondisabled children agreed that inclusion was beneficial for children with and without disabilities. Both sets of parents said they believed that inclusive classrooms helped SWD become prepared for the real world, develop independence, and learn from their typically developing peers. Perceived benefits of inclusion for nondisabled students included increased sensitivity to others with disabilities and a better understanding of differences in people. A greater percentage of parents of nondisabled children, compared to parents of SWD, expressed concern that SWD would be rejected by their nondisabled peers in inclusive classrooms (Hilbert, 2014).

A survey of parents of children with and without disabilities attending reverse inclusion (settings in which a small group of nondisabled students are added to a specialized program for SWD)

preschool classes in New York State found that parents of SWD and nondisabled children agreed that inclusion had a positive impact on their children. But parents of nondisabled children were more likely to be concerned about the effects of inclusion on their children. A substantial percentage of parents of nondisabled children agreed that their child might be frightened by the strange behavior of some SWD, that SWD might injure their child, or that their child might learn negative behaviors from SWD (Rafferty et al., 2001).

A number of researchers have studied parent perceptions of inclusive classrooms outside of the U.S. These studies have confirmed the results of studies conducted within the U.S. For example:

- Al Neyadi (2015) surveyed parents of children with and without disabilities in the United Arab Emirates (UAE). Both sets of parents agreed that inclusion was a positive educational practice for SWD and nondisabled students. They also agreed that direct interaction between SWD and nondisabled students helped nondisabled students become more accepting of SWD. Parents of SWD reported more positive attitudes toward inclusion than parents of nondisabled children. Both sets of parents supported inclusion because of its positive social impact on children, but had concerns about its impact on children's academic achievement.
- Mohsin and colleagues (n.d.) surveyed parents of children with and without disabilities in Pakistan. Survey results indicated that parents of both disabled and nondisabled children had positive perceptions of inclusive classrooms. No significant differences were found in the percentages of the two sets of parents agreeing that participation in inclusive classrooms promoted academic growth and the independence of SWD. However, parents of SWD were more likely than parents of nondisabled children to agree that inclusion fostered understanding and acceptance of differences.
- Doménech and Moliner (2014) surveyed parents of children with and without disabilities in Spain. Both sets of parents agreed that inclusion had numerous educational benefits, although parents of SWD were generally more in agreement about the positive effects of inclusion than were parents of nondisabled children. Surprisingly, parents of SWD were more concerned about conflicts between students than were parents of nondisabled students. The researchers hypothesized that parents of SWD might have felt that their children would be more protected in self-contained special education classrooms.
- A survey of parents of SWD in India reported that most parents had positive attitudes toward inclusion. The majority of parents strongly supported their children's chance to participate in inclusive classrooms and said that inclusion would prepare their children for the real world (Gupta & Buwade, 2013).
- Another study in India, this time surveying only parents of nondisabled children, found that the majority of parents indicated that inclusive classrooms benefited their children. However, parents believed that inclusive classrooms were only beneficial for non-academic activities, such as artwork, singing, and sports. Parents expressed a

preference for separate academic classes for SWD and nondisabled students (Narumanchi & Bhargava, 2011).

- Dimitrios and colleagues (2008) surveyed parents of SWD who had been placed in inclusive classrooms in Greece. The majority of parents had positive attitudes toward inclusion and believed inclusive classrooms would prepare their children for the real world. Parents did express concerns about whether their children would be socially accepted by their nondisabled peers.
- A survey of parents of SWD in Northern Ireland also found support for inclusive education. Parents said they supported inclusion mainly because they believed it provided opportunities for their children to socialize with peers and to challenge negative stereotypes (National Disability Authority, 2012).
- Finally, a survey of parents of SWD in Australia found that most parents were supportive of inclusive classrooms. Survey respondents identified the strongest benefits of inclusion as social interaction with nondisabled students, greater independence, greater understanding and tolerance by nondisabled peers, friendships with nondisabled peers, and opportunities to model the behavior of nondisabled peers (Elkins et al., 2003).

One area of concern noted among parents of SWD was their belief that general education teachers were not adequately trained to work with their children. Parents worried that this lack of training would lead to overburdened teachers and a decrease in the quality of instruction in inclusive classrooms (Leyser & Kirk, 2011; Elkins et al., 2003).

- In Hilbert's (2014) survey of parents in Alabama, Colorado, Oklahoma, and Texas, 63% of parents of SWD said they believed that teachers in inclusive classrooms were not likely to be qualified or trained to deal with the needs of SWD.
- In Rafferty and colleagues' (2001) survey in New York State, parents of SWD cited unqualified teachers as one of their major concerns with inclusion classrooms.
- A collaborative research study that interviewed parents of SWD from two Indiana school districts and two South African provinces reported that parents in both countries did not believe general education teachers had been adequately trained to work with SWD (Yssel et al., 2007).

2. The perceptions of parents of both disabled and nondisabled children depend on the nature of the child's disability, with support for inclusive classrooms decreasing as the severity of the student's disability increases.

Hilbert's (2014) survey of parents in Alabama, Colorado, Oklahoma, and Texas found that parents' support for inclusive classrooms decreased as the severity of a child's disability increased. Parents of both disabled and nondisabled children indicated that they were more likely to support an inclusion placement for children with an orthopedic impairment, speech impairment, or visual impairment. They said they were less likely to support inclusion for

children with moderate to severe disabilities, such as autism, emotional and behavioral disorders, or cognitive impairments.

Rafferty and colleagues' (2001) survey of New York State parents indicated that parents of both disabled and nondisabled children were less likely to support inclusion for children with severe disabilities than for those with mild or moderate disabilities. Both sets of parents said they were more likely to support inclusion if it involved children with a speech impairment, hearing impairment, or orthopedic impairment, and less likely to support inclusion for students with emotional problems, cognitive impairments, or autism.

Al Neyadi's (2015) analysis of survey data from parents of disabled and nondisabled students in the United Arab Emirates led her to conclude that the severity of a child's disability was an important factor that affected parents' attitudes toward inclusion. Parents of both disabled and nondisabled children reported that they were more supportive of inclusion for children with mild or sensory disabilities, but less supportive of inclusion for students with more severe disabilities, such as emotional disturbances or autism.

It should be noted that Dimitrios and colleagues' (2008) study conducted in Greece and Gupta and Buwade's (2013) study conducted in India found that the severity of children's disability did not emerge as a factor that influenced parents' perceptions of inclusion. Both studies administered the *Attitude Toward Inclusion/Mainstreaming Scale* to parents of SWD and did not include parents of students without disabilities in their survey samples.

Summary

This Information Capsule summarized the research on the academic and social outcomes of inclusion on students with and without disabilities. The following conclusions were drawn:

- Most studies have found no significant difference between the academic achievement of students with disabilities (SWD) in inclusive classrooms and SWD in self-contained special education classrooms. A few studies have reported that inclusion has a positive effect on the achievement of SWD.
- No consensus has been reached regarding the impact of inclusion on nondisabled students' academic achievement. Some studies have found that placement in inclusive classrooms has a positive effect on nondisabled students' academic achievement, others have found that inclusion has no effect or even a negative effect on achievement, and still others have reported mixed results.
- Studies have found that placement in inclusive classrooms has a positive impact on disabled students' social outcomes, including more opportunities to learn and model socially acceptable, age-appropriate behavior and increased interactions with classmates. SWD in inclusive classrooms also demonstrate an enhanced sense of belonging and levels of self-esteem that are comparable to those of their nondisabled peers.
- The impact of inclusion on nondisabled students' social outcomes has not yet been determined. Some researchers have reported that nondisabled students in inclusive

classrooms demonstrate greater respect for their disabled classmates, have an increased understanding of other students' needs, and become more comfortable around persons with disabilities. Others, however, are concerned that SWD may have a negative effect on nondisabled students' behavior.

Best practices for implementing inclusive classrooms were reviewed, such as obtaining buy-in from all stakeholders, basing placement decisions on each student's individual needs, and differentiating instruction.

A theme that ran throughout the inclusion research was that general education teachers need rigorous and ongoing professional development in order to teach SWD in inclusive classrooms. Most researchers agree that successful inclusion depends on the provision of professional development for the following reasons:

- General education teachers have had to assume many of the responsibilities that were once held only by special education teachers because increasing numbers of SWD are being placed in inclusive classrooms.
- Several studies have found that general education teachers were not adequately trained to teach SWD in their teacher preparation programs.
- Some teachers themselves have reported that their pre-service training in the areas of inclusion and special education was insufficient.
- There is a perception among parents of both disabled and nondisabled students that general education teachers are not equipped to teach SWD.

Research conducted on parents' perceptions of the benefits and risks of inclusive classrooms was also summarized. Two general findings emerged:

1. Studies have found that parents of both disabled and nondisabled children have positive attitudes toward inclusion, but they also have concerns about inclusive classrooms. Parents of nondisabled children tend to have more concerns about inclusion than parents of disabled children.
2. The perceptions of parents of both disabled and nondisabled children depend on the nature of the child's disability, with support for inclusive classrooms decreasing as the severity of the student's disability increases.

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