

**TEACHERS' INSTRUCTIONAL COMPETENCIES  
FOR INCLUDING STUDENTS WITH INTELLECTUAL  
& DEVELOPMENTAL DISABILITIES IN GENERAL  
EDUCATION SETTINGS**

---

Lauren Keaney

Developmental disabilities are defined as “a set of abilities and characteristics that vary from the norm in the limitations they impose on independent participation and acceptance in society” (Odom, Horner, Snell, & Blacher, 2007, p. 4). Students with developmental disabilities frequently have a diagnosis of intellectual disability and may also have additional diagnoses such as autism spectrum disorder, orthopedic impairments, or sensory impairments (Odom, Horner, Snell, & Blacher, 2007). For the purposes of this paper, we use the term intellectual or developmental disabilities (I/DD) because it encompasses the heterogeneity of this population of learners.

Research on students with I/DD suggests that their educational outcomes are less than optimal. For example, data indicate that students with I/DD are less likely to live independently, have postsecondary education, and obtain gainful competitive employment upon graduating high school as compared to students with other disabilities (Bouck, 2012; Grigal, Hart, & Migliore, 2011). In enacting The Individuals with Disabilities Education Act (IDEA) of 2004, Congress identified that low expectations were largely to blame for the poor outcomes students with disabilities have experienced (Turnbull, Stowe, & Huerta, 2007). To address this, Congress included specific provisions within IDEA that showed clear preference for educating all students with disabilities, including students with I/DD, in general education settings. IDEA states that students must be educated with peers who do not have disabilities to the maximum extent appropriate, and that students may *only* be removed from the general education classroom in cases where their disability prevents them from gaining an appropriate educational experience in that setting, even with the provision of supplementary aids and services (Turnbull, Stowe, & Huerta, 2007). If students are removed from the general education setting for any part of the school day, IDEA requires that “a student’s IEP (Individual Education Program) must include an explanation of the *extent, if any*, to which the student will not participate” (Turnbull et al., 2007, p. 215). The nature of the language used to clarify these conditions indicates that IDEA assumes the general education classroom as the rightful placement for all students, thus establishing inclusion as the norm rather than the exception.

In line with these IDEA mandates for placement in the least restrictive environment, rates of inclusion for students with I/DD are on the rise. According to the National Center for Education Statistics (2018), the percentage of students ages 6-21 served under IDEA in 2014 (the most recent year reported) who spent 80% or more of their school day in general classes in regular schools increased by 29% since 1990. The U.S. Department of Education (2015) reported that in 2013, students with disabilities associated with I/DD, such as autism, developmental delay, and intellectual disability were included in general education settings for at least 40% of the school day at the rates of 57.9%, 82.3%, and 43.3% respectively.

Given the rise in inclusive placements, general education teachers must be prepared to educate students with I/DD. Yet, to this end, outcomes are discouraging. Able, Sreckovic, Schultz, Garwood, and Sherman (2015) found that gen-

eral education teachers voiced a need for professional development regarding how to effectively include students with ASD in their classrooms. In this study, teachers cited a lack of preparation in their preservice teacher education program as a key source of their insecurities related to teaching students with ASD. Research has also documented that preservice teachers express uncertainty in their abilities to include students with I/DD in their classrooms (McCray & McHatton, 2011). Not surprisingly, teachers have communicated that they feel “least prepared to support the specific needs of students with the most extensive support needs” (Ruppar, Neeper, & Dalsen, 2016, p. 282).

The body of research on teacher preparation for I/DD suggests that many in-service general education teachers stand in need of additional knowledge and skills if they are to achieve the goals of IDEA and successfully include these students in their classrooms. A leading resource for educators of students with I/DD is the Council for Exceptional Children's (CEC) Division for Autism and Developmental Disabilities (DADD). In 2015, DADD published a comprehensive list of seven essential professional standards with associated knowledge and skills for teachers of students with I/DD: Learner Development and Individual Learning Differences (Standard 1), Learning Environments (Standard 2), Curricular Content Knowledge (Standard 3), Assessment (Standard 4), Instructional Planning and Strategies (Standard 5), Professional Learning and Ethical Practice (Standard 6), and Collaboration (Standard 7) (Council for Exceptional Children; CEC, 2015).

Given that general education teachers have reported a lack of competence and confidence in teaching students with I/DD, Standard 5 (Instructional Planning/Strategies) should be prioritized within teacher professional development. Students with intellectual disability and autism often require specialized instruction in areas such as forming friendships and developing social skills that is best accomplished through explicit instruction and targeted interventions—instructional skills that general education teachers are less likely to possess (Carter et al., 2014). General education teachers are also less likely than special education teachers to understand how IEP goals, instruction in general education settings, and assessment data interconnect to comprise students' cohesive programming (Ruppar, Neeper, & Dalsen, 2016).

While the Council for Exceptional Children's DADD teaching standards offer a robust framework for professional development, they are not sufficient in and of themselves to meet the professional development needs of general education teachers seeking to include students with I/DD in their classrooms (Ruppar, Neeper, & Dalsen, 2016, p. 283). This study aims to reconcile the gap between the existing CEC-DADD professional preparation Standard 5, Instructional Planning/Strategies, and the practical implementation of concrete strategies that align with those standards in a general education classroom. To accomplish this, we conducted interviews with three experienced teachers of students with I/DD in a specialized school setting; our intent was to gain their insight on the key competencies new (i.e., inexperienced) general education teachers of students with I/DD should possess in seeking to include these

students in their classrooms. While these teachers in a specialized setting may not have day-to-day contact with the general education context, their practical and rich experience in meeting the educational needs of students with I/DD will help to fill the gaps that new general education teachers may have in interpreting the CEC-DADD standards. Our study is limited to elementary (K-6th grade) settings.

The research question guiding this study is: what practical insights regarding instructional planning/strategies do experienced teachers of students with I/DD have for new general education teachers seeking to effectively include students with I/DD in their classrooms?

## **METHOD**

### *Description of Specialized School*

The participants in this study were teachers in a private specialized school in Texas that serves roughly 70 students between the ages of 3 and 21 with developmental and learning disabilities, which includes students with I/DD and related behavior disorders. Housed within a larger child development center, this school is one of many services provided by that center such as developmental pediatrics, psychology testing and therapy, and applied behavior analysis treatment. The school has been open since 1962 and operates with the vision of preparing their students with the skills they need to successfully return to a traditional educational setting. With an average class size of 12 students, instruction is one-on-one and is individualized according to each student's learning needs. The certified teachers in this school have significant experience working with students who have I/DD, and therefore offer credible input regarding educating individuals with diverse needs such as I/DD. Two summers prior to data collection for this study, the first author completed an internship at this school during which she worked with study participants.

### *Participants*

Participants were three educators in the aforementioned specialized school for children with I/DD. Two of the participants were teachers and one of the participants was the school director. All participants were female and identified as White. Participants were all certified teachers and one participant was also a Licensed Board-Certified Behavior Analyst (BCBA). Participants' years of experience working with students with I/DD ranged from 5 to 17 years, with participants occupying their current roles at the school 3 to 4 years. One of the teachers currently taught in a classroom of seven students ranging from 4 to 8 years old and the second teacher in a classroom of 10 students ranging from 5-8 years old.

### *Procedures*

**DATA COLLECTION.** Prior to data collection, this study received Institutional Review Board approval to conduct research with human subjects. The first author contacted the director of the school to share information about the study

and to seek assistance in recruiting teachers for participation. Interested teachers contacted the first author directly. Two teachers expressed interest in participating in the study, and the director of the school also expressed interest.

Data were collected via individual in-person interviews with the participants at the school. Interviews were conducted by the first and second author with participants at the school and were guided by a semi-structured interview protocol that included questions related to instructional planning/strategies. These questions were developed based on the Instructional Planning and Strategies (Standard 5) standard published by the Council for Exceptional Children's Division for Autism and Developmental Disabilities (Council for Exceptional Children; CEC, 2015). The questions invited teachers to offer input and strategies that would benefit new teachers of students with I/DD regarding topics such as teaching functional life skills, building on students' strengths, and using positive behavior interventions. Each of the three interviews lasted roughly 30 minutes. The first researcher audio recorded the interviews and subsequently transcribed them for data analysis.

**DATA ANALYSIS.** First, the researchers independently read the interview transcripts and engaged in initial coding, which "breaks down qualitative data into discrete parts, closely examines them, and compares them for similarities and differences" (Saldaña, 2016, p. 115). The researchers then met to discuss and compare their separately identified initial codes in order to reach consensus. Next, the researchers engaged in pattern coding, which involved grouping codes into larger segments of data, or categories (Saldaña, 2016). Categories were developed initially in a team meeting, and then refined based on each author's individual review. This process resulted in further refinement of the codes as well. Next, the research team examined the categories to determine if they could be grouped into larger segments of data, or themes. The research team identified four themes from which the categories were grouped. The first researcher then compiled the final codebook, inclusive of codes, categories, and themes, and identified discrepant terms or considerations to be reviewed by the second researcher. The team met to review the final codebook, which involved reconciling any discrepancies in code, category, or theme names and content.

## **FINDINGS**

There were two broad themes resulting from the data: teaching methods, which we define as *how* to teach students with I/DD in general education settings, consisting of 10 categories; and curriculum, which we defined as *what* to teach students of I/DD in general education settings, consisting of 4 categories. Following, we describe the themes and related categories, citing specific instances in the data to help illustrate and support the descriptions.

## *Teaching Methods*

The theme of teaching methods consists of 10 categories that are focused on how teachers can improve their instruction with students who have I/DD to support inclusion in general education settings. The codes that matched with these 10 categories contain strategies and considerations for planning and implementing instruction. Following is a description of the categories and codes comprising the “teaching methods” theme; refer to Table 1 for a full list of the codes within these 10 categories.

**GROUPING.** When reflecting on how participants utilized grouping within classrooms, participants repeatedly voiced the effectiveness of and necessity for both small groups and one-on-one instruction with students who have I/DD. Participants noted that whole-group instruction is challenging for students with I/DD, and that if whole-group instruction is utilized—as it typically is in a general education setting—that it would need to be supplemented with small-group instruction to address the instructional needs of students with I/DD. While all three participants considered whole-group instruction precarious, one did advocate for teaching social skills in group settings because “it makes sense to do social skills in a group and not in a one on one setting.”

**OPPORTUNITIES FOR PRACTICE.** The participants, especially the two participants who were currently teaching at the school, emphasized the importance of providing opportunities for students with I/DD to practice a desired skill. When describing social skills practice in the classroom, one teacher said:

I think there are always opportunities to practice things that are not going well in the classroom as far as social skills go. I think it is so important to stop what you're doing and help facilitate social interactions between students. I think that the more that you do that, the more practice your students are going to have engaging in social skills in a way that you want them to in your classroom.

Not only did participants highlight the need for intentionally setting up the opportunities for students to practice skills, they also expressed that teachers should learn to recognize in-the-moment teaching opportunities to model appropriate behavior. They should prompt the student to try again rather than default to punishment. Participants promoted techniques of redirection and repeated practice. One participant commented that “when you see children engaging in things that you don't want them to do, or if they're having trouble with a social skill, it's really important to stop in that moment right there and have them practice, even if they have to repeat every word that you say.” Participants assured that these methods for practice and teaching moments need not be formal or complicated; rather, that teachers should seize organic teaching moments when they occur by responding to students' skill deficits, be it academic or behavioral, with a chance for students to learn from their mistakes.

**BE FLEXIBLE AND DATA DRIVEN.** Participants strongly recommended that teachers collect data on students' performance and use it to inform instruction. One participant advised that data collection procedures should not be too difficult or complex such that the teacher is not inclined to collect data consistently. Another participant noted that if data suggest that a student is not responding to the current method of instruction, the teacher should adapt his or her instruction (e.g., changing the way information is being presented, changing how the student is being reinforced), and that the teacher continue to make such adjustments until the data illustrate improvement.

**KNOW YOUR STUDENTS.** A common thread among participant responses involved the notion that getting to know students on a personal level, as individuals should precede instruction in order for it to be effective. This knowledge of students included strengths, interests, and needs. One participant remarked that knowing students' strengths helps inform teachers' decisions about what skills they should build upon. For example, "if a student has really strong comprehension skills, they can follow a task list...[or] if their math skills are really great, start teaching calculator skills that could translate into a job in the future." Data expressed that knowing students' interests is a helpful strategy in determining what is reinforcing for the student, as well as building rapport with the student. One participant expressed that:

Acting interested in what the [students] like and the things that are important to them will help you build a relationship with them. Working with them and helping them through their interactions with their peers will go better because they like you and they want praise from you. I've seen that they'll work harder when you incorporate things that they're interested in and also just pay attention to things that they're interested in.

Another participant commented that teachers should take advantage of the first few weeks of school to evaluate students' needs and how to support those needs. To accomplish this, this participant suggested the following:

[Find] out what parts of the day the students with diagnoses need the most support. Is it transition time that they really struggle with? Is it a group lesson that they really struggle with? Is it lunchtime? Is it transitioning from one type of lesson to another? Narrow [those times] down and ensure that maybe that student is closer to you; maybe the distance between you and that student isn't as far.

Because of individual student differences, participants remarked that figuring out what will and will not work with each student will take time. Therefore, this trial-and-error process is enhanced and made more efficient the more teachers are familiar with their students.

MODELING. Participants agreed that teacher modeling is imperative when working with students who have I/DD. One participant emphasized the need for modeling social skills with the following response:

Teachers can easily model appropriate facial expressions and emotions. I think the biggest struggle for all special education teachers is regulating emotions. We use a lot of pictures and a lot of games in here to recognize emotions and how to use that language when that occurs. [The teacher] could say, "Oh, I'm, I'm really disappointed that I didn't get that correct, but I can try again later." You know, just teaching them more appropriate ways and then you're more likely to see that language pop up later if you're modeling it a lot for them, instead of that chain of them crying and shutting down and not wanting to engage and things like that.

Another participant highlighted this point by mentioning that teachers should use model appropriate behaviors through multiple exemplars so that their students see the behavior they want them to use.

MODIFICATIONS. Participants acknowledged the importance of differentiating and individualizing instruction for these students, especially in a general education setting. One participant explained breaking down goals as a specific method for such modification:

Anytime that the goal is too big, maybe too many things are required of them to learn at one time, try to make [the goal] smaller so that they can be successful. When they're not reaching any kind of success, it's very difficult for them to want to continue to learn and continue to put forth any effort. So, a lot of times if we're trying to teach the alphabet and our target is maybe A-E, we have to change it to just learning to point to A or something very small to start to build some traction. So, we break down anything that's not working—anything that is too large of a target, so that they can be more successful in the classroom.

PEER SUPPORTS. Two participants highlighted the benefits of utilizing peer supports in the classroom to support inclusion for students with I/DD. One participant suggested that class-wide peer tutoring in particular is a useful strategy in supporting learners with I/DD in general education classes because it mitigates the challenges associated with large-group instruction. Another participant, in response to a similar dialogue about class sizes, described recognizing and utilizing students without disabilities and with helping personalities to support learners with I/DD:

Students can help you clean up or get set up for your next lesson or maybe get prepared for a lunch or clean—any context where you may recognize that the student with special needs requires a little bit more help. I would definitely utilize the students that you do have and make it a team effort. Really recognize that there are always more students who are wanting to help the teacher.

Influences on instruction. This category encompasses the foundational understandings teachers have about the characteristics of learners with I/DD that inform the instructional methods they select, rather than the instructional methods themselves. It includes having an awareness of how diverse and heterogeneous students with I/DD are, and having an understanding of the significant and unique effects I/DD has on learning and on meaningful participation in general education classroom settings. As one participant emphasized, "In general, these children are going to learn much, much, much slower than their peers...and [will] not learn using traditional curriculum materials."

Participants also discussed the link between instruction and student behavior, such that when instruction is not planned with a foundational understanding of the characteristics of learners with I/DD in mind, problem behaviors may emerge. For example, one participant expressed that "students with a diagnosis are more likely to engage in some type of problem behavior or some form of noncompliance when something is too difficult because they don't know how to express that they don't understand the task." Another participant stated that some students have trouble adjusting to being one of many children in a classroom and consequently engage in problem behavior to gain the adult attention they desire. This participant also expressed that teachers must remember when instructing students with I/DD that "social skills is a deficit in children with autism and other developmental disabilities."

Explicit instruction. Participants mentioned that teachers need to explicitly teach students the behaviors they want them to use:

I think one of the biggest things to know about that is most of the time when children are not exhibiting those skills, that's because they don't know how. So, a lot of times when children are engaging in problem behavior or behavior that you would not like to see in the classroom, it's because they don't have an alternative behavior for it. A lot of times they get punished for those things, but they're not ever taught what to do instead. Well, they don't know what to do if you don't tell them what to do. So, when you see children engaging in things that you don't want them to do or they're having trouble with a social skill, it's really important to stop in that moment right there and have them practice. Even if they have to repeat every word that you say and then you have to do that for the other student as well. The more practice they have in situations like that, the more likely they are to use those skills in the future.

Another participant echoed this sentiment by highlighting the need for teaching students replacement behaviors:

Make sure that if any child, with or without an intellectual disability, is not engaging in appropriate, pro-social skills that we understand why or what the function of their behavior is. Is it to escape some unpleasant situation? Is it to gain attention and they just don't know a better way to do it? So, identify what's going on and then teach the appropriate replacement behavior the same way you would teach any skill.

An example mentioned by one participant of a skill that teachers need to explicitly teach to students with I/DD is how to work independently and stay engaged in a task. This participant described the method she uses to develop these independent skills:

Most of the time I start with a two-minute to a five-minute goal, but by the end of the year we're trying for 15 or 20 minutes. And it takes the whole year to get there. So, I don't think that independent work happens quickly. I think it's something that has to be taught, especially as you add more tasks for them to do independently.

PRAISE/FEEDBACK. Participants described reinforcement as a key strategy for supporting inclusion. Participants mentioned targets for reinforcement such as reinforcing positive behavior, strengths, and attending to the task, but their overall message was that reinforcement should be an integral element of instruction for this population. One participant described specific strategies for reinforcing social skills, such as using a "friendship board," which is a sticker system that recognizes students for engaging in positive friendship skills, and reinforcements that are unique to individual students. For example, if iPad time is motivating for a student, then this could be used as a reinforcer for desired behaviors.

When describing the importance of reinforcing the behavior teachers want to see students engage in, one participant stated:

We focus on calm, positive, appropriate behavior and we don't attend a lot to the inappropriate or negative behavior unless necessary. [For example,] if we're doing story time and a student is rolling around on the floor, we're more likely to attend to the student who's sitting criss-crossed with their hands in their lap. Give attention to the behavior you want. Same with friendship skills. You can translate that to anything.

### *Curriculum*

Distinct from "teaching methods," the second theme, "curriculum," includes 4 categories of codes that relate to *what* teachers of students with I/DD should be teaching in their classrooms. Codes within these 4 categories pose various materials, content, and characteristics to consider when planning the curriculum in a classroom that includes students with I/DD. Each of the four categories are described in detail below. Refer to Table 2 for a full list of the codes within these four categories.

ACADEMICS. This category contains participant responses that relate to delivering academic content to students with I/DD. One participant explained how she uses personal tutorials with computerized feedback to provide students with some academic content. For example, a student may work independently at a computer on a math program that poses questions to the student and provides immediate feedback on the accuracy of his or her response.

Another participant noted that because teachers cannot work one-on-one with every student all day in any classroom, an important skill to teach students is to complete work independently. She further explained:

I think that doing anything independently is a really big skill for all students, it's something that I focus on for about an hour everyday here because if you cannot stay engaged in a task, whether it be a life skill or an academic skill without somebody's one on one attention, then nobody else can get much done.

**SOCIAL/BEHAVIOR.** Teaching social-emotional skills to students with I/DD was heavily emphasized by participants. Participants mentioned that teachers may need to support social interactions by, for example, helping a child with I/DD initiate play with another peer. One participant assured that behavior can be treated like any other skill, as illustrated by the following quote:

I think sometimes people think of social emotional behavior as something different than regular behavior and it's not. It's lawful; you can observe it, you can measure it, and you can record it. You can lump it in with learning to read and learning to write; it is just as sensitive to environmental manipulations.

To teach these skills, participants suggested using pictures, games, and visuals, as these strategies are particularly beneficial for students with I/DD. They explained that board games help students to practice social skills and regulate emotions. One participant noted that while empirically validated social skills in curricula are scant, classroom group contingencies—specifically, the Good Behavior Game—are effective for behavior management. The Good Behavior Game is a classroom-wide intervention in which students are divided into teams and those teams are rewarded as groups for engaging in appropriate, desirable classroom behavior.

**ADAPTIVE/FUNCTIONAL SKILLS.** Adaptive skills include the practical skills individuals employ to successfully engage in daily living tasks such as communicating, socializing, and taking care of oneself. Participants maintained that adaptive skills should be infused within elementary classrooms. One participant suggested using curricula such as Texas' Functional Academic Curriculum for Exceptional Students (FACES) for functional, research-based skills. The FACES curriculum provides teachers with a resource for supporting the instruction of functional skills such as transportation, nutrition, and house-keeping. Another participant mentioned that teachers should evaluate students' strengths and build functional skills from those strengths. For example, if a student is good at math (strength), it would be beneficial for that student to learn calculator skills (functional skill aligned with the student's strength). In addition, in order to support the development of adaptive/functional skills, participants shared that transition planning, which focuses on supporting students for post-secondary education or employment, needs to start earlier than age 14, which is the required age in the state of Texas. (Nationally, transition plans are not required until age 16.)

CURRICULUM CHARACTERISTICS. Curriculum characteristics refers to participant responses that dealt with factors teachers need to recognize regarding appropriate curriculum for students with I/DD. When considering and choosing curriculum for students with I/DD, one participant claimed that “these children will not learn using traditional curriculum materials.” She went on to encourage teachers to use research-based curriculum materials and teaching procedures that are validated for use with children with an intellectual disability or validated for other children. This participant stated, “Do not use ‘pretty’ materials or ones with ‘bells and whistles’; look past that and look at the actual content and the research behind it. Teachers may not have a way to vet this, but principals or school administrators should.”

## **DISCUSSION**

### *Summary of Findings*

The three interviews generated participant responses that fell within two overarching themes of teaching methods and curriculum. Participants provided insight and strategies in response to questions regarding instructional considerations for teachers aiming to include students with I/DD in their general education classrooms. In terms of the teaching methods theme, participants indicated that in order to inform one’s instruction well, a teacher must know his or her students well, be flexible and data driven, and acknowledge other influences, such as disability characteristics. To implement instruction meaningfully, participants encouraged the use of strategies such as modeling, explicit instruction, praise and feedback, and opportunities for practice. Lastly, within the teaching methods theme, participants emphasized modeling, peer supports, and grouping. For the curriculum theme, participants discussed considerations for academic skills, social and behavioral skills, functional skills, and other curriculum characteristics.

### *Discussion of Findings*

One of the barriers cited by the study participants as complicating the implementation of effective inclusion practices in the general education classroom is grouping. Because of these class sizes, instruction is often delivered either to the whole class, or in small groups. Instances of one-on-one instruction are less frequent and less manageable in general education classrooms than in special education classrooms or specialized schools. In this study, participants discussed their preference for educating students with I/DD in small groups or one-on-one.

Although one-on-one instruction may not be as practical in general education classrooms, research shows that it may not be necessary for successful inclusion. Snell, Brown, and McDonnell (2016) stated that one-on-one instruction is not “as beneficial to students with severe disabilities as many educators have thought” (p. 140). These authors claim that one-on-one instruction creates more non-instructional time for students who are not receiving the one-on-one attention, deprives students with I/DD from interacting with peers and

learning to participate in a group, and often results in a failure to generalize skills (Snell et al., 2016).

Small groups, however, have been shown to benefit most students, including those with and without disabilities. Carter, Sisco, Brown, Brickham, and Al-Khabbaz (2008) found that small-group instruction was most effective at facilitating both peer interactions and learning. Whether general education teachers choose to support inclusion using small-group or whole-group instruction or some combination of the two, different methods can enhance group instruction for students with disabilities. For example, one might individualize instruction to make participation possible for all group members, involve students in prompting and praising others, and provide reinforcement. Therefore, general education teachers seeking to include students with I/DD in their classrooms need not completely restructure their existing grouping strategies; instead, they should thoughtfully examine how their grouping choices engage all their students and how their group instruction may be strengthened.

Research supports another strategy that the study participants offered: peer supports. Although dated, cooperative learning groups, which involve teaming students of various ability levels together to assist one another in learning academic material, have been linked with inclusion for students with I/DD (Dugan, Kamps, Leonard, Watkins, Rheinberger, & Stackhaus, 1995; Hunt, Staub, Alwell, & Goetz, 1994). The study participants specifically named peer tutoring, which is a particular type of peer support that involves peers assisting classmates in learning academic content using effective teaching strategies and positive reinforcement. Research has shown that peers are effective instructors and, in fact, may be more effective than adults in some areas (e.g., shaping conversational behaviors; Carter & Kennedy, 2006). This research verifies comments from one of our participants, who suggested that class-wide peer tutoring has been shown to benefit both the students delivering the instruction and the students receiving it. However, teachers employing peer tutoring should take measures to balance these instructional relationships and non-helping reciprocal friendships between students with disabilities and their peers (Snell et al., 2016).

Lastly, participants repeatedly expressed the importance of explicitly teaching students with I/DD social and emotional skills. This topic of instruction aligns not only with the needs of students with I/DD, but also with existing systems such as Schoolwide Positive Behavior Intervention and Supports (SWPBIS). SWPBIS utilizes evidence-based practices to support students' academic, social, emotional, and positive behavioral skills. Studies have shown that SWPBIS is accessible to students with severe disabilities and can improve inclusion in general education classrooms when principles such as Universal Design for Learning are integrated (Loman, Strickland-Cohen, & Walker, 2018). Because students with I/DD typically struggle with social and emotional skills, it is especially important for teachers to execute practices such as the ones outlined by SWPBIS when including students with I/DD.

### *Implications*

The significant amount of feedback that the participants had to offer suggests that special educators are valuable resources for general education teachers seeking to grow in their abilities to include students with I/DD in their classrooms. Such teachers who lack this expertise should seek out collaborations with special education professionals to learn strategies and hear insight similar to what experienced special educators participating in our study offered. Increased collaboration among general and special education teachers regarding inclusion would serve as an appropriate first step to bridge the gap between varying expertise, given the lack of professional development opportunities to learn inclusion strategies for general education teachers.

Schools can help facilitate this collaboration and support general education teachers seeking to include students with I/DD by examining how they can build on existing structures rather than creating new ones. Many of the strategies discussed by the study participants align with components of Response to Intervention (RTI) and SWPBIS, which are widely used in school settings across the U.S. In particular, RTI and SWPBIS are grounded in data collection and reinforcement systems that the study participants strongly recommended. Lastly, according to the participants and existing research, peer support strategies show significant promise in promoting meaningful inclusion outcomes for students with I/DD in general education settings. Teachers seeking to make the most of an inclusive classroom should reflect on the ways that students without disabilities in their classroom could support their instruction and the learning of the students with I/DD.

### *Limitations*

This study is limited in its lack of additional measures for ensuring trustworthiness in the findings, beyond interviews we conducted. Examples of such measures include data triangulation, which involves using different methods to check the results of the findings, examining the data for negative evidence, and obtaining feedback from the study participants, also known as member checking (Miles, Huberman, & Saldaña, 2014). Another limitation of this study was the specialized nature of the school where the participants work. The participants offered advice based on their experience in a setting that differs from public schools in several ways, such as class size and the primary ability levels served. Because of this, public school teachers will need to interpret the results in light of the differences presented by the environment in which they are implemented. Future research should include the perspectives of special education teachers in public school settings. Comparing these two samples would offer insight into whether the findings of the current study might translate to public school settings. After confirming the findings of the current study with studies examining the perspectives of experienced teachers in public school settings, the next step would be to test the resultant strategies to determine effectiveness and feasibility within inclusive settings.

## **CONCLUSION**

This study presents strategies identified as effective by study participants for teachers seeking to include students with I/DD in general education settings. Findings suggested that specific teaching methods and curriculum considerations are needed in order for students with I/DD to be successfully included in general education. They also suggest that teachers who have experience working with students with I/DD possess professional capital that can be shared with other teachers who have lack such expertise. Future research should seek to confirm if these findings are valid for public school settings and test the effectiveness of these strategies for inclusion outcomes.

## References

- Able, H., Sreckovic, M. A., Schultz T. R., Garwood, J. D., & Sherman, J. (2015). Views from the trenches: Teacher and student supports needed for full inclusion of students with ASD. *Teacher Education and Special Education, 38*(1), 44-57. <https://doi.org/10.1177/0888406414558096>
- Bouck, E. C. (2012). Secondary students with moderate/severe intellectual disability: Considerations of curriculum and post-school outcomes from the National Longitudinal Transition Study-2. *Journal of Intellectual Disability Research, 56*(12), 1175-1186. <https://doi.org/10.1111/j.1365-2788.2011.01517.x>
- Carter, E. W., Common, E. A., Sreckovic, M. A., Huber, H. B., Bottema-Beutel, K., Redding Gustafson, J., ... Hume, K. (2014). Promoting social competence and peer relationships for adolescents with autism spectrum disorders. *Remedial and Special Education, 35*, 91-101. <https://doi.org/10.1177%2F0741932513514618>
- Carter, E. W., & Kennedy, C. H. (2006). Promoting access to the general curriculum using peer support strategies. *Research and Practice for Persons with Severe Disabilities, 31*, 1-9. <https://doi.org/10.1177%2F154079690603100402>
- Carter, E. W., Sisco, L. G., Brown, L., Brickham, D., and Al-Khabbaz, Z. A. (2008). Peer interactions and academic engagement of youth with developmental disabilities in inclusive middle and high school classrooms. *American Journal on Mental Retardations, 113*, 479-494. <https://doi.org/10.1352/2008.113:479-494>
- Council for Exceptional Children (CEC). (2015). What every special educator must know: Professional ethics and standards. Retrieved from <https://www.cec.sped.org/~media/Files/Standards/CEC%20Initial%20and%20Advanced%20Specialty%20Sets/Initial%20Specialty%20Set%20%20Developmental%20Disabilities%20and%20Autism%20Spectrum%20Disorder.pdf>
- Loman, S. L., Strickland-Cohen, M. K., & Walker, V. L. (2018). Promoting the accessibility of SWPBIS for students with severe disabilities. *Journal of Positive Behavior Interventions, 20*(2), 113-123. <https://doi.org/10.1177/1098300717733976>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks, CA: SAGE Publications, Inc.

- McCray, E. D., & McHatton, P. A. (2011). "Less afraid to have them in my classroom": Understanding pre-service general educators' perceptions about inclusion. *Teacher Education Quarterly*, 38, 135-155. Retrieved from <https://eric.ed.gov/?id=EJ960622>
- National Center for Education Statistics. (2018). Children and youth with disabilities. Retrieved from [https://nces.ed.gov/programs/coe/indicator\\_cgg.asp](https://nces.ed.gov/programs/coe/indicator_cgg.asp)
- Odom, S. L., Horner, R. H., M. E. Snell, & J. Blacher. (2007). *Handbook of developmental disabilities*. New York, NY: The Guilford Press.
- Ruppar, A. L., Neeper, L. S., & Dalsen J. (2016). Special education teachers' perceptions of preparedness to teach students with severe disabilities. *Research and Practice for Persons with Severe Disabilities*, 41(4), 273-286. <https://doi.org/10.1177%2F1540796916672843>
- Saldaña, J. (2016). *The coding manual for qualitative researchers*. Newbury Park, CA: SAGE Publications.
- Snell, M. E., Brown, F. E., & J. J. McDonnell. (2016). *Instruction of students with severe disabilities*. New York, NY: Pearson.
- Turnbull, H. R., Stowe, M., Huerta, N. (2007). *Free appropriate public education: The law and children with disabilities*. Denver, CO: Love Publishing Company.
- U.S. Department of Education. (2015). 37th annual report to Congress on the implementation of the Individuals with Disabilities Education Act. Retrieved from <https://www2.ed.gov/about/reports/annual/osep/2015/parts-b-c/37th-arc-for-idea.pdf>

Table 1  
Teaching Methods Categories and Codes

Teaching Methods	
<i>Grouping</i>	<ul style="list-style-type: none"> <li>• Small group instruction is helpful</li> <li>• One-on-one as much as possible</li> <li>• Group instruction is difficult for students with I/DD. The teacher will need to address the skills that the student with I/DD did not learn while in a group setting by supplementing with small group instruction.</li> <li>• It makes sense to teach social skills in a group setting because social skills occur in groups</li> </ul>
<i>Opportunities for practice</i>	<ul style="list-style-type: none"> <li>• Redirect when an opportunity to practice has been modeled. It [finding opportunities to practice skills] does not have to be formal or complicated. Take advantage of all opportunities; teach a skill and see how it goes throughout the week</li> <li>• Give opportunities to practice skills - stop what you are doing and facilitate social interactions between students when needed. More practice leads to social skills you want to see in the classroom. Practice is helpful for students with all ability levels. Stop children in the moment and practice skills if needed.</li> <li>• Set up opportunities for that skill to happen; make sure to teach the skill and then step back and let the child try independently - reinforce when it happens</li> <li>• "Re-do's"</li> <li>• Run multiple trials in natural settings - repeated practice</li> <li>• Reframe behavior issues as teaching moments - as opportunities to demonstrate and model what is appropriate rather than punishing behavior</li> </ul>
<i>Be flexible and data-driven</i>	<ul style="list-style-type: none"> <li>• If modifying the curriculum, get baseline information about the child and collect data that will help you make decisions about whether or not it is effective.</li> <li>• Change what you are doing if the student is not meeting an intended goal. "Change what is not working." The way you are teaching; the way you're presenting it; the way you're reinforcing for participation.</li> <li>• Data collection procedures should not be too hard or complex because the teacher won't use it.</li> </ul>
<i>Know your students</i>	<ul style="list-style-type: none"> <li>• Know your students' strengths</li> <li>• Find out the parts of the day for each child in which they need more support (e.g., transitioning from one activity to the other, lunchtime, etc.). Then organize the day so that you are closer to the child at that time of the day.</li> <li>• Figure out what is reinforcing for students. Praise may not be reinforcing if the teacher has not built a rapport. Build a relationship with students. Get to know them. Act interested in what is important to them. Then they will want praise from you.</li> <li>• Take their interests into consideration</li> <li>• Teachers should understand that it will take time to figure out what will and will not work with students. Take the time needed to get to know the child during the first couple of weeks.</li> </ul>
<i>Modeling</i>	<ul style="list-style-type: none"> <li>• For social skills, model facial expressions and emotions; use pictures and games; takes a lot of work</li> <li>• Model emotion language and appropriate responses</li> <li>• Multiple exemplars</li> </ul>

	<ul style="list-style-type: none"> <li>• Modeling is so important - does not have to be formal; can be simple - practicing a skill in the morning and one skill in the afternoon</li> </ul>
<i>Modifications</i>	<ul style="list-style-type: none"> <li>• Differentiate/individualize instruction</li> <li>• Breaking down goals helps "build some traction."</li> <li>• Break down goals that involve too many skills into smaller goals.</li> </ul>
<i>Peer supports</i>	<ul style="list-style-type: none"> <li>• Use peers to assist the teacher in making sure that he/she is able to devote time to helping the student with IDD. Peers can help with cleaning up an activity so that the teacher can work with the student with I/DD. Take advantage of classroom jobs.</li> <li>• Class-wide peer tutoring is validated and would be beneficial for including students with ID in a general education classroom</li> </ul>
<i>Influences on instruction</i>	<ul style="list-style-type: none"> <li>• Understand that students may be exhibiting an inappropriate behavior because they do not have a replacement behavior.</li> <li>• There are a broad range of skills/abilities/functioning in the IDD category, but generally speaking, these students learn at a much slower pace than their peers</li> <li>• Recognize that social skills are a deficit</li> <li>• When a task is too difficult, there will likely be problem behavior.</li> <li>• Understand that behavior may be a result of students with I/DD not understanding that they are one of many children in the classroom. They will fight for attention. Be ready for that and know how to engage them.</li> <li>• These children "would not learn in a group setting."</li> </ul>
<i>Explicit instruction</i>	<ul style="list-style-type: none"> <li>• Explicitly teach positive/desired behavior</li> <li>• Assess function and teach appropriate replacement behaviors (social emotional skills) the same way you would teach anything</li> <li>• Teachers cannot work one-on-one with every student all day. While they are working with other students, each student will need to learn how to complete work independently. In teaching students to do independent work, start small - 2-5 minutes of independent work. Teach how to use materials in the classroom and how to choose material and stay engaged. Work up to longer spans of independent work. At the end of the year, maybe the goal is 10-15 minutes.</li> </ul>
<i>Praise/feedback</i>	<ul style="list-style-type: none"> <li>• It is important that the child feels successful; this helps them be motivated to put forth the effort to continue to learn.</li> <li>• Give attention to and reinforce positive behaviors that you want; don't attend to inappropriate or negative behaviors</li> <li>• Teach errorlessly</li> <li>• Reinforcement ***</li> </ul>

**Table 2**  
*Curriculum Categories and Codes*

Curriculum	
<i>Academics</i>	<ul style="list-style-type: none"> <li>• Personal tutorials - computerized feedback</li> <li>• Teachers cannot work one-on-one with every student all day. While they are working with other students, each student will need to learn how to complete work independently. In teaching students to do independent work, start small - 2-5 minutes of independent work. Teach how to use materials in the classroom and how to choose material and stay engaged. Work up to longer spans of independent work. At the end of the year, maybe the goal is 10-15 minutes.</li> </ul>
<i>Social/behavior</i>	<ul style="list-style-type: none"> <li>• Initiating play with a peer</li> <li>• Social-emotional behavior is the same as regular behavior. It can be observed, measured, and taught. It is not more innate than academics.</li> <li>• Not a lot of empirically validated social skills curricula</li> <li>• Teach appropriate ways to handle emotions.</li> <li>• Pictures, games, visuals</li> <li>• Play board games to practice social skills and emotional regulation</li> <li>• Good behavior game - classroom group contingencies - is effective for behavior management. Research based.</li> </ul>
<i>Curriculum characteristics</i>	<ul style="list-style-type: none"> <li>• These children "would not learn using traditional curriculum materials."</li> <li>• Teachers should use research-based curriculum materials and teaching procedures - validated for use with children with an intellectual disability/validated for other children. Do not use "pretty" materials or ones with "bells and whistles"; look past that and look at the actual content and the research behind it. Teachers may not have a way to vet this, but principals or school administrators should.</li> </ul>
<i>Adaptive/functional skills</i>	<ul style="list-style-type: none"> <li>• Infuse adaptive skills in elementary classrooms.</li> <li>• Need to start transition planning at earlier than age 14 because it takes them a long time to learn skills. (e.g., balance checkbook)</li> <li>• The FACES curriculum is great. It is all functional. Research-based. Any teacher could use it.</li> <li>• Incorporate functional life skills into the classroom (e.g., tying shoes). Ask parents to try those skills at home. Also evaluate strengths (e.g., math) and build functional skills from those strengths (e.g., calculator skills).</li> <li>• Be practical about the skills they are going to achieve. Have them practice realistic, practical vocational skills early on.</li> </ul>