

**Do-Watch-Listen-Say**  
**Social and Communication**  
**Intervention for Autism**  
**Spectrum Disorder**  
**Second Edition**

by

**Kathleen Ann Quill, Ed.D., BCBA-D**  
The Autism Institute  
Essex, Massachusetts

and

**L. Lynn Stansberry Brusnahan, Ph.D.**  
University of St. Thomas  
Minneapolis, Minnesota



Paul H. Brookes Publishing Co.  
Post Office Box 10624  
Baltimore, Maryland 21285-0624  
USA

www.brookespublishing.com

Copyright © 2017 by Paul H. Brookes Publishing Co., Inc.  
All rights reserved.  
Previous edition copyright © 2000

“Paul H. Brookes Publishing Co.” is a registered trademark of  
Paul H. Brookes Publishing Co., Inc.

Typeset by Absolute Service, Inc., Towson, Maryland.  
Manufactured in the United States of America by Sheridan Books, Inc., Chelsea, Michigan.

All examples in this book are composites. Any similarity to actual individuals or circumstances is coincidental, and no implications should be inferred.

Purchasers of *DO-WATCH-LISTEN-SAY: Social and Communication Intervention for Autism Spectrum Disorder, Second Edition* are granted permission to download, print, and photocopy the assessment tool, any blank forms appearing in the appendixes, and the activity sheets. Please visit [brookespublishing.com/downloads](http://brookespublishing.com/downloads) with (case sensitive) keycode: 78ilKaT02. These forms may not be reproduced to generate revenue for any program or individual. Photocopies may only be made from an original book. *Unauthorized use beyond this privilege may be prosecutable under federal law.* You will see the copyright protection notice at the bottom of each photocopyable page.

**Library of Congress Cataloging-in-Publication Data**

Names: Quill, Kathleen Ann, 1952- author. | Stansberry Brusnahan, L. Lynn., author.  
Title: Do-watch-listen-say : social and communication intervention for autism spectrum disorder / by  
Kathleen Ann Quill, Ed.D., BCBA-D, The Autism Institute, Essex, Massachusetts and  
L. Lynn Stansberry Brusnahan, Ph.D., University of St. Thomas, Minneapolis, Minnesota.  
Other titles: Do watch listen say  
Description: Second edition. | Baltimore : Paul H. Brookes Publishing Co., [2017] | Includes bibliographical  
references and index. Identifiers: LCCN 2016050144 | ISBN 9781598579802 (pbk.) | ISBN  
9781681252322 (epub) | ISBN 9781681252339 (pdf)  
Subjects: LCSH: Autistic children—Rehabilitation. | Autistic children—Education.  
Classification: LCC RJ506.A9 Q55 2017 | DDC 618.92/85882—dc23  
LC record available at <https://lcn.loc.gov/2016050144>

British Library Cataloguing in Publication data are available from the British Library.

2021 2020 2019 2018 2017

10 9 8 7 6 5 4 3 2 1

# Contents



About the Online Materials.....	vii
About the Authors .....	ix
The DO-WATCH-LISTEN-SAY Approach to Assessment and Intervention .....	xi
The Emotional Needs of the Child.....	xv
<b>1. Understanding the Complexity of Autism.....</b>	<b>1</b>
Historical Overview and Contemporary Implications of Autism.....	2
Identifying and Diagnosing Autism.....	5
Cognition in Autism.....	9
Summary.....	22
<b>2. Understanding Social and Communication Development and Challenges.....</b>	<b>23</b>
Core Skills for Social and Communication Development .....	23
Social Skill Development.....	33
Communication Skill Development .....	46
Restricted, Repetitive Behavior in Autism.....	58
Summary.....	62
<b>3. Assessing Social and Communication Skills.....</b>	<b>65</b>
Understanding Educational Assessments.....	66
Assessment of Social and Communication Skills in Autism .....	66
The Assessment of Social and Communication Skills for Individuals with Autism Spectrum Disorder, Revised (ASCS-2).....	69
Summary.....	99
Appendix: Assessment of Social and Communication Skills for Individuals with Autism Spectrum Disorder, Revised (ASCS-2).....	101
<b>4. Designing Intervention.....</b>	<b>141</b>
Intervention Planning: An Overview .....	142
Framework for Targeting Skills.....	145
Framework for Intervention: Core Skills.....	151
Framework for Intervention: Social Skills .....	155
Framework for Intervention: Communication Skills.....	175

---

Framework for Intervention: Community Skills.....	186
Framework for Intervention: Restricted and Repetitive Behaviors.....	188
Summary.....	191
<b>5. Selecting Evidence-Based Practices to Enhance Social and Communication Skills.....</b>	<b>193</b>
Evidence-Based Intervention Practices.....	194
Intervention Approaches.....	197
Summary.....	207
<b>6. Instructional Strategies to Enhance Social and Communication Skills.....</b>	<b>209</b>
Teaching Opportunities.....	210
Explicit Instruction and Interactions.....	219
Summary.....	237
<b>7. Instructional Supports to Enhance Social and Communication Skills.....</b>	<b>239</b>
Organizational Supports.....	240
Social Supports.....	251
Communication Supports.....	259
Behavioral Supports.....	266
Summary.....	272
<b>8. Activities to Promote Skill Development.....</b>	<b>273</b>
Activity Strategies.....	274
Using the Sample Activity Sheets.....	276
Core Skills Activity Sheets.....	279
Social Skills Activity Sheets.....	289
Communication Skills Activity Sheets.....	304
<b>9. Collecting Data to Measure Authentic Progress.....</b>	<b>323</b>
Overview of Progress Monitoring.....	324
Monitoring Skill Emergence, Mastery, and Generalization.....	328
Data Collection Forms.....	328
Using Data to Make Intervention Decisions.....	355
Summary.....	365
Appendix A: Progress Monitoring Forms—Quantitative Data Collection Forms.....	368
Appendix B: Progress Monitoring Forms—Qualitative Data Collection Forms.....	376
<b>References.....</b>	<b>391</b>
<b>Index.....</b>	<b>409</b>

# About the Authors



## **Kathleen Ann Quill, Ed.D., BCBA-D, The Autism Institute, Essex, Massachusetts**

Kathleen Ann Quill, Ed.D., BCBA-D, is a compassionate professional who has spent 40 years supporting individuals with autism spectrum disorder. She is a developmental psycholinguist, educator, and board certified behavior analyst (BCBA-D). Dr. Quill has conducted trainings in more than 20 countries, given the keynote address for 10 international organizations, and presented at more than 200 conferences. She discusses how to integrate behavioral (applied behavior analysis) and developmental treatment models to enhance language, communication, and social learning. Dr. Quill promotes innovative solutions that bridge the gap between research and practice in order to sustain quality education for all students with autism.

Prior to founding the Autism Institute, Dr. Quill was a professor at the University of Massachusetts and Lesley University in Boston and conducted applied research on developmental differences in autism. She is the author of two seminal texts, numerous publications, and online resources on the topic. She is also on the editorial board for *Journal of Autism and Developmental Disorders* and *Focus on Autism and Other Developmental Disabilities*. She facilitates Professional Learning Communities through regional and national partnerships and collaborates with companies to design technology solutions for educators.

## **L. Lynn Stansberry Brusnahan, Ph.D., Associate Professor, Teacher Education, University of St. Thomas, Minneapolis, Minnesota**

Laroye “Lynn” Stansberry Brusnahan, Ph.D., is the parent of an adult with autism and an associate professor in teacher education at the University of St. Thomas in Minnesota. She coordinates the autism spectrum disorder certificate, license, and master’s program. She was the 2012 Autism Society of America Professional of the Year. Dr. Stansberry Brusnahan has a doctorate from the University of Wisconsin-Milwaukee in Exceptional Education. She has served on numerous boards including the Autism Society of America National Board, the Council for Exceptional Children’s Division on Autism and Development Disabilities Board, and Minnesota Life College’s professional advisory board. She worked with the Minnesota Department of Education, where she helped craft an autism spectrum disorder special education license for educators. She has an active agenda as an invited speaker at the local, national, and international level.



## TEACHING OPPORTUNITIES

Planning optimal teaching opportunities for social and communication skill instruction includes arrangement of the learning environment and selection of specific activities to teach social and communication skills. This process requires an understanding of 1) the principles of UDL and 2) instructional adaptations, including accommodations and modifications. With these understandings, the social context, setting, and activities can be arranged to maximize social learning.

### Universal Design for Learning

UDL is a scientifically valid framework guiding educational practice that can be customized and adjusted to meet individual needs. UDL

- Provides flexibility in how learners are engaged, how information is presented, and how learners demonstrate knowledge and skills
- Reduces barriers in instruction, provides needed supports, and maintains high expectations for all learners, including students with autism
- Provides a blueprint for designing instruction that creates opportunities for access, participation, and progress in the classroom for all students

The Center for Applied Special Technology (CAST, n.d.; Myer, Rose, & Gordon, 2014) is a resource for information related to UDL. CAST believes that learning barriers are not inherent in the learner but instead arise as a result of inflexible educational methods, materials, and assessments. When teachers create a classroom environment, an instructional plan, or an assessment using UDL principles, they proactively design flexible approaches that can be customized and adjusted for individual needs and do not rely on a single, one-size-fits-all method. UDL emphasizes three aspects of differentiated instruction: 1) multiple means to engage learners, 2) multiple means to present information, and 3) multiple means for learners to demonstrate understanding. For example, using the UDL framework, a teacher presents information and content in different ways, seeking to meet the learning styles of diverse learners. In advance, the teacher plans ways to differentiate how learners can express what they know. In addition, the teacher plans student engagement to ensure that learners not only are engaged but stay motivated. When planning intervention for students with autism, the principles of UDL can be used proactively to design instructional opportunities that meet the needs of all learners. The following vignette illustrates how the principles of UDL can be applied to intervention planning.

*The teacher plans a group project to provide social opportunities for a student with autism. The student with autism is interested in trains. The group is assigned a project on Japan, and the teacher includes a requirement for the assignment to include transportation (e.g., bullet train). When presenting the lesson on Japan, the teacher uses both an oral lecture and visuals so that information is presented in multiple ways. The teacher allows the student with autism to draw a map of Japan's train routes instead of having to do an oral presentation to demonstrate his understanding.*

### Adaptations: Accommodations and Modifications

*Adaptations* are defined as changes made to the learning environment, curriculum, instruction, and/or assessment practices in order for a student to be a successful learner. Adaptations allow learners to have equal access to the environment and information. They include accommodations and modifications and are based on individual student needs. Some adaptations *do not* fundamentally alter or lower standards or expectations in instruction, engagement, or assessment. These are referred to as *accommodations*. Some adaptations *do* alter or lower standards or

expectations, and these are referred to as *modifications*. When instructors use the UDL framework, lessons and classroom environments are designed with learners' needs in mind from the start, which can reduce the number of adaptations needed or even eliminate the need to create them.

## Environmental Arrangement

The principles of UDL can be used to design learning environments that support all learners. Every social context, setting, activity, and instructional moment has the potential to include opportunities that enhance social and communication skills (see Table 6.1 for an overview of considerations for designing the learning environment). Activities and social interactions should be structured to create maximal learning opportunities. The temperament of an individual (i.e., sensory sensitivities, restricted and repetitive behaviors, and emotional temperament) is taken into account to determine what adaptations to the environment must be made. For example, classroom accommodations for a student who is sensitive to touch may include sitting close to the teacher rather than peers, being first or last in line with a group of peers, being given choices of what manipulative materials to use (e.g., writing or art activities), changing the location of school lockers, and more. Small changes to the environment can minimize the student's discomfort and maximize social and communication opportunities. More details about arranging the social context, setting, and activities follow.

**Select Social Context** Given that difficulties with social understanding and communication are central to autism, it is imperative to consider the social context when teaching new skills. Consider the following two questions when arranging the social context to support social and communication skill development:

- Should intervention occur in one-to-one or in small- or large-group settings?
- Should intervention be conducted with adults and/or peers?

**Table 6.1.** Considerations to prepare the learning environment

Prepare the learning environment	Considerations
Select social context:	Social communication is more likely to occur in one-to-one interactions.
One-to-one	
Group	Group expectations (not size) determine the probability of success.
Small	
Large	Skills are generally acquired first with adults and generalized to peers.
Adult partner	
Peer partner(s)	
Select type of setting:	Adapt the environment to accommodate sensory sensitivities.
Sensory-sensitive	
Structured	Orchestrate opportunities for semistructured interactions.
Single setting	
Multiple settings	Embed learning in the most natural setting possible for automatic generalization of skills.
Semistructured	Use every moment at school, at home, and in the community as a teachable moment.
Single setting	
Multiple settings	
Natural	
Single setting	
Multiple settings	
Select type of activity:	Select activities that are:
Closed-ended	Motivating
Open-ended	Meaningful
	Age appropriate

Depending on the targeted skills, there are some helpful guidelines for how to decide on the social environment (i.e., one-to-one, small group, or large group) and select social partners for social-communicative intervention:

- If the goal is participation in social activities (DO-WATCH), first introduce the skill in a one-to-one setting with an adult. After the initial acquisition of the skill, practice the skill in a partner activity with one peer partner and then generalize the skill to a group setting. The adult's role will shift from social partner to the facilitator of child-peer interactions.
- If the goal is communication (LISTEN-SAY), first arrange the initial interactions with an adult to practice the skill. After the initial acquisition of the skill with an adult, practice the skill with a peer partner, and then practice the skill in a variety of small-group and large-group social contexts. The adult's role will shift from communication partner to the facilitator of child-peer interactions.

The child's ability to acquire new social and communication skills will vary across activities. When the child is struggling to learn a new skill in a particular setting, it is helpful to consider the different social contexts as a hierarchy, from most to least support. Figure 6.1 illustrates various arrangements of the social context for teaching and practicing skills organized according to this hierarchy.

When considering social contexts for teaching and practicing skills, remember that social or group dynamics strongly affect successful participation and opportunities to learn for students with autism. Participation in social situations is sometimes less influenced by the size of the group than by the expectations. The unspoken social rules that exist in almost any setting where there is more than one person are challenging for many people with autism. The need to wait or take turns while talking or doing an activity often is not understood or is confusing. The individual's ability to participate and learn new skills in a social or group activity often can be determined by two key factors: social predictability and communication expectations. The levels of clarity and social predictability within the activity or setting should be considered when planning teaching opportunities.

- If the student requires clarity with social expectations (what to DO), modify activities so that everyone in the group is doing the same thing at the same time with little or no waiting, and ensure that the student with autism has his or her own set of materials.
- If the student understands what to DO but requires support to wait or take turns (whom to WATCH), structure activities to increase the level of predictable turn taking. The child's ability to demonstrate joint attention in a peer group will contribute to his or her level of engagement. Keep in mind that requirements to observe others and wait to take a turn increase relative to the size of the group. For example, an individual waits for approximately 50% of the time in an activity consisting of two people (dyad). However, if the group consists

Social context	Level of support
1. One-to-one with adult partner (e.g., adult-child) 2. One-to-one with peer partner and adult facilitator 3. One-to-one with peer partner (e.g., child-peer) 4. Small group with peers and adult facilitator 5. Small group with peers 6. Large group with peers and adult facilitator 7. Large group with peers	Most support and greatest opportunity to practice new skills ↓ Least support and fewest opportunities to practice new skills

Figure 6.1. Hierarchy of social contexts.

of 10 people who are taking turns, it is likely that the individual will need to WATCH and wait to take a turn for 90% of the activity.

The communication expectations also vary across social or group activities. Language comprehension is required to participate in some activities, whereas other situations do not require an understanding of the language in order to participate. Examine the communication expectations of the activity in relation to the child's communication and language comprehension abilities.

- If the child with autism has limited language comprehension skills (LISTEN), select activities in which an understanding of language is not required in order to participate, even though talking occurs (i.e., during snack time). Ensure that the child knows what to DO before targeting communication skills in the setting.
- If the child has language comprehension skills and understands what to DO, select activities that require discussion (SAY) in order for the child to practice communication skills.

Recall that the general types of group activities include, from least challenging to most challenging: 1) unison, 2) choral, 3) structured nonverbal turn taking, 4) structured verbal turn taking, 5) unstructured play, and 6) discussion. Identify the type of group activities in which the child is most successful and the contexts in which social and communication intervention goals should be addressed. If the child with autism is not successful with any of the group contexts, begin with unison activities.

Finally, the characteristics and abilities of the student with autism must be taken into account to determine the relevance of a particular activity as a context for learning. Always review assessment data (e.g., ASCS-2) to consider the degree to which the child demonstrates joint attention in different social groups and is able to imitate a sequence of motor and/or verbal acts in natural contexts. The presence or absence of these core skills largely determines the approach to social and communication enhancement. The ability to use these core skills in different settings and with different social partners will influence the degree to which specific instructional strategies and supports will be used with the child:

- Core skills are absent: If joint attention and imitation are absent, intervention must include more highly structured activities, better organization of the physical environment, more adult-directed activities, and more explicit adult instruction.
- Core skills are present: If joint attention and imitation skills are present, intervention can include less-structured activities, more group turn-taking activities, and greater use of adult and peer modeling.

The following vignettes illustrate how core skill abilities and group dynamics determine the appropriateness of various activities for children with autism.

*Joseph attends a specialized program for children with autism. He is able to engage in parallel activities when he has his own set of materials; he does not observe his peers during these activities. Joseph is able to participate in group activities when all of the individuals are doing the same thing at the same time and there is no waiting. During these unison and choral groups, he observes his peers and imitates everyone in the group. His ability to observe and imitate peers is linked to the level of social predictability in the group activity.*

*Samantha spends half of her school day in an inclusive general education classroom. She observes and imitates peers during structured art projects and during academics when everyone is doing the same thing at the same time. She communicates with peers during lunch and with one friend during structured activities. Samantha can attend while her teacher reads or lectures to the class, but she loses focus when the group engages in discussion about the lesson.*

She also has difficulty during group meeting times that involve random turn taking. In addition, Samantha isolates herself during unstructured free time. Her ability to interact with peers is linked to the level of social predictability and the level of language complexity in the group activity.

**Arrange Setting** Decisions about *where* interventions will occur must take into account the target goals, the setting variables, and the characteristics of the student with autism. A key to successful intervention for social and communication skills is to recognize that every moment, regardless of setting, is a teachable moment to focus on the target goals.

Typically, social and communication skills will have greater meaning and be acquired more rapidly if learned in natural settings. All settings can be structured and orchestrated to create opportunities for acquiring skills. Some children or target goals may require the setting to be highly structured for the skill to be acquired, whereas other skills can be learned in more unstructured and natural settings. If a skill is first learned in a contrived or structured setting, the skill needs to be practiced in additional structured, semistructured, and natural settings to ensure mastery and generalization.

The highly structured setting is associated with the traditional behavioral method in which the adult directs the activity and uses explicit instruction; a natural setting is analogous to the developmental method in which naturally occurring events and social interactions are used as teaching opportunities; and a semistructured activity is associated with the behavioral-developmental model in which naturally occurring events and social interactions are structured to plan teaching opportunities (see Figure 6.2). The more structured setting provides the student with the fewest environmental distractions and the most support. In contrast, the natural setting may have the most distractions, which can be problematic for children with sensory sensitivities and difficulty with social attention.

Intervention must occur across multiple settings (e.g., school, home, community). All of the skills addressed in this text require ongoing intervention and continual practice with everyone who interacts with the child with autism. Keep in mind individual temperament and core skill abilities when selecting the optimal setting for teaching new skills. Some important considerations are as follows:

- **Sensory sensitivities:** If the child with autism has difficulty participating because of sensory sensitivities (e.g., sensitive to noisy, active settings), arrange the environment to have less sensory input (e.g., quieter, less-busy setting). Select settings in which the child is calm, organized, and self-regulated.
- **Anxiety:** Ensure that the setting is not causing anxiety. If the child engages in restricted or repetitive behaviors or is experiencing anxiety, arrange a more structured, predictable environment. Whenever possible, identify settings where there is an absence of restricted and repetitive behaviors.
- **Problem behaviors:** If the child engages in challenging behaviors, arrange the environment to mirror conditions where this behavior is least likely to occur. Identify settings where problem behaviors are less likely to occur for opportunities to practice target social and communication skills.

Social setting	Associated intervention approach	Level of distractions
Structured	Traditional behavioral	Least
Semistructured	Behavioral-developmental	↓
Natural	Developmental	Most

Figure 6.2. Social Settings.

- **Social motivation:** If the child watches, imitates, and is reinforced by peers, use peer models as social motivation in the learning environment.
- **Shared attention:** Examine the child's ability to attend in adult-child and peer-peer interactions in structured, semistructured, and natural settings. Select settings to teach new social and communication skills in which the child demonstrates shared joint attention.
- **Imitation:** Examine the child's ability to imitate one or more adults and peers in structured, semistructured, and natural settings. The presence or absence of imitation will determine the level of structure required to teach new skills. When imitation is present, the child will be more likely to access teaching opportunities in all settings.
- **Organization:** The organized individual is calm, sustains attention to activities, attends to others, initiates communication, and makes changes. Information about a student's level of organizational skills can be obtained from assessment (e.g., ASCS-2). The presence or absence of organizational skills varies from setting to setting and from person to person. The continuum of intervention options is largely determined by the student's level of organization at the moment. For example, examine how the level of structure or the number of people in the environment influences the child's ability to demonstrate organized, purposeful social and communication skills. If the child with autism does not demonstrate organizational or purposeful skills, additional supports will be required for him or her to access teaching opportunities in the setting. Organizational supports are discussed in detail in Chapter 7.

The following vignettes illustrate how individual temperaments and core skill abilities—not cognitive or language capacities—should be used to determine the appropriateness of an intervention setting.

*Tommy is a quiet, passive student who lacks most core skills and engages in a high level of repetitive behaviors. He struggles to share attention or respond to others' directions, and there is an absence of motor imitation skills. Tommy is extremely sensitive to sound. He says some words while engaging in activities alone, and his solitary activity consists of perseverative use of objects. He generally uses simple gestures to make requests. When working with his parents and a therapist at home in a one-to-one activity, Tommy is able to engage in functional play activities and is beginning to make requests with intent. He imitates some actions during familiar, frequently practiced songs, and he looks at books with another person. In an inclusive school setting, his teacher was unable to engage Tommy in the same play and leisure activities that were successful at home. Tommy frequently climbed into one of the classroom cabinets when it became noisy. The team decided to select quiet activities with one peer partner as the setting for targeting Tommy's social goals.*

*Caroline is nonverbal. She has frequent tantrums in response to adult directions and is more likely to respond to her siblings and neighborhood friends. She demonstrates shared attention and watches peers, but she does not imitate them. She appears to have no sensory sensitivities or intense repetitive behaviors. Caroline used to attend a self-contained classroom until her parents requested some more inclusive opportunities; thus, Caroline now attends a general education classroom with an aide. In her class, Caroline responds to the social invitations of peers, imitates peers during structured classroom projects, initiates use of her communication board when her peers show interest, and does not engage in challenging behaviors. Caroline's parents report that she sleeps better and seems happier since attending the general education class. Caroline clearly benefits from an inclusive setting where she has regular interactions with her peers. Social interactions with peers are highly motivating for her and encourage the development of core, social, and communication skills.*

*Philip is highly verbal. He is able to do academic work with significant modifications. He also is able to have simple conversations with others about his interests, but understanding the instructions and discussion in his general education class is difficult for him. He likes to engage in solitary leisure activities related to his favorite movies and books. Philip has severe tactile sensitivity and becomes easily upset when there are changes in his physical environment. At one point, Philip's educational program was composed of a self-contained small class in the morning and attendance in an inclusive classroom in the afternoon. After four months of intense effort, however, Philip's family decided to discontinue his participation in the inclusive program. Philip was displaying loud outbursts in the inclusive classroom, frequently crying out, "I don't like it here." His sleep and eating patterns became disrupted as well. Philip stated that the large social group was too stressful. Large-group work appeared to limit his ability to access new skills. He preferred having one or two peers come to the quieter resource classroom or home to interact. Philip's anxiety levels and sensory sensitivities were important considerations in selecting a setting that best met his individual needs.*

**Select Activities** Given the nature of social and communication development, every activity potentially includes opportunities to enhance social and communication skills. Regardless of the target social or communication goal, skills will have greater meaning and be acquired more rapidly if taught during naturally occurring, fun, age-appropriate activities. However, most activities will need to be structured and orchestrated to create teaching opportunities for children with autism. In addition, closed-ended activities are more likely to meet the needs of the child. Whenever possible, ensure that the setting and activities are motivating and meaningful. See Chapter 8 for a rich collection of activities in which to embed instruction on core, social, and communication skills for students with autism. Motivating and meaningful activities in natural environments promote and build spontaneous social and communication skills.

**Closed- or Open-Ended Activities** Social activities can be closed- or open-ended. Activities that lack predictability or are open-ended can be confusing for children with autism and often are not the best opportunities to facilitate social and communication skills. Children with autism will vary in their ability to participate in open-ended activities in purposeful and flexible ways. The presence or absence of core skills—specifically, shared attention, imitation, and organization—will directly affect the individual's success or difficulty with open-ended activities. Consider a child's core skill abilities when determining whether a particular closed- or open-ended activity is a viable opportunity for social interaction and communication enhancement.

In general, closed-ended activities have a clear purpose, organization, and a final product or clear completion point. In contrast, open-ended activities generally lack specific rules, allow for the creative use of materials, have no set sequence of events, and do not include a final product.

- If the child has an absence of core skills and/or is inflexible, plan for participation in closed-ended activities.
- If the child possesses core skills and is flexible, consider participation in open-ended activities as an option.

The lack of organization inherent in open-ended activities often is challenging for most individuals with autism. All activities, open- or closed-ended, can be further organized and more highly structured to create greater predictability. The following vignette illustrates closed- and open-ended activity participation.

*Maura and Bertha are two students with autism. The school team created a plan for recess because both girls struggle to play with the other children during this time. Maura observes, imitates, and likes to interact with her peers, but she only talks about her favorite TV character, continuously asking peers the same question and then turning away from them. The recess plan included an adult facilitating Maura's participation in a number of semistructured, open-ended*

games, such as *Four Square*, *jump rope*, and *Mother-May-I*, which were enjoyed by all of the children. An alternative plan was needed for Bertha, who isolated herself at recess and engaged in self-stimulatory repetitive behaviors. Bertha did not watch, imitate, or interact with peers. The plan included an adult facilitating closed-ended games with three peer partners. The peers volunteered before recess (i.e., “Who wants to play \_\_\_\_\_ today?”). The small group participated in partner relay races using various props, which made the games fun for everyone.

**Motivating Activities** Motivating activities can be defined as purposeful and meaningful activities in which social interactions are most likely to occur. Motivation is obviously linked with personal interests. Motivation also is intimately linked to understanding the purpose of an activity. When a child with autism understands what to DO in any situation, it increases the likelihood that he or she will interact with others. Social understanding, or an understanding of how to interact with others (WATCH-LISTEN), also is naturally linked to motivation. Misunderstanding the intentions and behaviors of others accounts for many of the social struggles common to children with autism and influences their motivation to participate and engage in social activities. As such, motivation is affected by the type of activity, the social partners, and the complexity of the social interaction. The intervention plan should incorporate those types of activities in which the child is most successful as opportunities for building social and communication skills. It also is important to consider the stylistic patterns of the adults and peers with whom the child is most interactive and choose social partners who are compatible in terms of interaction style and interests. Finally, monitor the child’s emotional state during activities to determine which activities and interactions are most motivating. Social motivation and participation occur when the social environment is meaningful and pleasurable for both the child and others.

Motivating activities are likely to elicit positive opportunities for social engagement and communication. Interests are a window into what makes sense to an individual; that is, an individual engages in activities that provide stimulation, comfort, and meaningful information. It is important to frequently do an inventory of the child’s motivations and interests (e.g., using tools such as the ASCS-2 Behavior Profile) that includes information about motivating activities, sensory preferences, and social partners with whom the child with autism is most interactive. When selecting activities to motivate learning, use assessment information and ask the following questions:

- Are there opportunities to target social and communication skills within preferred activities?
- Are the child’s preferred activities open- or closed-ended?
- Does the structure of the activity influence social participation?
- Does interaction improve during active or passive activities; for example, does movement foster more interaction or create more disorganization?
- In what situations is the child with autism most interactive with others?
- What are the stylistic characteristics of social partners who successfully interact with the individual?

Assessment information can be used to adapt activities and modify the interaction patterns of adult and peer partners to increase motivation. Consider

- Embedding a child’s interests and preferences into a less-motivating social activity
- Using solitary play and leisure interests as contexts for social interaction with others
- Using social activities that the child has mastered with adults as opportunities to interact with peers
- Pairing new activities with preferred objects or people to enhance motivation

Individuals with autism vary significantly in their ability to stay calm and organized in various settings. Sensory sensitivities and degree of anxiety often can determine whether the person is active, passive, or anxious, and/or expresses restricted or repetitive behaviors during activities. Activity level and degree of restricted and repetitive behaviors may be expressions of comfort level. These factors—anxiety, sensory sensitivities, and comfort level—should be considered when selecting activities. To discern what factors may contribute to a particular student’s level of comfort and ability to access teaching opportunities, review assessment information and consider the following questions:

- What sensory stimuli does the child seek and avoid?
- When does the child engage in restricted or repetitive self-stimulatory behaviors? When are these behaviors least likely to occur?
- When does the child engage in restricted or repetitive social interactions? When are these behaviors least likely to occur?
- What does the child do to calm himself or herself?

If the child needs assistance with focus, organization, and self-regulation, enhance motivation to participate in selected activities through the use of various instructional supports (i.e., organizational, social, and communication supports) described in detail in the following chapter.

Finally, a distinction needs to be made between an individual’s repertoire of motivators and his or her intense interests or passions. Sometimes, the child’s intense interests may be motivating opportunities for learning, but sometimes they are not. It is important to monitor students’ emotional state and behaviors when engaged in intense interests to make sure they do not become consumed by their enthusiasms at the expense of learning. An intense interest may be used as a teaching opportunity and embedded into different activities if the student can 1) share a strong interest with others in a flexible manner and 2) disengage from an activity associated with the intense passion without disruption. Nonetheless, one may need to be cautious in using special interests as part of an intervention plan. The following vignettes illustrate both positive and negative results of using obsessive interests to motivate children with autism.

*Robert is fascinated by robots and talks about them incessantly. His teacher used his intense interest in positive ways. She used robot stickers as rewards. She arranged a daily activity for Robert and one classmate to draw a picture and write a story about different types of robots. Positive interactions and conversations occurred as Robert and his peers worked together on these projects. By the end of the school year, the class had generated a robot encyclopedia.*

*Don is extremely interested in vending machines; he talks nonstop about the one in school. Initially, Don was given an opportunity with a friend each day to fill the vending machine; however, he became increasingly more anxious while waiting for his next opportunity to do this. Don’s inability to control this obsession resulted in a dramatic increase of his running out of the classroom to the vending machine, which then escalated into screaming in the classroom. Therefore, access to and discussion about the vending machine had to be eliminated completely. The teachers wrote a story for the class about the vending machines being for teachers only. A “Do Not Enter” sign was placed on the room with the vending machine, and a new behavior contract with different rewards was designed for Don.*

**Meaningful Activities** The ability to sustain attention and to participate spontaneously in an activity is linked to the activity’s meaningfulness for the individual. Meaningful activities are essential to social and communication success, because social interactions are more likely to occur in the context of purposeful and meaningful activities. The challenge

of intervention is to select age-appropriate, meaningful activities and then superimpose elements of structure and organization into them. The activity should be inherently reinforcing whenever possible. Remember also that structured, organized, predictable, and somewhat repetitious activities can be both meaningful and fun. The following vignettes illustrate how target social and communication goals can be structured into meaningful, fun activities. The first sample activity was selected for a child whose goal was to increase imitation skills. The second sample activity was used for a child whose goal was to increase commenting communication skills.

*In physical education class, the students begin doing warm-up exercises. Five different stretch positions and actions are practiced with Edgar, who is learning to imitate motor actions across a wide range of meaningful activities. The large group of peers serves as his model, and the adult prompts the contextually meaningful actions.*

*A book share is structured to elicit communication with Sheldon. The teacher selects an age-appropriate picture book about a topic of interest. The teacher and Sheldon take turns pointing to and labeling the objects in the book in a predictable way. The teacher looks through the entire book with Sheldon, pointing to and labeling one item per page. Next, the teacher starts the book again and establishes a turn-taking routine so that the adult and student take turns naming one item on each page. For example, when using a book about animals, the teacher points to an animal on page one and says, "(name of animal)." Then she points to the animal on the next page and waits for Sheldon to label or comment. The teacher uses prompts as needed to elicit commenting.*

In summary, intervention must take into account the settings, activities, and interactive partners that offer positive social experiences for the child with autism. These positive characteristics need to be duplicated across as many social contexts as possible to enhance comfort and, thus, to facilitate social-communicative competence. The characteristics of the setting that may contribute to level of comfort include the social dynamic (e.g., size and makeup of the group), physical environment (e.g., closed-ended or open-ended), and activity (e.g., active or quiet; predictable or creative). The characteristics of the interactive partners that may contribute to an individual's level of comfort include style (e.g., simple or complex language use; animated or calm; use of prompts and cues) and timing (e.g., slow- or fast-paced). In the absence of comfort, a child with autism is more likely to engage in challenging behaviors. When the individual is unable to focus or participate in a social context, this generally results from feeling confused either by the activity or by the social expectations.