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Recommendations for Using the CLASS® in Early Childhood Programs, Birth–Age 8

This paper examines key issues that may arise when the Classroom Assessment Scoring System® (CLASS®) is used to observe in classrooms with children who are receiving special education services. While the initial work done with the CLASS was conducted in classrooms that primarily served typically developing children, the CLASS is currently being used in a variety of settings: state and locally funded preschool classrooms that enroll typically developing children and/or children who are considered to be at-risk for school failure, Head Start and Early Head Start programs, and community-based child-care programs. It is likely that any of these programs may include children who have IEPs, individualized education programs, or IFSPs, Individualized Family Service Plans, designed to meet the unique learning needs of children with disabilities. In addition, the CLASS tool is being used in some self- contained classrooms and child-care settings in which most if not all of the children have an IEP or IFSP.

As the use of the CLASS expands, users have questions about using the CLASS in settings that include a diverse population of children. Here we address some of the key issues related to using the CLASS tool in classrooms that enroll children with disabilities. First, we discuss how the interactions described by the CLASS are applicable to all children. Then we discuss coding in early childhood settings that include some children with IEPs or IFSPs. Next, we describe coding in classrooms where the majority, if not all, of the children receive special education services (self-contained classrooms that generally serve children with more significant needs). Finally, we pose some recommendations for using the CLASS in self-contained special education settings.

Interactions Matter

The types of effective teacher-child interactions delineated in the CLASS are important for all children. Regardless of ability, all children benefit from being in warm, supportive environments where they can develop strong relationships with their teachers and peers. Similarly, all children have increased opportunities to learn in well-managed classrooms where teachers provide interesting and engaging instruction that increases children's knowledge and skills.

What is the Purpose of the Observation?

CLASS observations may be conducted for a variety of reasons. While some districts use the CLASS as a part of their teacher evaluation process, others may conduct observations to evaluate the overall efficacy of teacher-child interactions across the program, and to target program-level professional development on areas for growth. In

some cases, programs use program-level data to make high-stakes decisions (for example, the National Office of Head Start and some Quality Rating & Improvement Systems).

Finally, many programs use the CLASS® as an informal measure of quality. Administrators and coaches take the information they've learned from observations and use it as a springboard for goal-setting and ongoing teacher-level professional development.

Regardless of the purpose of the observation, the CLASS observer must always follow the protocol described in the manual. Recall that the CLASS is the only validated tool that specifically addresses teacher-child interactions, which have consistently been identified as a key lever of change in classrooms. Whether the CLASS is used for informal data gathering or high-stakes evaluations, the data should be utilized to help programs identify areas where classroom interactions are effective, in order to help teachers increase their intentionality around these types of interactions, as well as areas for professional growth.

Using the CLASS to Observe in Classrooms That Include Children with Disabilities

To obtain valid information about the efficacy of the teacher-child interactions, the observer must follow the protocol outlined in the CLASS manual and look for evidence of all of the CLASS dimensions during the observation, regardless of the composition of the classroom.

An observer who knows that the classroom includes children who receive special education services may not decide to skip certain dimensions or indicators because he feels that those dimensions or indicators "do not pertain to the classroom." As stated previously, the types of interactions described by the CLASS are important for all learners, regardless of ability. Furthermore, CLASS observers who are collecting data in classrooms that include children who have IEPs or IFSPs should not know which children have these plans or the reason for them. An observer may suspect that a child has a learning difference based on some observed behaviors, but may not ask the teacher if this is the case. Doing so would be a breach of the child's confidentiality. Furthermore, regardless of the students' developmental levels, the observer simply observes and records the interactions that relate to the indicators and behavioral markers in the CLASS. In some cases it is obvious that a child has a disability (for example, the child communicates via American Sign Language, or the child uses a wheelchair for mobility and communicates via an augmentative communication system). However, this information must not impact how the observer assigns codes. CLASS observers must remain objective at all times. Each version of the CLASS manual includes information on the importance of remaining objective. For example, Chapter 2 in the *Pre-K CLASS*

Manual states, "When assigning scores, it is imperative to base codes on the written descriptions of the dimensions. Observers should not adjust their codes upward or downward based on any information other than what they observed in the classroom"(pg. 12). Similarly, Chapter 2 in the *Toddler CLASS® Manual* indicates that "observers must guard against injecting external explanations for what they see taking place in the classroom. The observer must remain true to the individual dimensions" (pg. 11). Making allowances or exceptions in coding because children have special needs will result in data that is not reliable.

Chapter 2 also states that observers need to attend to both the teacher's and the children's behaviors. The same is true when coding classrooms that include children with IEPs or IFSPs. Children who require this additional level of support may differ from their typically developing peers in how they communicate with the teacher or respond to stimuli. Therefore, it is imperative that the observer attend to subtle cues and nuances in a child's behavior and watch to see how the teacher responds. For example, a typically developing child who is having a conflict with a peer may approach the teacher and say, "He's bugging me." The teacher may respond by saying, "You have a lot of words. Why don't you go talk to him about that?" thereby effectively addressing the child's concern. In contrast, a child who lacks well-developed language may respond to the conflict by whining, gently rocking back and forth, or showing other signs of agitation. An observer who sees these behaviors should watch for the teacher's response. Does the teacher say "be quiet" or "stop rocking" and then keep doing whatever she was doing? Or does the teacher say, "What's going on? You don't seem happy" and then follow the child's cues in order to determine why the child is upset? Observing the child's reactions to the teacher's actions is key to determining the effectiveness of the interactions. In the first example, if the child goes over and talks to his peer and they reengage in play, then it is clear that the problem has been addressed successfully. In the second case, does the child who was told to be quiet show signs of increased agitation? Does the child whose teacher asked what was going on respond to the teacher in ways that help the teacher address the problem? Carefully noting the subtleties of these exchanges is vital to determining the efficacy of these interactions.

Children who receive special education services are more like their typically developing peers than they are different from them. Most young children who receive special education services receive them due to a speech or language delay, and many are indistinguishable from their peers who do not have disabilities. Furthermore, typecasting children based on a disability label is not helpful, as the same diagnosis may manifest itself in different ways in different children. For example, a child with a mild form of cerebral palsy may have weakness on one side of his body and have some difficulty with articulation, while another child who has the same diagnosis may use a wheelchair and have significant cognitive delays. Similarly, two children with Autism Spectrum Disorder may be very different. A child at the low end of the spectrum may only have difficulty with social skills, while a child at the opposite end may have

difficulty with social skills, language, cognition, and behavior. That said, on the whole, children with IEPs or IFSPs are very much like their peers without disabilities. They are curious and active explorers of their world who want to have fun and play.

Is the CLASS® Applicable for Students Receiving Special Education Services?

Observers who question the applicability of the CLASS in settings that include students with disabilities may have their concerns allayed when they realize that many of the interactions described in the CLASS are fundamental aspects of special education. Each child's Individualized Education Program or Individualized Family Service Plan outlines in detail the individualized goals and objectives for that child. These documents also list specific adaptations and accommodations that a child needs in order to participate and progress in classroom activities. Sensitive teachers routinely monitor how well children progress and adjust instruction accordingly.

Just as teachers may need to individualize instruction for students with special learning needs, they often need to individualize how they facilitate instruction to meet the diverse needs of the children in the class. Some children may need to have instructions for an activity broken down into component parts, while others may simply need more practice to master a skill. Other children may need additional time to process information. Likewise, a teacher may need to accept alternate modes of responding on the part of the child (for example, pointing, sign language, and/or picture cards).

Similarly, young children who have IEPs or IFSPs tend to engage in challenging behaviors at higher rates than their peers. Therefore, teachers need to clearly communicate expectations, be proactive, redirect misbehavior, and consistently reinforce rules. A teacher may rely on signs or picture cues rather than vocal speech to communicate expectations, but the intent of the interactions is the same.

In sum, the types of effective teacher-child interactions described by the CLASS are relevant for all children. However, the interactions may look somewhat different based on the child's individualized needs and method of communicating, as well as the nature of the child's disability. Because behavioral cues often differ from child to child, the observer must watch closely to see how teachers interpret and respond to children. The next section outlines things to take into account when collecting data in classrooms that include children who receive special education services.

Dimension-Level Considerations

This section provides suggestions for things that observers may see related to the different dimensions of the CLASS. The information provided is not meant to be exhaustive, but rather to serve as a starting point to help observers pick up on some of the ways that children with disabilities may behave and communicate.

Positive Climate: All children, regardless of ability, benefit from warm and supportive learning environments. A child with autism may not make eye contact with his teacher or give her hugs, but instead may stroke the teacher's arm or stand very close to her. When behaviors like these occur, the teacher might say, "I'm so glad you came to school today!" or gently touch the child on the shoulder to demonstrate the connection between the two of them.

Teacher Sensitivity: Being aware of and responsive to children's individualized learning needs is a key component of Teacher Sensitivity and an integral part of educating children who have IEPs or IFSPs. Teacher Sensitivity towards children with disabilities is demonstrated in two different ways. First, teachers plan lessons that provide appropriate modifications and supports to ensure that all children have the opportunity to participate in classroom activities. Second, teachers closely attend and respond to children's behavioral cues. A child with a language delay may not approach the teacher and say, "I need help," but may instead sign the word "help" or give the teacher a picture card with a symbol for help. A sensitive teacher will then notice the child's request and provide assistance. Similarly, a teacher may note a child with a fine motor delay struggling to write her name on the morning sign-in sheet and provide adaptive materials that allow the child to be successful (for example, larger marker, pencil grips, etc.). Because children with special learning needs may take longer to process information and develop a response to a question, teachers may demonstrate sensitivity by providing additional wait time.

Regard for Student/Child Perspectives: Teachers can show regard for children with disabilities in the same ways that they demonstrate regard for all children. If a child is moving a marble along the marble run over and over again, a teacher may follow the child's lead by performing the same action on a different track. A child may not vocalize that she wants to read a specific book, but the teacher may see the child holding the book and offer to read it to her. Teachers can offer a child with special needs the same kinds of choices they provide others, but recognize that they may need to limit the number of choices they offer and allow the child to respond by vocalizing, pointing, touching, using eye gaze, or physically moving. Likewise, a child may express himself with words, pictures, signs, or an augmentative communication device. Restriction of movement may mean allowing a child to stand during story, hold something during circle, or take an activity break as necessary.

Behavior Management/Behavior Guidance: Clear, consistent expectations with reliable follow-through are particularly important for young children with disabilities. Teachers may display rules in pictures and point to these pictures to remind children of behavioral expectations. Teachers must closely monitor children's behavior for subtle signs of trouble and redirect before problematic behavior occurs. Some children may require higher rates of praise in order to internalize the classroom rules.

Productivity: Like all children, children with IEPs or IFSPs benefit from being in well-managed classrooms where activities are provided and routines are clear. Children with a speech or language delay may indicate choice via head nods, eye gaze, or pointing to a picture. Teachers may use picture schedules and refer back to them if children have difficulty remembering the routines. Teachers may also use pictures or signs to communicate activity instructions. Some children may need more one-on-one assistance to successfully transition from one activity to another. For example, the teacher may need to provide verbal reminders about the steps of cleaning up after centers. Similarly, teachers may provide more explicit follow-through by refocusing a child's attention to the task at hand ("Remember, it's not time to look at books; it's time to get ready for snack.").

Instructional Learning Formats: To meet the diverse needs of the children in their classrooms, teachers must plan lessons and activities in ways that engage each child and allow for all children, regardless of ability level, to be active members of the classroom learning community. Teachers may need to use additional levels of facilitation to engage children with disabilities. In some instances, an observer may see teachers task analyze an activity (in other words, break it down into steps—a process called task analysis) and systematically teach children each part of the task. This research-based method has proven to be quite effective in teaching children with more significant needs (Cooper, Heron, & Heward, 2007). Some activities that teachers may task analyze include: hand washing, completing a puzzle, and cutting out Play-Doh® shapes with cookie-cutters. Like all children, children who have IEPs or IFSPs may benefit from having information presented in multiple modalities. For example, a teacher may teach alphabet letters by using a brightly colored letter chart, alphabet shaped puzzle pieces, magnetic alphabet letters, and sandpaper letters. The teacher may follow up by having the children make letters in sand or shaving cream. Using this variety of modalities and materials not only heightens children's interest, but may also be beneficial for children with visual impairments. Because some children with disabilities may have shorter attention spans or focus on extraneous stimuli, the teacher may need to have longer conversations about what the children are doing and ask even more questions to ensure that the children focus their attention on the learning objectives. Finally, student interest may look somewhat different when a child has a disability. For example, a child may not look at the teacher, but may still be manipulating materials and/or directing her attention to the task at hand.

Concept Development: Teachers embed Concept Development by intentionally providing children with learning opportunities that are adapted to the children's skill level. These opportunities should be challenging enough to promote growth, but not so challenging that the children give up; think of the Russian psychologist Lev Vygotsky, who developed the concept of the "zone of proximal development," which states that children learn new skills when teachers adapt the levels of support they provide in order

to help the children master new skills (Vygotksy, 1978). All children can engage in analysis and reasoning: the key is to present the information at the appropriate level. For example, a child with a developmental delay may not have the prerequisite knowledge to explain why placing the wooden block on one end makes the balance scale go down while the feather on the other end goes up, but the child can problem-solve what to do when the area where she wants to play is full. Both of these examples address analysis and reasoning, but at different levels. Teachers should always be explicit when they integrate knowledge or connect new information to the children's real world; however, they need to be even more intentional and explicit if children have IEPs or IFSPs.

Quality of Feedback: Effective feedback is good for all learners. Remember that scaffolding occurs when a teacher takes the student from where they are and provides the support that the child needs to be successful. For a child with a more significant disability, this could be as simple as pointing to a picture of soap by the sink to remind the child to use soap while washing his hands or as complex as using a hand-over-hand prompt to help the child pick up the soap and rub it between his hands. The system of least prompts, another research-based strategy used in special education, is designed to scaffold children's learning by starting with the least intrusive prompt (hint) and systematically moving to more intrusive prompts (for example, hand-over-hand guidance) until the child arrives at the correct response (Wolery, Ault, & Doyle, 1992). An observer should not assume that they would never see a feedback loop between a teacher and a child with limited language. Teachers may use a combination of gestures, signs, and pictures to engage a child in a back-and-forth exchange that helps the child complete a task or come to a higher level of understanding. Because some children may hyper-focus on extraneous stimuli, the provision of explicit feedback is often necessary. Finally, teachers may pose questions that encourage thought, but the child may respond nonverbally.

Language Modeling: Teachers promote language in a variety of ways. Teachers may observe play and comment about what the children are doing. These comments may turn into conversational exchanges or serve as parallel talk depending on whether or not the child responds. When teachers respond contingently to a child's communicative attempts, including nonverbal attempts, they let the child know that they value the child as a communicative partner, thereby increasing the odds that the child will initiate more communication. Along the same lines, a teacher may map the children's actions, encouraging children to use whatever vocal speech they have and then expanding on their attempts. For example, if a child looks at a ball on a shelf and says "ba," the teacher may say, "Ball. You want the ball" and then either get the ball for the child or give the child permission to go and get it. Similarly, a child may point to the bowl of peas on the lunch table and the teacher may say, "Oh, you want peas?" and pass the bowl to the child. In both of these examples, the teacher reads the children's cues and responds contingently.

How Does this Look in Practice?

The following example shows a teacher interacting with a child at the water table while addressing indicators in the Instructional Support domain. Notice that the teacher embeds interactions in Instructional Support even though the child uses very little oral language.

> *Andrea is at the water table pouring water from a one-cup container to other containers of differing sizes. The teacher uses parallel talk, saying, "I see you are pouring water." She then asks, "Which container do you think will hold more water?"(Analysis and Reasoning). Andrea points to the smaller container and the teacher says, "Let's see what happens." Andrea pours the water into the container and it overflows. The teacher says, "Hmm, there was too much water. It overflowed. That means that the water spilled over the top of the container (Advanced Language). What do you think will happen if you pour it into the other container?" (Prompting Thought Processes and Prediction). Andrea scoops the water into the other container and excitedly points to show that there is room at the top for more water. The teacher says, "So this one holds more water than the other one. I wonder why?" (Analysis and Reasoning). Andrea holds up the two different containers and says, "B." The teacher says, "Yes. The second container is bigger. That's why it holds more water. Good thinking."(Repetition and Extension, Providing Information).*

Being "Penalized" Because of Children's Behavior

Some teachers are concerned that the behaviors of students with IEPs, IFSPs, or Behavioral Intervention Plans (BIPs) may bring down the CLASS® scores. However, in most cases these behaviors will not impact the score because the CLASS measures the average experience of the average child in the classroom. If one or two children act out or are defiant, it is unlikely to influence the score. On the other hand, if the behavior disrupts classroom activities and upsets the other children, it may influence the score. If the teacher takes a lot of time away from instruction to address these behaviors, it will impact the code for Behavior Management. High levels of problem behavior may affect Instructional Learning Formats as well as Productivity. A teacher who spends a significant amount of time dealing with misbehavior has less time to facilitate activities and may not always provide children with something to do. It is important to recognize that typically developing children and children who are at-risk for school failure may also engage in disruptive behavior.

Keep in mind that the CLASS tool provides an objective measure of what is happening in a classroom during the observation period; it is not intended to blame teachers for children's behaviors. On the contrary, observers can use the data collected during an

observation as a guide for planning professional development to support teachers' work with all children. The CLASS Manual recommends four consecutive observation cycles because observing multiple cycles allows the observer to have a representative snapshot of interactions in the classroom. An observer may see some problem behavior during the first cycle, but see none in subsequent cycles.

Can the CLASS® Be Used to Code Self-Contained Special Education Classrooms?

Different localities provide special education services in different ways. Some localities implement full inclusion, which means that all children, regardless of their disability, receive all of their special education services in the general education setting. Other localities implement a continuum of service options, ranging from full inclusion at one end of the continuum to education in self-contained special education classrooms at the other. The Individuals with Disabilities Education Act (IDEA) does not include a legal definition of self-contained classrooms, calling instead for educating students with disabilities in the Least Restrictive Environment (LRE) (IDEA, 2004).

The lack of a federal definition leaves states to determine their own definitions, resulting in variations in how this term is applied. In many states, a classroom is considered to be self-contained if all of the children in the room have an IEP or IFSP. However, other states and localities have different interpretations. For example, the State of Arizona describes a self-contained classroom as one "in which more than 50% of the children have identified special needs and are receiving services through an IEP/IFSP."(*Quality First Participant Guide FY16).* Due to these types of differences, the focus should be on how the CLASS can best be used in classrooms that contain a large percentage of children with IEPS or IFSPs, rather than on the terminology used to describe the classrooms. The next section contains a set of recommendations for coding in these types of settings.

Recommendations for Coding in Classrooms that Contain a Large Percentage of Students with IEPs or IFSPs

1. Observers should have a background in special education.
2. Observers should briefly talk with the teacher or administrator to learn about any special circumstances they should take in account when coding (for example, types of disabilities, alternative or augmentative communication systems in use, behavior intervention plans). These circumstances should not alter codes, but rather should provide context to help the observer understand the nuances of the behaviors they observe.
3. Follow the CLASS protocol as described in the manual; do not make exceptions because children have IEPs or IFSPs.
4. Use the CLASS tool that corresponds to the chronological age of the majority of the children in the classroom. There is some thought that the observer should

use the age level that corresponds to the children's developmental level. However, this is not our recommendation. Observers are not privy to information about children's developmental levels, so it would not be feasible to make adjustments. Furthermore, just as we see a wide variation in skill level among children who don't receive special education services, we also see a wide variation in skill level among children in self-contained classrooms. For example, a classroom may serve a child with autism who has good cognition but significant needs in social skills and language. This child may play side by side with a peer who has severe physical limitations, but whose language skills are developmentally appropriate.

Summary

The types of teacher-child interactions measured by the CLASS® are critical for all children. Indeed, we respectfully suggest that the CLASS describes what effective special education teachers routinely do in their classrooms. Indeed, preliminary data from the State of Arizona suggests that the CLASS tool may be used in self-contained preschool classrooms that serve a large percentage of children who have IEPs or IFSPs (this data will be shared at the end of this paper). We recommend that an observer who is collecting data in a classroom that serves a large percentage of children with disabilities have a background in special education in order to understand the context in which the interactions take place. Just as a CLASS observer who is collecting data in a classroom for dual language learners must understand the languages being spoken, the observer in this type of classroom should understand how to interpret and code the types of interactions that may occur during the observation period.

We recommend that an observer who knows that the majority of children in the classroom have an IEP or IFSP gather information about the needs of the children; learning about adaptations such as alternative modes of communication and behaviors that may interfere with learning. Ideally, the observer should spend several minutes in the room prior to the formal start of the observation to allow the children to get used to their presence. Some students with disabilities may be unduly distracted by unfamiliar adults in the classroom and thereby prevent the observer from seeing typical interactions. During this time, the observer may watch how the children interact with each other and communicate their needs. The observer should also note child behaviors that suggest that the children feel comfortable.

Can the CLASS Be Used to Code Classrooms That Include Children with Limited Verbal Communication?

It is important to recognize that the CLASS measures the efficacy of teacher-student interactions, including both verbal and nonverbal behaviors. Observers may have

questions about how to code interactions between adults and children when children have limited or no vocal speech. The following section includes information about the kinds of nonverbal interactions an observer may see for each dimension. As always, observers should note children's responses to teachers, factoring in verbal and non-verbal exchanges.

Positive Climate

All of the indicators for Positive Climate may be noted by observing non-verbal interactions. With the exception of the behavioral markers of social conversation (Relationships) and respectful language (Respect), all of the other behavioral markers may be noted in the absence of vocal speech on the part of the child. An observer may see a teacher and child sitting on the floor playing with one another (close physical proximity and shared activities). In addition to laughing or smiling, children with well-developed speech may animatedly talk with the teacher about what they are doing as a way of demonstrating the connection between the two. In contrast, a child with limited speech is more likely to simply smile, laugh, or show enthusiasm via facial expression and gestures.

Negative Climate

While many of the indicators and behavioral markers that define Negative Climate are exhibited by verbal speech (harsh voice, yelling, threats, sarcastic tone of voice), Negative Climate may be conveyed though non-verbal interactions. For example, peer aggression (negative affect) may or may not be accompanied by verbalizations, as a child may pinch or shove another child without saying anything. Similarly, a child may take toys away from another child (disrespect/teasing). Finally, a fight between peers may also occur without children saying anything.

Teacher Sensitivity

Be definition, Teacher Sensitivity looks at how teachers respond to children's verbal and nonverbal cues. Teachers who are aware of children's needs notice when a child has not started working on an activity or appears to be upset. A teacher may see a child look away or pull at his sleeve when asked a question that is too difficult, and may offer additional support to help the child be successful. Typically developing children may show that they are comfortable with their teacher by calling the teacher's name, asking the teacher to "watch me!" or volunteering to answer questions during class activities. A child without vocal speech may display this level of comfort by approaching the teacher, getting the teacher's attention by touching the teacher on the arm or gently pulling on the teacher's sleeve. Instead of calling out the answer to a question, the child may sign or point to a physical object in the classroom or a picture on their picture communication system.

Regard for Student Perspectives

Although the first three indicators in this dimension (flexibility & student focus, support for autonomy and leadership, and student expression) directly measure the things that teachers do to promote children's interests, motivations, and points of view, observers should still be on the lookout for ways that the teacher acknowledges and builds on children's interests. For example, a teacher may notice several children watching ladybugs flying around the playground and decide to read Eric Carle's *The Grouchy Ladybug* when they go inside instead of the book she had planned to read. Along the same lines, a teacher may ask the children to decide where they will play during centers, and accept eye gaze or pointing to picture cards to indicate preference. A teacher may also give children more time to formulate responses or have them point to picture vocabulary cards to share their ideas. For example, after finishing a story about a little girl who lost her puppy, a teacher may ask, "How did the girl feel when she couldn't find her puppy?" and wait while a child who uses an augmentative communication device locates the picture of "sad." She might then follow up by saying, "Yes, she felt sad. What makes you feel sad?" and again wait for the child to formulate a response.

Behavior Management

As noted in the earlier section on dimension-level considerations, effective teachers monitor the behavior of all children in the classroom. Teachers must be particularly aware of indications that a child with limited communication skills is having difficulty and respond quickly to avert escalation of problem behavior. Teachers need to understand that children who have difficulty communicating their wants and needs may exhibit challenging behaviors. Rather than overreacting to these behaviors, teachers need to identify the underlying function of the behavior and respond accordingly. For example, a child having difficulty completing a puzzle may throw a piece out of frustration. The teacher may respond by saying, "That is a pretty hard puzzle. Would you like me to help you with it?" and then show the child a more appropriate way to express his frustration by teaching the child the sign for help.

Productivity

Productivity measures how well teachers manage instructional time and routines in the classroom. The indicators of Maximizing Learning Time and Preparation look at whether or not teachers plan activities and provide instruction for the children. The extent to which children understand the routines in a classroom may be observed through their non-verbal interactions. For example, during mealtime, do the children serve themselves food and then pass the bowl to the child next to them, or do they leave the bowl sitting on the table? Similarly, at the end of the meal, do the children automatically

clean up their place at the table and go to the sink to brush their teeth, or do they wait for the teacher to tell them what to do?

Instructional Learning Formats

The dimension of Instructional Learning Formats looks at what teachers do to draw children into activities and help them learn. When coding this dimension while observing children who have limited vocal speech, the observer should account for how the children display interest and whether or not the teacher attends to these communications. When a teacher asks a question to expand the children's involvement, does the teacher note a child's nonverbal communication and build upon the child's communication to keep the child's interest? Or does the teacher acknowledge the communication and then move on to something else? Similarly, does a teacher use alternate modes of communication such as sign, pictures, or tangible materials to engage the children?

Concept Development

Some observers believe that it is not possible to measure Concept Development in classrooms that include children with little to no verbal communication. However, the definition of this dimension states that Concept Development "measures the teacher's use of instructional discussions and activities to promote students' higher-order thinking skills and cognition." This means that the observer should focus his or her attention on what the teacher does to promote higher-order thinking and then note how the children respond. Teachers can engage the children in interactions that exemplify each of the indicators of this dimension (analysis and reasoning, creating, integration, and connections to the real world). However, the children's responses may look different based on their modes of communication. A teacher may ask children to classify pictures of fruits and vegetables, but instead of having the children verbally tell her what category each picture falls into, she may ask the children to sort the pictures onto a large piece of paper, placing fruits on one side and vegetables on the other. Children may also use alternative modes of communicating, such as pointing or computer generated voice output, to indicate their responses. It should be noted that the activity might be modified to meet a child's developmental level.

Quality of Feedback

Just as Concept Development focuses on the teacher's interactions with the children, so too, does Quality of Feedback. As noted in the section on dimension-level considerations, some research-based strategies designed specifically for use with children with disabilities (for example, the system of least prompts; Wolery et al., 1992) utilize scaffolding as a primary means of instruction. Although we often think about

feedback loops as occurring within the context of a conversation, feedback loops can occur without a child vocalizing. An example of a non-verbal feedback loop follows:

> *Antonio is working on a puzzle that displays a picture of the beach. The puzzle shows the sand, the water, and the blue sky. Antonio picks up a light blue puzzle piece that contains a bit of cloud on it and tries several times to figure out where it fits. His teacher notices his efforts and says, "That's a tricky one. Would you like me to help you?" Antonio nods his head to indicate yes.*
> *Teacher: "Look at the color of your puzzle piece? What color is it?"*
> *Antonio signs the color blue.*
> *Teacher: "That's right. It is blue. Where do you see blue on this puzzle?"*
> *Antonio points to the ocean and then tries to place the piece in that section of the puzzle.*
> *Teacher: "The ocean is blue, so that's a good try. But look again to see if the blue in your piece matches the blue of the ocean."*
> *Antonio puts the piece next to the ocean and shakes his head "No."*
> *Teacher: "Good observation. Your blue is lighter than the blue ocean. Can you find someplace with a lighter blue?"*
> *Antonio scans the puzzle and places the piece at the top of the puzzle, but looks frustrated when it doesn't fit.*
> *Teacher: "You are close, but look at your piece again. What is different about it?"*
> *Antonio shrugs his shoulders to indicate he doesn't know.*
> *Teacher: "Look at that white. It's a part of a cloud. Do you see the rest of a cloud?"*
> *Antonio scans the top part of the puzzle and places his piece where it belongs.*
> *Teacher: "Nice work, Antonio. You matched the light blue sky with the cloud. You really worked hard on that!*

Teachers can provide information and offer encouragement and affirmation regardless of a child's linguistic capabilities. The indicator in this dimension that is probably most difficult to measure is that of prompting thought processes. Again, the observer should record how the children respond. For example, during calendar time, the teacher may ask a child to look at the weather chart and tell the class whether there have been more sunny days or more cloudy days that month. The child may scan the chart and point to the picture of the sun. The teacher may ask, "How do you know that there have been more sunny days?" The child may point to the column of the sunny days and run his hand up the column to show that there are more entries on the sunny column than there are on the cloudy column on the chart.

Language Modeling

The first two indicators in the Language Modeling dimension, frequent conversation and open-ended questions, focus on verbal interactions. Nonetheless, it is important to

recognize that a teacher and child may have back-and-forth exchanges in which the teacher uses vocal speech and the child uses an alternative or augmentative communication system. In addition, they may engage in back-and-forth exchanges using American Sign Language. Teachers who respond to children's communicative attempts, be they vocal, gestural, or using pictures, pointing, or sign, validate children's communication, thereby supporting children in their efforts to initiate and respond to communication in the future. Consider the following illustration:

> *The teacher asks who would like to pick out the next song they will sing during morning greeting. Kylie raises her hand and her teacher says, "Which song would you like us to sing?" She waits while Kylie pauses and says the /t/ sound. Her teacher says, "Oh, would you like us to sign Twinkle, Twinkle, Little Star?" The teacher acknowledges her affirmation and leads the class in a rousing rendition of Twinkle, Twinkle, Little Star.*
>
> *Kylie nods happily and the class starts to sing.*

The remaining indicators, repetition and extension, self- and parallel talk, and advanced language are appropriate for all children. Repetition and extension can be particularly salient for children with limited speech, as the teacher acknowledges their utterances and recasts them into expanded forms. A teacher who notices a child making a "vroom-vroom" noise to request to play with a truck might say, "That's a truck. They make a "vroom" sound, but they are called trucks." Observers should be aware that advanced language for a child with limited to no vocal speech might be different from advanced language for children with more typically developed communicative skills. For example, a child with a cognitive disability may be learning basic colors (red, blue, green) while her peers are learning more advanced colors (lavender, turquoise, coral).

Are There Classrooms That Should Not Be Observed with the CLASS®?

Some observers ask whether or not the CLASS is appropriate for use in self-contained special education classrooms where all of the children have IEPs or IFSPs. However, a better question might be, "What kinds of learning/developmental needs do the children in the classroom have?" Based on the state definition of self-contained, a classroom may enroll a sufficient number of children with speech and language delays that it is considered to be a self-contained classroom. Not observing in this situation would be a misstep because many of these children are considered to be at risk for school failure. The children who fit this label are often the children who benefit the most from being in warm, supportive, structured environments where teachers have clear and consistent behavioral expectations. In contrast, a classroom may enroll a few children with significant disabilities (for example, severe cognitive disabilities or severe autism). If only a few children with IEPs of IFSPs have significant needs, then use of the CLASS is still appropriate, because the CLASS measures the average experience of the average child.

In situations where a large number of children have more significant needs that impact cognition and communication (both verbal and nonverbal), on the other hand, the CLASS may not be the appropriate tool for evaluation, but is still appropriate as a tool for professional development.

Data from Special Education Classrooms

When the State of Arizona's First Thing's First program decided to include the CLASS in their QRIS system, they could not find information on how to best code classrooms that included a large percentage of children who were receiving special education services. Understanding how to do this was important, due to the number of children who were being served in inclusive settings.

In order to determine how to best go about this, First Things First contacted Teachstone for additional guidance. Upon learning that the CLASS has not been specifically validated for use in special education settings, they realized that they needed to move forward in developing their own protocol. In collaboration with Teachstone, they decided to observe in all classrooms, regardless of the class composition. However, they also decided that data collected in self-contained classrooms, which Arizona defines as classrooms in which 50% or more of the students are being served with an IFPS or IEP, would be used for professional development, but would not be considered when determining a site's star rating.

To help readers gain insight into the use of the CLASS in classrooms serving a large number of children with special needs, we present data collected by Arizona's Quality First program. Although their current sample size is small (N=81), the trends noted demonstrate that the CLASS accurately captures classroom interactions in self-contained classrooms at or above the levels observed in classrooms where the majority of children are typically developing. Based on the strength of this data, they are considering including data from self-contained classrooms in program ratings. We would like to thank our colleagues at First Things First and Southwest Human Development for sharing this information with us and for their thoughtful contributions to this paper.

[Section Break]

Arizona's Quality First program has collected pre-K CLASS® data from classrooms where more than 50% of the students are on an IEP/IFSP, which are considered "self-contained." Although the number of classrooms where the data was collected is small (n=81), the trends noted demonstrate that the tool accurately captures classroom interactions at or above the levels of classrooms with a majority of typically developing students.

CLASS® Score Averages by Program Sites	Average Emotional Support	Average Classroom Organization	Average Instructional Support	Average Positive Climate	Average Negative Climate	Average Instructional Teacher Sensitivity
Self-Contained Classrooms CLASS Averages by Program Sites	**6.3**	**6.1**	**2.0**	**6.3**	**1.1**	**6.4**
N Value (Total Number of Self-Contained Classrooms out of **41 Program Sites**)	81	81	81	81	81	81
Non-Self-Contained Classrooms CLASS Averages by Program Sites	**6.4**	**6.0**	**2.1**	**6.3**	**1.1**	**6.4**
N Value (Total Number of Non-Self-Contained Classrooms out of **190 Program Sites**)	302	302	302	302	302	302

CLASS® Score Averages by Program Sites	Average Regard for Student Perspectives	Average Behavior Management	Average Productivity	Average Instructional Learning Formats	Average Concept Development
Self-Contained Classrooms CLASS Averages by Program Sites	**5.7**	**6.4**	**6.4**	**5.5**	**1.7**
N Value (Total Number of Self-Contained Classrooms out of **41 Program Sites**)	81	81	81	81	81
Non-Self-Contained Classrooms CLASS Averages by Program Sites	**5.9**	**6.2**	**6.3**	**5.5**	**1.9**
N Value (Total Number of Non-Self-Contained Classrooms out of **190 Program Sites**)	302	302	302	302	302

CLASS® Score Averages by Program Sites	Average Quality of Feedback	Average Language Modeling	Number of Children Enrolled with Individual Education Plans at Assessment	Number of Children Enrolled with Individual Family Service Plans at Assessment
Self-Contained Classrooms CLASS Averages by Program Sites	**1.7**	**2.5**	**701**	**19**
N Value (Total Number of Self-Contained Classrooms out of **41 Program Sites**)	81	81	81	81
Non-Self-Contained Classrooms CLASS Averages by Program Sites	**1.7**	**2.7**	**772**	**2**
N Value (Total Number of Non-Self-Contained Classrooms out of **190 Program Sites**)	302	302	302	302

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