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15

Membership, Participation, and Learning in General Education Classrooms for Students with Autism Spectrum Disorders Who Use AAC

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- - - - - What would happen if the place in which students with [ASD] had access to the general curriculum was in the general education classroom; if students with [ASD] pursued the same learner outcomes as students without disabilities; and if augmentative communication supports were developed, monitored and expanded until students with ASD could communicate the same messages—and to the same extent socially and academically—as students without disabilities?

(McSheehan, Sonnenmeier, Jorgensen, & Turner, 2006, p. 267)

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In the past, students with intellectual and developmental disabilities, including those with autism spectrum disorders (ASDs), were typically educated in special schools or self-contained classrooms for students with disabilities. Initial changes in practices toward inclusive education focused on the social inclusion of students with disabilities; the early inclusion research addressed the social value of welcoming students with disabilities into general education classrooms (Stainback & Stainback, 1996). The emphasis on social inclusion was (and is) critical for enabling students with ASDs to learn appropriate communication, behavior, and social skills. However, even in the context of social inclusion, students with ASDs often continue to receive specialized curricular content that is implemented within general education classrooms but that focuses primarily on separate learning goals and instruction.

A growing body of evidence has demonstrated that students with intellectual and developmental disabilities, including ASDs, can be academically engaged, develop communication and social skills, demonstrate literacy skills, and show improvements on standardized measures of reading and math skills when they are included in general education curricular content (Baker, Wang, & Wahlberg, 1994/1995; Blackorby, Chorost, Garza, & Guzman, 2003; Downing, Morrison, & Berecin-Rascon, 1996; Erickson, Koppenhaver, Yoder, & Nance, 1997; McGregor & Vogelsberg, 1998; Ryndak, Morrison & Sommerstein, 1999; Wehmeyer, Lattin, Lapp-Rincker, & Agran, 2003). For example, in the United States, data from two longitudinal studies of students with disabilities found that—after controlling for differences in disability, functioning level, demographics, and household factors—students who spent more time in general education classrooms were more engaged, made greater academic gains, and were more socially adjusted at school (Blackorby et al., 2007; Wagner, Newman, Cameto, & Levine, 2006). However, it is clear that simply placing students with ASD in the same classrooms with typically developing peers is not enough; students with ASDs need individualized supports to learn within general education classrooms. Unfortunately, these same two longitudinal studies, with nationally representative samples, indicated that the educational programs of students with ASDs and related disabilities often fall short with respect to evidence-based practices and subsequent educational outcomes. Specifically, the reports noted that:

- Students with ASDs are more likely to take courses in special rather than general education settings.
- Of the students with ASDs in special education classes, 10% are exposed to the general education curriculum with some modifications, 15% have substantially modified curricula, 64% receive a specialized or individualized curriculum, and 10% have no curriculum at all.
- Among all students with disabilities, students with ASDs are the least likely to take science and social studies courses.
- As they progress through the elementary grades, students with ASDs, traumatic brain injuries, or multiple disabilities are the most likely to lose ground with respect to achieving grade-level performance in reading and mathematics.
- Students with ASDs participate less actively than other students in general education classes.
- Less than 20% of students with ASDs use computers in their classes on a regular basis; computers are used most frequently for academic drills.
- Students with ASDs are less likely to graduate with standard diplomas, in comparison with students who both do and do not experience disabilities (U.S. Department of Education, 2007).

Some researchers examining the inclusion of students with ASDs in general education classrooms have focused on specific strategies for supporting inclusion (such as priming, self-management strategies, and peer-mediated interventions) and their impact on social and academic outcomes (see Harrower & Dunlap, 2001, for a review). Other researchers have focused on examining integrated models that address the needs of educators and students with ASDs alike. For example, Simpson, de Boer-Ott, and Smith-Myles (2003) described the Autism Spectrum Disorder Inclusion Collaboration Model, which addresses specific instructional methods (such as task analysis, transition methods, and generalization of skills) as well as educators' attitudinal and social supports, collaboration needs for implementing curricular adaptations and instructional methods (such as appropriate training, planning time, availability of paraeducators, and reduced class size), and recurrent evaluation of inclusive practices.

The goal of this chapter is to provide theoretical perspectives, research findings, and practical applications that pertain to academic learning and the use of AAC supports in general education classrooms. In the first section of the chapter, we discuss elements of inclusive education that are relevant to all students. In the second section, we discuss a model for continuous improvement that educators may use in their efforts to develop and enhance these elements of inclusive education in their classrooms.

ELEMENTS OF INCLUSIVE EDUCATION

To be successful in supporting student learning of the general education curriculum, educators need to provide the appropriate instruction, supports, and accommodations to students with ASDs and must have a vision for inclusive education that goes far beyond just "being there." This requires educators to 1) reframe their expectations regarding students' learning to hold high expectations and presume competence, 2) promote classroom membership, 3) plan for participation in instructional routines, 4) prioritize academic learning, and 5) engage in effective collaborative teaming practices.

Hold High Expectations and Presume Competence

Presuming that students with ASDs are competent to communicate and to learn general curriculum challenges a number of long-held beliefs about the nature of this disability itself. Although the criteria for autism in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* do not include a judgment regarding cognitive ability, the authors of the current manual note that "in most cases, there is an associated diagnosis of mental retardation, which can range from mild to profound" (American Psychiatric Association, 2000, p. 71). Edelson (2006) examined the evidence used as the basis for such claims, reviewing 215 articles published between 1937 and 2003. Results indicated that 74% of the claims came from nonempirical sources, 53% of which never traced back to empirical data. Nonetheless, Edelson noted that "the practice of claiming that a majority of children with autism are mentally retarded continues largely unabated" (p. 74). Based on these mostly unsubstantiated claims, many students with ASDs are presumed to be less able than their peers to learn to read, write, do mathematics, think critically, solve problems, perform functional life skills, and demonstrate age-appropriate receptive and expressive language skills.

A growing number of parents, educators, and researchers are challenging this assumption. In their view, presuming students' competence to learn is not only justified, but it is an essential practice that is related to positive educational outcomes (Jorgensen, 2005a; Kasa-Hendrickson, 2005). This competence view is supported by several rationales, including the potential for causing harm as a result of inaccurate and inappropriately low expectations (e.g., Biklen, 1999; Jorgensen, 2005a). In particular, Donnellan's (1984) principle of the "least dangerous assumption" provides a foundation for this competence view. The application of the least dangerous assumption in educational programming requires educators to provide opportunities consistent with high expectations because *to assume incompetence and not to provide such opportunities could be harmful if proved to be wrong.* Thus, educational programming based on the assumption that a student has limited capacity to learn to read, write, or do math, for example, could result in limited instruction in these areas. If the student does have the capacity to learn such skills, such an educational program would result in great harm, with the student missing out on valuable learning opportunities. Educational decisions ought to be based on the best information available at the time and on the values that schools and communities hold about diversity and disability, while at all costs avoiding the possibility of harming the student. When educators make the least dangerous assumption to presume a student's competence, they are more likely to make decisions that promote a student's full membership within general education classrooms, provide supports for participation and engagement in classroom activities, and plan for learning the general education curriculum content (Jorgensen, McSheehan, & Sonnenmeier, 2007).

Promote Classroom Membership

Educators have reported that a student's presence in the classroom as a member of the learning community and the social and academic activities thereof is an essential component for raising team expectations for student learning (McSheehan et al., 2006). Kent-Walsh and Light (2003) reported on general education teachers' experiences with inclusion of students who use AAC. The teachers in their study noted several benefits, such as increased interactions between AAC users and their classmates without disabilities, classmates' increased acceptance of individuals with disabilities, and teachers' personal growth and learning. Clearly, membership has its benefits.

Membership in the general education classroom is characterized by students having access to valued social roles and to related "symbols of belonging," such as having a desk, being given class jobs, going on field trips, and having their names called during attendance (e.g., Jorgensen, McSheehan, & Sonnenmeier, 2002; McSheehan et. al., 2006). The first and most obvious sign of membership is attendance in the general education classroom; thus, a first step toward promoting a student's membership in the general education classroom is to monitor the percentage of the day that a student is physically present. Additionally, there are aspects of membership that are more affective, having to do with a sense of belonging (Kluth, 2003). Robertson, Chamberlain, and Kasari (2003) reported generally positive relationships between the general education teachers in their study and second- and third-grade students with ASDs who were included in their classrooms on a full-time basis. These researchers found that, as teachers perceived their

relationships with included students with ASDs to be more positive, the students' levels of behavior problems were lower and they were more socially included in the class. Williams and Downing (1998), through a series of focus groups and interviews, found that middle school students' perceptions of membership incorporated components such as feeling comfortable, welcomed, wanted, and respected by classmates and teachers; feeling as if they belong to a group and/or to the class as a whole; and having fun. These studies suggest that general education teachers' relationships with included students and the students' perceptions of membership are both components of inclusive education that educational teams can influence positively.

Figure 15.1 presents a checklist format for monitoring indicators of class membership and the degree to which each indicator is present for an individual student. Based on these indicators, the educational team

Sample indicators	Present	Partial	Absent	Action steps
Attends the general education classroom, daily (Percent time spent in the classroom: approx __%)				
Follows the same schedule as classmates Attends academics (reading, math, science) Attends recess, lunch Attends specials/unified arts Attends assemblies, field trips				
Has own desk				
Desk is grouped with classmates' desks				
Has a textbook for each academic/subject area				
Has the same materials/handouts as classmates				
Homework is assigned				
Has a homework folder for turning in assignments				
Is on the attendance list; class list				
Has a mailbox, cubby, locker				
Gets a class job (as opposed to being a class job)				
Is acknowledged by teacher in the same way as are classmates				
Other indicators:				

Figure 15.1. Sample checklist to document indicators of class membership.

may recognize the need to make changes in their practices to promote a student's membership within the classroom. This might involve changes in daily routines that were established previously, changes in educators' expectations for student involvement, and/or changes to the types of supports provided to the student. The vignettes in Table 15.1 provide some examples.

Plan for Participation in Instructional Routines

Participation is defined as students actively accessing the social, communication, and instructional life of the classroom (McSheehan et al., 2006). There is well-documented concern that students who rely on AAC may be primarily passive participants in communicative interactions (Light, 1989). Students with ASDs who use AAC are participating members of general education classrooms when they take part in the same conversations, activities, and instructional routines as their classmates without disabilities. Examples of participation include being called on in class to give an answer and having a defined role during cooperative learning groups.

Given the scope of this chapter, we will emphasize participation in academic instruction which, of course, requires access to AAC supports for communication in many cases. Classroom instruction includes a variety of routines such as seatwork, one-on-one instruction, partnering

Table 15.1. Examples of practices that promote class membership

- Jamie always arrived 5 minutes late for homeroom, missing opportunities to socialize with classmates and missing the morning announcements, because of issues with transportation. An administrator talked with those in charge of transportation schedules and arranged with Jamie's parents for him to arrive at school 5 minutes earlier.
- Previously, Sally's name was listed as a "class job" for another student ("Sally's peer buddy/assistant"). Now, Sally's name is not listed as a "job"; rather, choices for class jobs have been programmed into her speech-generating device (SGD). Each week, she indicates her preference for the class job she would like to do when asked (e.g., "Which class job would you like to try: line leader, attendance taker, or fish feeder?")
- In the past, Adam's desk was placed at the back of class and was not aligned with the rows of the rest of his class. This year, his desk was moved up to be in a row, alongside his classmates.
- Often, Thomas was pulled out of group read-aloud activities because it was difficult to support him to sit on the floor during reading. To address this, the occupational therapist (OT) and speech-language pathologist (SLP) conducted observations of the reading group. The OT generated a list of accommodations to support Thomas's seating and attending (e.g., bean bag chair, fidget tools). The SLP developed a communication board with the characters and scenes from the activity so that Thomas could read along with the rest of the class. The OT and SLP then provided services in class to model for the teacher how to provide these accommodations so that Thomas was able to remain in class during reading group activities.

with a classmate, small-group instruction, cooperative learning activities, large-group lectures, and large-group interactive sessions. Similar to tracking the percentage of time a student spends in the class as a membership indicator, educators can also track the occurrence and distribution of a student's engagement in instructional routines. Figure 15.2 presents a format for documenting a student's degree of participation in different instructional routines. The ultimate goal is to increase involvement in the same routines as the student's classmates, in the same proportion and at the same times of day, while allowing for variability to accommodate needs for individualized instruction.

Through the lens of participation (contrasted with the lens of learning), the goal is for the target student to be engaged in the instruction with his or her classmates. Even though the student may not yet be demonstrating learning of the same curriculum content as his or her classmates, the student is engaged in the learning process as a full participant, similarly to his or her classmates. Educators can support a student's participation in instructional routines by emphasizing both process and content. For example, during partner or small-group reading activities, a target student might demonstrate participation in the reading process by making comments and/or requests with his or her speech-generating device (SGD) (e.g., *What page are you on? It's your turn, I like this part of the story, Let's read some more*). During another part of the lesson, the teacher might lead a prereading activity to activate background knowledge or to recall what has been read thus far. In response to a teacher probe, classmates might brainstorm ideas or call out events from the book. Participation in a brainstorming activity does not require that a student has read, decoded, and comprehended the text via silent reading. Rather, a student's participation in this activity

Instructional routine	Number of occurrences for class	Number of occurrences for target student	Action steps (including fostering use of AAC)
Seat work—independent			
One-to-one instruction			
Small group—teacher directed			
Large group—teacher directed			

Figure 15.2. Sample worksheet to document and plan for a student's participation in instructional routines.

could involve sharing information the student heard a classmate mention or could simply be a guess at an answer. A student might have access to a communication display (e.g., a board, a series of index cards with symbols ands text) of possible correct answers related to events read from the book. Any of the messages selected from the display would communicate a viable answer. Thus, the student would be able to participate and stay engaged with the content of the lesson, without necessarily demonstrating learning of specific content. For beginning AAC users, the focus could be on developing their skills to activate a display or become familiar with the use of their SGD during a classroom activity. For a more advanced AAC users, this situation allows for repeated interactions with relevant academic vocabulary to foster learning of the general curriculum content.

An instructional planning process that presumes that a student is competent to learn and promotes a student's participation and engagement in instructional routines will look somewhat different than other planning models and processes that are not based on presuming competence. In other models, a framing question for instructional planning might be "What can this child do during this class lesson?" When presuming competence, educators instead might ask, "What would it take for this student to actively participate in the same lesson, in the same or a similar way as his/her classmates?" A framework for such instructional planning includes the following four steps.

1. Identify the content area (e.g., reading, math) and what all students are expected to do within the instructional activity.
2. Identify how students will demonstrate that they are engaged in the instructional activity (e.g., during reading students hold and look at age/grade-level books; track text with their eyes and/or index fingers; turn pages; and make comments, ask questions, and share information regarding the reading).
3. Identify how the target student can demonstrate those same or similar behaviors, possibly with an alternative way of demonstrating participation (such as AAC) as needed (e.g., Joe can hold, look at, and turn pages in a book; he can track text with his index finger with assistance; and can use his communication display to make comments, ask questions, and share information).
4. Identify what supports are needed for the target student to participate in the instructional routine (e.g., adapted book with text at student's reading level, possibly enhanced with pictures or symbols; hand-over-hand assistance for tracking text; communication displays with likely comments, questions, and information to be shared; an experienced communication partner to model or encourage use of the AAC display).

Activity content area	Typically, all students show they are engaged by:	This student shows the same types of engagement as his/her peers by (include use of AAC as means of communication):	This student may require the following supports in order to show that engagement (i.e., to participate and learn):	Preparation by team (what/ who/by when)

Figure 15.3. Sample worksheet to document planning for participation and learning within instructional routines.

Figure 15.3 presents a format that can be used to plan for students' participation (and learning) in instructional activities. Examples of participation in instructional routines are presented in Table 15.2.

Prioritize Academic Learning

Historically, students with ASDs have been "seen as 'too cognitively impaired' or 'not ready for' instruction" (Mirenda, 2003, p. 271) in general education academics. This concern has been discussed by a number of authors in relation to literacy learning (Kliewer & Biklen, 2001; Mirenda, 2003; Mirenda & Erickson, 2000). In the areas of math and science, these issues have also been raised in the literature on students with significant cognitive disabilities (Browder, Spooner, Ahlgrim-Delzell, Wakeman, & Harris, 2008; Courtade, Spooner, & Browder, 2007).

Researchers have called for instruction in academics to be an educational priority if students are to achieve desired outcomes and make progress (Browder, Wakeman, Spooner, Ahlgrim-Delzell, & Algozzine, 2006; Erickson & Koppenhaver, 1995). As discussed in the introduction to this chapter, there is some research supporting the idea that students with significant cognitive disabilities, including those with ASDs, can learn academic content. Comprehensive reviews of the literature related to reading (Browder et al., 2006), mathematics (Browder et al., 2008), and science (Courtade et al., 2007) provide additional examples of these students acquiring academic skills.

Table 15.2. Examples of participation in instructional routines

Example 1: Supporting Jay's participation in reviewing homework assignments
• Activity: At the beginning of the math lesson, the classroom teacher checks homework by calling on individual students to give answers.
• What all students are doing: Students look at their homework sheets and follow along as each item is reviewed. Students provide an answer when called upon by the teacher.
• Plan for Jay's participation: Previously, the classroom teacher did not call on Jay to provide answers when checking class homework because he was not given homework. To remedy this, the classroom teacher began to assign a few homework problems to Jay. He completes the homework with his parents and practices giving the answer when requested, using his speech-generating device (SGD). In class, the teacher calls on him to share an answer for one of the problems he was assigned.
Example 2: Supporting Jeff's participation as the master of ceremonies of a fourth-grade play
• Activity: The entire fourth-grade social studies class is preparing a play to be presented to the school community based on content they have been studying in class. Students are to be organized into teams of 4–5 to prepare a section of the play. Jeff's group is in charge of the script for a master of ceremonies, who will introduce and manage transitions for the play.
• What all students are doing: Students will show participation in the preparation phase by discussing the emcee role, possible script ideas, and a process for assigning the emcee role. The group needs to generate ideas, agree and disagree with each others' ideas, and take notes. The emcee needs to speak out loud.
• Plan for Jeff's participation: Jeff uses his SGD to participate in discussions during the preparation work. Jeff can show agreement/disagreement with ideas by selecting *yes* or *no* from his SGD. Classmates need to be coached on how to support Jeff in the small group work and supported to ask yes/no questions for group discussion. Jeff's teaching assistant and classroom teacher are available to assist Jeff's group as needed and then fade away to support other groups.

These syntheses, along with other qualitative studies and anecdotal reports, suggest that learning of general academics is not only relevant but a priority for this population (see, for example, Erickson et al., 1997). Additionally, many researchers are beginning to rethink the notion that students with ASDs may progress through the curriculum in a way that is quite different from students without disabilities. Mirenda (2003) noted that:

> - - - - - Research supports that learners with and without disabilities may be more similar than previously thought... most–if not all–students with autism can benefit from literacy instruction that incorporates the use of multiple instructional strategies that are carefully matched to the stages or phases of development through which all readers pass on their way from emergent reading to skilled reading. (p. 275)

Bedrosian, Lasker, Speidel, and Politsch (2003) reported on an intervention study designed to enhance the skills needed in the planning and writing of stories by an adolescent with ASD who used AAC. While working with a typically speaking peer as a partner, the student with ASD used a story grammar map, a joint story writing and revision process, story boards, and story writing software to support generation of the story. The researchers described positive outcomes for both the student's participation with the peer in the writing process and his achievement of learning goals that were aligned with the general education writing curriculum. This example highlights the type of preparation that is often needed to facilitate learning in instructional routines for students with ASDs who rely on AAC (e.g., selecting AAC vocabulary that is derived from a typical academic activity and that will be useful not only to the target student but also to classmates and teachers).

Pursuing the four-step instructional planning process described previously sets the stage for a student's demonstration of both anticipated and unanticipated learning. By using this process, educators have reported evidence of student learning that was not previously expected (McSheehan et al., 2006). For example, a student with ASD and little functional speech had never been exposed to grade-level novels. Beginning in fifth grade, books were rewritten for him from a fifth-grade reading level to a second-grade reading level, while preserving the essential content. The text was enhanced with Picture Communication Symbols that were consistent with those on his SGD. Initially, these supports were put into place to foster his participation with age-appropriate materials, on the same topics as his classmates. However, toward the end of the school year after repeated engagement with the adapted novels, the student began vocalizing as he independently turned pages in his books and tracked text with his index finger. He varied his intonation and began to pause on words and at the ends of sentences—similar to his classmates reading aloud. Additionally, he participated in quizzes, tests, and an end-of-year review of all of the novels by selecting from multiple-choice formats programmed into his SGD. By selecting some of the right answers, he demonstrated that he had not only participated in the various instructional routines, but also had learned some of the academic content expected of his classmates—which previously had not been expected of him.

Engage in Effective Collaborative Teaming Practices

The relationship between effective collaborative teaming and student learning is well documented in the literature (Blackstone, 1989; Edelman & Giangreco, 1995; Giangreco, 2000; Giangreco, Cloninger,

Dennis, & Edelman, 1994; Giangreco, Cloninger, & Iverson, 1998; Hunt, Soto, Maier, Muller, & Goetz, 2002; McCarthy et al., 1998; Snell & Janney, 2005; Villa, Thousand, Stainback, & Stainback, 1992). Collaborative teaming occurs when a group of individual team members with diverse but complementary expertise work together to achieve agreed-upon and mutually defined goals (e.g., Snell & Janney, 2005; Thousand & Villa, 1992). Effective collaborative teaming is particularly important when team members need to incorporate AAC displays and technologies to support the participation and learning of students in the general education classroom (Erickson et al., 1997; Koppenhaver, Spadorcia, & Erickson, 1998).

Hunt and her colleagues (Hunt et al., 2002; Soto, Muller, Hunt, & Goetz, 2001a, 2001b) identified several themes related to the ability of team members to work together collaboratively to support the successful inclusion of students with AAC needs. They described a set of professional skills for effective collaboration that is consistent with generally accepted inclusive practices, including 1) holding regular team meetings with contributions from all team members; 2) treating all team members with respect; 3) establishing good interpersonal and communication skills; 4) identifying team members' roles and responsibilities while being flexible about role boundaries; 5) identifying a team leader; 6) establishing common, action-oriented goals; and 7) establishing processes to maintain accountability among team members.

Teams frequently face numerous systemic and organizational barriers that inhibit effective and efficient team collaboration (Garmston & Wellman, 1999). These barriers can be amplified when students have ASDs and/or AAC needs (Hunt et al., 2002; Simpson et al., 2003; Soto et al., 2001a, 2001b). Barriers to effective collaborative teaming include lack of 1) administrative support for inclusion; 2) clarity about team members' roles and responsibilities; 3) time for regular team meetings, planning, and preparation of materials; 4) access to professional development and training in the use of technology and instructional strategies for students with ASDs and AAC needs; and 5) access to effective related service delivery models (Jorgensen, Fisher, Sax, & Skoglund, 1998; Jorgensen, Schuh, & Nisbet, 2005, McCarthy et al., 1998; Rainforth, York, & Macdonald, 1992; Soto et al., 2001a; Villa & Thousand, 1995). Additionally, some researchers have acknowledged the importance of access to a mentor—a "critical friend"—who can guide and support teams to learn new skills and collaborative processes and can help to institute organizational changes that are sustainable (Fullan, 2001; Fullan & Miles, 1992; Jorgensen et al., 2005, Olson, 1994).

Summary

The five elements of inclusive education described in this section provide a focus for designing effective instruction, interventions, and supports, including AAC for students with ASDs who are included in general education classrooms. Each element in and of itself is necessary but not sufficient for successful inclusive education. Presuming a student is competent to learn the general curriculum and "dumping" him into a general education classroom without appropriate instructional planning will no doubt fail. Providing only individualized instruction on the curriculum with no connection to the rich and meaningful social context of the classroom is also inadequate. Although making progress in all areas requires well-coordinated, systematic efforts, "few models and procedures have been advanced to facilitate the successful placement and maintenance of learners with ASD in general education classrooms" (Simpson et al., 2003, p. 117). The Beyond Access model integrates the key elements of inclusive education that support educational teams to promote the learning of general education curriculum content by students with significant disabilities.

THE BEYOND ACCESS MODEL

From 2002 through 2006, the Beyond Access model was designed and evaluated as part of a federally funded grant from the Office of Special Education Programs, U.S. Department of Education. Students who participated in the development and evaluation of the Beyond Access model used a variety of unaided communication modes (including facial expressions, natural gestures, sign language, and speech) and aided communication strategies (including Picture Communication Symbols, switches, and electronic SGDs). Students were included in general education classrooms for at least 50% of the day in at least two core academic areas (e.g., language, arts, math, social studies).

The Beyond Access model (see Figure 15.4) was developed to address the research-to-practice gaps that exist in schools that are attempting to include students with significant disabilities (including those with ASDs) who use assistive technology and AAC in general education classrooms. As a professional development and student support planning model, it assists teams with translating emerging research and promising instructional strategies into a daily practice. It structures collaborative teaming through a set of processes to identify, try out, and systematically evaluate the instructional and communication strategies that students need to be successful academic learners. Expectations for student membership, participation, and learning—along with supports

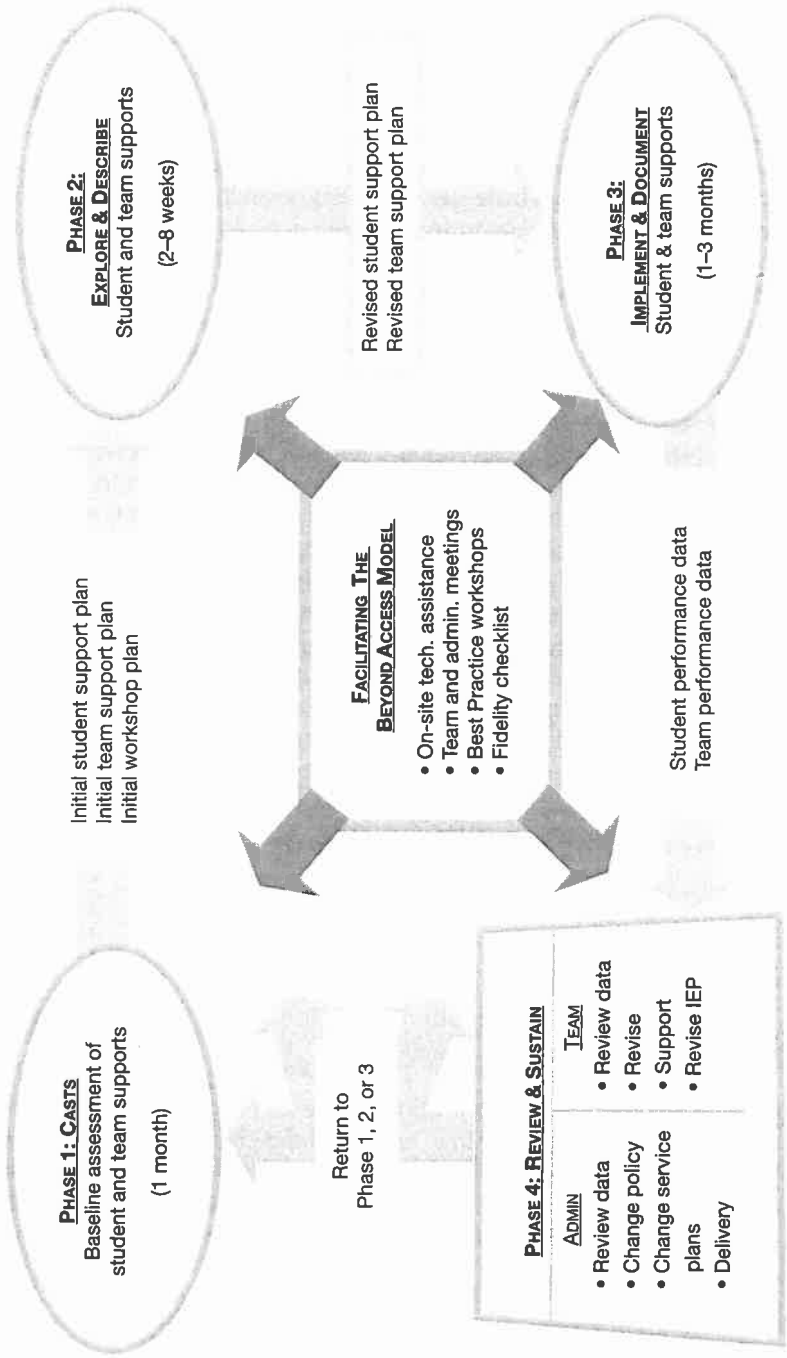

Figure 15.4. The Beyond Access model.

for collaborative teaming and the use of AAC and other forms of assistive technology—are essential elements of this model (e.g., Jorgensen, McSheehan, & Sonnenmeier, in press; Jorgensen et al., 2007; McSheehan et al., 2006; Sonnenmeier, McSheehan, & Jorgensen, 2005).

The Beyond Access model engages teams in an iterative process of 1) assessment; 2) exploration of various instructional strategies, AAC and assistive technology strategies, supports, and accommodations; 3) implementation of the most promising practices based on the exploration; and 4) evaluation of the efficacy of those practices to support an individual student's learning. All members of a student's team participate in model activities, including parents/guardians, general educators, special educators, related service providers, and administrators.

Preliminary research on use of the Beyond Access model with elementary-age students with significant disabilities, including ASDs, shows promising outcomes (Jorgensen et al., 2007; McSheehan et al., 2006; Sonnenmeier et al., 2005). Schools that use the Beyond Access model have demonstrated commitment to engage collaborative teaming practices including administrative leadership and support for staff to attend monthly professional development workshops and weekly team meetings; an in-district staff person to assume leadership in using the model; and an administrative team that monitors implementation of the model and works on systems for sustainability. By engaging in collaborative practices, teams enhance their capacity to plan for, implement, and evaluate students' membership, participation, and academic learning within the context of general education classrooms.

Components of the Beyond Access Model

In this section, we describe the key components of the Beyond Access model, which include an emphasis on best practices, the participation of a Beyond Access consultant, the use of an in-district Beyond Access mentor, the establishment of an administrative review team, the provision of an initial team orientation, and the provision of ongoing professional development workshops.

Best Practices The foundation of the Beyond Access model is a set of values-based, promising, and evidence-based best practices (see Chapter 15 appendix). Each of the Beyond Access model best practices includes a list of indicators that are used to document each team member's knowledge and skill level of each practice over time (Jorgensen et al., 2002).

Consultant A core component of the Beyond Access model is the active participation of a "critical friend" who is knowledgeable in the best practices and implementation of the model. This person might be a private consultant, a university faculty member, or any person with extensive experience supporting the inclusive education of students with significant disabilities. It is important for teams to have support from a critical friend because the model challenges them to change their practices related to how they work together as a team *and* how they promote the learning of the general education curriculum by students with ASDs. Team members also need support in changing their perspectives on student's presumed levels of competence. The Beyond Access consultant guides the team through the initial implementation of the phases of the model while simultaneously mentoring the in-house Beyond Access Facilitator.

In-District Facilitator Essential to long-term sustainability is the identification and mentoring of an in-district staff person (e.g., inclusion facilitator, school special education coordinator) who is positioned within the school to assume a leadership role in the implementation of the Beyond Access model. This person takes the lead in supporting teams in the day-to-day implementation of the model. Over time, this person assumes more responsibility for facilitating the phases of the model, supporting review and problem solving regarding the team's practices, and oversight regarding the implementation fidelity.

Administrative Review Team The establishment of an administrative review team is critical to the model's success and sustainability. The Beyond Access consultant meets regularly with key administrators to discuss both the progress being made and the challenges that may prevent full model implementation. The administrative review team includes at least the school principal, special education coordinator, and the special education teacher who supports Beyond Access students. Once a month, the Beyond Access consultant meets with these individuals and the district special education administrator to monitor implementation of the model. In addition, we encourage the superintendent to join the monthly administrative review meetings two to three times each year.

Initial Team Orientation Members of each student's educational team participate in a 2-day orientation to learn about the underlying assumptions and practices of the Beyond Access model. The orientation provides informed consent for team members to more fully understand the potential successes and struggles of using this approach. In an era of accountability and an emphasis on evidence-based practice, this is an important step in the process and encourages

team members develop a mindset for designing defensible educational programs that include practices that may be values based or promising but that do not yet have a strong research base. Topics addressed in the orientation session include

- Historical perspectives on practices for educating students with ASDs and those who use AAC
- Beyond Access model overview, with an emphasis on the iterative phases of the model and on collaborative teaming practices
- Understanding what constitutes access to, participation in, and learning of the general education curriculum, with an emphasis on the Beyond Access Best Practices (Jorgensen et al., 2002)
- The least dangerous assumption of presumed competence (Jorgensen, 2005a)

Professional Development Workshops Team members participate in monthly professional development workshops on topics related to their implementation of the Beyond Access model. Workshops may include topics such as presuming students' competence (Jorgensen, 2005a); effective teaming practices such as collaborative teaming, problem solving, conflict resolution, and evaluating student and team progress (e.g., Jorgensen et al., 2002); instructional planning, accommodations, and curriculum modifications (Jorgensen, 2005b); AAC and assistive technology; positive behavior supports; literacy instruction; and writing standards-based individualized education program.

Beyond Access Model Phases

There are four main phases involved in Beyond Access model implementation related to assessment, exploration, implementation, and review.

Phase 1: Comprehensive Assessment of Student and Team Support The Comprehensive Assessment of Student and Team Supports (CASTS) is an assessment of a student's learning and supports in the context of current school and team practices, and how those practices align with the model's best practices (see Chapter 15 appendix). The findings from the CASTS provide a baseline from which the team establishes priorities and documents progress.

Two focus questions guide the CASTS:

1. What supports are needed for the student's membership in the general education classroom and his or her full engagement in and learning of the general education curriculum content?

2. How does the team need to work together to support the student's full engagement and learning?

Data are typically collected by a consultant or team point person over a 2- to 3-week period (see Table 15.3) and include a thorough review of the student's educational records (e.g., individualized education program, evaluations, behavior charts, academic performance data, and work samples); completion of questionnaires by each team member; interviews with each team member; observations of the student at school and home; and observations of team collaboration or team meetings.

The Beyond Access consultant synthesizes the information, summarizes themes, notes areas of agreement and discrepancies, and identifies representative examples of student and team performance. The consultant also compares and contrasts the team's current practices

Table 15.3. Data sources for comprehensive assessment of student and team supports (CASTS)

Activity
1. Conduct an initial assessment of current use of evidence-based and promising practices (e.g., Beyond Access Best Practices Rating Scale; McSheehan et al., 2006).
2. Review the student's educational records, including individualized education programs (current and past) and evaluation reports (e.g., achievement, communication, occupational and physical therapy, psychology, medical).
3. Administer a questionnaire addressing the student's interests, learning style, and communication profile; overall strengths/weaknesses in the student's educational program including indicators of membership and participation; and the team's collaborative practices.
4. Review team and school artifacts (e.g., team meeting minutes, school's professional development model, building-wide behavior procedures, school newsletter, mission statement).
5. Conduct observations at school and record description of a day in the life of the student from the student's perspective (Jorgensen, Schuh, & Nisbet, 2005).
6. Review student work samples, current augmentative communication devices and strategies, and instructional supports such as adapted materials.
7. Conduct observations at student's home and interview parent(s)/guardian(s) and sibling(s).
8. Conduct interviews with each team member to expand on information gathered from questionnaires and observations.
9. Observe a team meeting.
10. Identify the alignment between the student's educational program (including team practices) and best practices that promote the learning of the general education curriculum in the general education classroom by students with significant disabilities (McSheehan et al., 2006; Sonnenmeier et al., 2005).
11. Meet with team to review CASTS findings and obtain agreement with findings.
12. Meet with team to review, obtain agreement, and prioritize recommendations.

Note: "Team members" includes parents/guardians. Typically, the CASTS process is completed over the course of 2–3 weeks.

with Beyond Access Best Practices (see Chapter 15 appendix), then reports the findings to the team members. As each summary finding from the CASTS is reported, team members engage in a consensus-building process in which they add any missing and highly relevant information, seek clarification or propose revisions to any inaccurate information, and finally state their level of agreement with the accuracy of each category of information using six levels of agreement (adapted from Kaner, 1996). Any findings that do not achieve full team agreement are discussed, clarified, and edited until agreement is obtained.

Once the summary findings are approved, the team reviews four categories of recommendations: student supports, team supports, professional development needs, and team member responsibilities. The consultant engages the team in a process similar to the one related to the Beyond Access Best Practices to reach agreement on the recommendations. These recommendations are intended to build team capacity aligned with the Beyond Access model and to promote team collaboration and student membership, participation, and learning.

Phase 2: Explore and Describe The team then begins initial implementation of the CASTS results to address the two guiding questions. The BA consultant guides the team to explore and describe instructional, AAC, and assistive technology strategies and supports to promote the student's membership in the classroom (e.g., having a desk, being assigned a classroom job, being called on for attendance); participation in social activities and routines (e.g., playing with classmates during recess, chatting during snack, talking about current events); participation in academic activities and routines (e.g., cooperative learning groups, brainstorming sessions, teacher directed lectures, laboratory activities); and ability to demonstrate learning (e.g., giving answers, completing worksheets, writing essays). Supports to promote team collaboration are also determined (e.g., effective meeting structures, decision-making processes, and team communication skills). Throughout the remainder of the school year, team members attend professional development workshops that are needed to enhance their knowledge and skills to achieve the desired student and team outcomes.

During Phase 2, team members are encouraged to embrace a try-and-see approach. This approach encourages the team to be creative and open-minded, particularly if specific team members are unsure about how a given strategy might work. The consultant models instructional approaches; facilitates team meetings; coaches team members on the effective use of interventions; assists in the creation of instructional, AAC, and assistive technology materials; and arranges monthly professional development workshops.

By the end of Phase 2, the team selects one of four actions based on dialogue and discussion of their experiences with trying out the recommendation for the prescribed time period: 1) continue exploration of the recommendation; 2) abandon the recommendation; 3) adapt/alter the recommendation and extend exploration; or 4) adopt the recommendation for Phase 3. The efficacy of a support in this phase is based on the team's overall impressions and the team members' professional judgments regarding questions such as

1. Does this recommendation seem to be moving us toward our vision for the student and for ourselves?
2. Does the recommendation seem to positively address the framing questions regarding membership, participation, learning, and/or collaborative teaming?

Student and team supports that are endorsed at the end of Phase 2 are prioritized for implementation and more formal evaluation in Phase 3.

Phase 3: Implement and Document During Phase 3, the team focuses on improving the consistency and quality of the instructional, AAC, and assistive technology strategies and supports provided to the student, as well as documenting the efficacy of those strategies and supports. By reviewing student work samples, communication displays, observations, and videotapes of lessons, the team is able to describe the fidelity of implementation of the supports, as well as the student's performance using AAC and other techniques to engage in classroom activities over time. Concurrently, by reviewing evaluations of team meetings, the team is able to describe the fidelity of implementation of their collaborative teaming practices. These data are essential for establishing a defensible, sustainable educational program.

Throughout Phase 3, the team continues to attend professional development workshops related to the desired student and team outcomes. Additional mentoring from the school-based mentor and from the consultant is provided to ensure team members are providing the necessary supports accurately and consistently.

Phase 4: Review and Sustain During team meetings, reflective practice methods are used to evaluate the delivery of student and team supports systematically and to reflect on the patterns of student and team performance. The aim of Phase 4 is to determine if the supports result in increases in student membership, student participation in social and academic activities and instruction, student demonstration of learning, and team collaboration. Student and team supports that have demonstrated efficacy are maintained. Those supports that do not demonstrate efficacy may be referred for further training,

implementation, data collection, and analysis of student and team performance (revisit Phase 3) or may be discontinued. Additional student or team supports may be recommended for exploration as well (revisit Phase 2). This iterative process leads to increased team confidence in designing the educational program. Equally important is analysis of the student's work for evidence of learning that may be seen to represent performance with consistent, quality supports. This lessens the chance that judgments will be made about student performance or capacity in isolation from a consideration of the quality of instruction and individualized supports.

CONCLUSION

The Beyond Access model illustrates that educating students with ASDs who use AAC not only requires effective service delivery through collaboration by a group of skilled professionals, but also requires a deep commitment to the inherent dignity, value, and competence of students with ASD. With the growing number of students who are diagnosed with ASDs, the field of education is at a critical decision-making juncture about these students' educational programs. Do we continue to focus on student deficits and remediation? Do we require students to demonstrate specific sets of skills before they can be included with their classmates without disabilities? Or, do we develop approaches that foster both skill development and engagement with typical peers in natural settings?

The students, families, and professionals with whom we have worked tell us that they have come to believe that students with ASDs using AAC are "fine, just as they are" and that our job is to support their full membership, participation, and learning within the mainstream of general education. Our research suggests that the Beyond Access model provides teams with both the grounding principles and the practical strategies to help achieve those goals. We acknowledge that other educational models may accomplish the same outcomes equally well. However, in the final analysis, the efficacy of the Beyond Access model or any other set of values- and evidence-based practices will be measured by the degree to which our students are happy, learned, and responsible citizens who are able to fully participate in their schools and communities.

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