Preschool Education Programs for Children with Autism

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In the years since the publication of the first edition of *Preschool Education Programs for Children with Autism* in 1994, and the second edition in 2001, more and more children on the autism spectrum are receiving a quality education. There are more children, more programs, and for many families, a choice of placement options for their children. All of this is the result of the growing evidence supporting the effectiveness of science-based, intensive teaching. Lovaas (1987) was the first to report the impressive gains demonstrated by some children with autism in response to behavioral instruction. His work was then confirmed by a number of authors including Birnbrauer and Leach (1993), and our work at the Douglass Developmental Disabilities Center of Rutgers University (Harris, Handleman, Gordon, Kristoff, & Fuentes, 1991). More recently, Howard, Sparkman, Cohen, Green, and Stanislaw (2005) documented the success of intensive teaching over nonbehavioral methods.

During the past decade we have learned more effective methods for teaching children with an autism spectrum disorder (ASD), referred to as autism in this chapter. For example, the verbal behavior classification system of language instruction (Sundberg & Partington, 1998) has given us a highly useful structure for teaching language to students with ASD. In addition, functional behavioral assessments have become the cornerstone of behavior intervention planning; and antecedent interventions have become the first line approach for treating challenging behaviors.

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With each edition of *Preschool Education Programs for Children with Autism* we have learned more about how to include students with autism in public school programs, and how to more effectively work with families. More and more children are graduating from specialized preschool programs, and then being successful with varying degrees of support in regular education settings. Programs for students with autism are also providing more support services for families, which has resulted in greater parental collaboration with professionals and more informed advocates.

In this third edition of *Preschool Education Programs for Children with Autism* we explore the recent advances in applied behavior analysis (ABA) interventions for the preschool student with autism. We provide the reader with a forum to assess which methods are best for which children under which conditions. As in previous editions, we invited service providers from some of the finest programs for children with autism to contribute to the book. The reader will recognize four programs from the second edition: the Alpine Learning Center, the Autism Center at the University of Washington (formerly the Colorado University Affiliated Program for Developmental Disabilities), the Children's Unit at SUNY Binghamton, and the Douglass Developmental Disabilities Center. Seven programs are new to this edition: Ascent, the CABAS Program at Columbia University, the Groden Center, the LEAP program, the Summit Academy, the Pyramid Model at the Cape Henlopen School District, and the Valley Program. In order for the reader to compare the programs according to various dimensions, all authors were first asked to briefly describe their program and then answer the following questions:

- What criteria must a child meet for admission? What diagnostic materials do you use to determine eligibility and diagnosis?
- Do you have an overall curriculum? What tools do you use to assess a student's skills? How are goals and levels of instruction determined?
- How do you approach teaching speech and language? Do you use a verbal behavior framework? Do you use pictures, sign language, or other augmentative methods?
- How do you address teaching social skills and play? Do you use a specific curriculum?
- Do you take any special steps to ensure the fluency of skill use? For example, do you use fluency-based instruction? How about ensuring generalized use of the skills?

- How do you address problem behaviors? Are positive behavior supports used in teaching? At what point in behavior management planning are antecedent interventions considered? What role do functional assessments play in addressing behavioral challenges?
- Are visual supports used to augment teaching?
- What kinds of naturalistic teaching methods do you use?
- What role do families play in the educational program of their children? What types of supports are provided to the family?
- What types of inclusion experiences are available to the students?
- How is transition to school-age programs conducted?
- How do you measure outcome for your students?
- What are questions that you feel are still unanswered regarding the education of preschool children with autism?

The programs showcased in this edition are located in a variety of settings, including public schools, private special education schools, and universities. For example, the Autism Center at the University of Washington, the Children's Unit at SUNY Binghamton, and the Douglass Developmental Disabilities Center are all university based. Columbia University provides training for CABAS programs that are implemented in both public and private settings; and consultation and training for LEAP public school classrooms are provided at the University of Colorado at Denver. The Alpine Learning Center, Ascent, the Groden Center, and the Summit Academy are private programs; and the Pyramid Model at the Cape Henlopen School District and the Valley Program are public school programs. This diversity of settings should enable the reader to find one or more programs that are a good fit with his or her context.

While the discussions in this book will not enable the reader to replicate a particular program, they should serve to highlight the important variables that must be considered in the creation or modification of a classroom. For example, all of the methods described in the chapters are data based and such accountability is an ethical component of educational practice. In addition, all of the programs offer a very rich ratio of adults to children. This intensity of programming appears to be essential to the education of students with autism. All of the programs that are described in the following chapters also provide some type of opportunity for integration with typically developing peers; either within their own setting or in the community. Transitional programming is a key element of each program, as well as supports to promote collaborative planning with parents.

Questions Authors Were Asked to Answer

This edition of *Preschool Education Programs for Children with Autism* is intended to give an educator or administrator help in planning to create a new classroom, or to reorganize an existing program. It also is intended to provide a sense of the expanding methodology that is currently being employed by some of the prominent service providers in the field. Their responses to the following questions will help the reader appreciate what is considered to be best practice for educating students with autism.

Each chapter begins with a brief overview of the program: Where is it located? How is it funded? What are the staffing patterns? This information will familiarize the reader with the kinds of resources that are available in a particular program. For example, the setting that the program operates in can have a direct impact on services. In a university-based program, such as ours at Rutgers University (Chapter 7), the limited opportunities for inclusion in public school classes prompted the creation of our integrated preschool class, "Small Wonders." While a public school program such as the Valley Program (Chapter 12) can provide a fuller range of inclusion options, additional specialized supports that are more easily available in a university setting are often required. The program description will give the reader a sense of the program's complexion.

Creating a program for students with autism first requires an administrative structure and teaching staff. The authors of the following chapters first describe the staff members who participate in their program in terms of credentials and responsibilities. The reader will find that special education teachers, speech–language specialists, and psychologists are universally involved in these programs, as are teacher assistants and volunteers. Other specialists such as occupational therapists may be part of the regular staff, or serve as consultants for individual students. School–home consultants or behavioral specialists are specifically designated in some programs. University programs, such as Columbia (Chapter 5), Rutgers (Chapter 7), University of Washington (Chapter 4), and SUNY Binghamton (Chapter 6) use undergraduate and graduate students for additional support. The authors also describe the kinds of training and supervision they provide for their staff. Given the evolution of educational strategies for students with autism, inservice and continuing education is crucial for maintaining an effective program.

What Criteria Must a Child Meet for Admission? What Diagnostic Materials Do You Use to Determine Eligibility and Diagnosis?

There is still variability in the diagnostic criteria that are used to describe children with autism (Handleman & Harris, 2001). Each contributor was asked to describe the children being served by their program. It is important to know the type of children that are attending a particular program in order to assess whether the children attending one program are similar to those in another. This information is useful in determining to what extent differences in outcome may be the result of differences in population as opposed to educational methods.

The children that attend the programs in this book are referred for placement from a variety of sources, including parents, governmental agencies, and local child study teams. They are often diagnosed by independent experienced professionals, and the diagnoses are then confirmed by the receiving program. Most programs use the criteria of the *Diagnostic and Statistical Manual of Mental Disorders–Fourth Edition* and *Fourth Edition, Text Revision* (DSM–IV, DSM–IV–TR; American Psychiatric Association, 1994, 2000). Many programs also use the *Childhood Autism Rating Scale* (CARS; Schopler, Reichler, Devellis, & Daly, 1988) and the *Autism Diagnostic Observation Schedule* (ADOS; Lord, Rutter, DiLavore, & Risi, 2001) to accept children into their programs.

Do You Have an Overall Curriculum? What Tools Do You Use to Assess a Student's Skills? How Are Goals and Levels of Instruction Determined?

Designing a curriculum for the preschooler with autism is an intricate task (Handleman, 1992). The teacher must identify appropriate goals and objectives, determine the level of instruction, and then select or create suitable materials. Careful planning and systematic organization of educational experiences can result in a well-balanced curriculum (Handleman & Harris, 2001).

The contributors' answers to this question will provide the reader with an appreciation for the complex task of curriculum planning for the student with autism. In the following chapters, sample curriculum items from the domains of social, affective, cognitive, speech–language, and self-help are provided as examples of what the children are taught. In

Chapter 6, Romanczyk and his colleague provide details about the *Individualized Goal Selection Curriculum* (IGS; Romanczyk, Lockshin, & Matey, 2000). The reader will also learn how the programs assess the various dimensions of the child's functioning. Assessment of children with autism has been recognized as being difficult (Browder, 1991; Handleman & Delmolino, 2005); and the contributors present ways to use appropriate instruments and strategies that make it possible to conduct valid assessments. The results of these assessments then guide the selection of meaningful goals. For example, the importance of developing strong motivation systems for students by initially conducting reinforcer assessments can be found at Ascent (Chapter 2).

How Do You Approach Teaching Speech and Language? Do You Use a Verbal Behavior Framework? Do You Use Pictures, Sign Language, or Other Augmentative Methods?

The major emphasis of most curricula for teaching students with autism is communication, and speech is often the first modality that is taught. Lovaas' pioneering work in 1967 was quickly followed by the efforts of countless others. Most recently, Sundberg and Partington (1998) developed the verbal behavior classification system of language instruction, which was based on Skinner's (1957) thesis of verbal behavior. Today, most discussions about teaching communication skills also include reference to augmentative systems of communication, such as the *Picture Exchange Communication System* (PECS; Bondy & Frost, 2001), as either a method of communication or way to augment communication skills.

The contributors of the following chapters provide the reader with a glimpse of how they approach teaching the students in their programs to communicate. Whether following a developmental sequence of communication skills, a program-specific curriculum, or a classification system such as the *Assessment of Basic Language and Learning Skills* (ABLLS; Partington & Sundberg, 1998), each program emphasizes speech and language training. In our own program at Rutgers University (Chapter 7), the ABLLS is used to help select goals and to monitor a child's acquisition of communication skills. The reader will also find that most programs use pictures as a way to stimulate or augment communication. Most use the PECS by Bondy and Frost (2001). In Chapter 10, Andy Bondy and Kris Battaglini describe the implementation of the PECS in the Cape Henlopen School District.

How Do You Address Teaching Social Skills and Play? Do You Use a Specific Curriculum?

Social skills represent another major curricular area for the student with autism. Establishing eye contact, approaching another child, and returning a ball are examples of some of the social skills that might be taught. Most students are also taught adaptive skills, such as dressing and simple food preparation, as well as play, leisure time, and recreational activities. Both the beginning and experienced teacher search for more effective methods to teach these important interpersonal skills.

Each of the programs in this book has a systematic approach to teaching social skills. Whether taught in isolation, embedded in communication training, or part of community programming, the ability to respond to other individuals or participate in social experiences is viewed as an important life skill. The reader will find in the following chapters examples of specific social skills curricula, as well as useful strategies for increasing social responsiveness. For example, in the Valley Program (Chapter 12), a number of published resources, such as *Skill Streaming* (McGinnis & Goldstein, 1997) and *Social Skills Training* (Baker, 2001), are used. At the University of Washington's Early Start Denver Model (Chapter 4), fundamental skills of social engagement and reciprocity are infused in all aspects of the program.

Do You Take Any Special Steps to Ensure the Fluency of Skill Use? For Example, Do You Use Fluency-Based Instruction? How About Ensuring Generalized Use of the Skills?

Once a student learns a particular skill, it is important that he or she is able to use it smoothly and effectively; or in other words, fluently. Each of the programs described in this book addresses this important component of learning, and the reader will find useful strategies to promote swift and accurate responding. Examples of fluency-based instruction, according to Binder (1996), are described at the Alpine Learning Center (Chapter 3) and the Douglass Developmental Disabilities Center (Chapter 7).

In order for learning to be durable, a student must also be able to use a skill with a variety of instructors and in different settings. Generalization of responding is considered an essential component of learning (Handleman & Delmolino, 2005), and in each of the following chapters the contributors describe how their programs ensure generalization. The

use of varied materials, teachers, and settings that is described by Leslie Weidenman and her colleagues at the Groden Center (Chapter 8) can also be found in each program in this book.

How Do You Address Problem Behaviors? Are Positive Behavior Supports Used in Teaching? At What Point in Behavior Management Planning Are Antecedent Interventions Considered? What Role Do Functional Assessments Play in Addressing Behavioral Challenges?

The student with autism often displays behavioral challenges, and behavior management planning becomes a major focus of programming. While there are a range of interventions with preschool-aged students, most involve functional assessment and teaching appropriate alternative behaviors. There is often a sense of optimism when intervening early with the problem behaviors.

All of the contributors were asked to describe their approach to behavior management and to indicate which specific techniques they employed when dealing with behavior problems. Specifically, we were interested in whether programs used positive behavior supports and antecedent interventions when dealing with challenging behaviors. We also wanted to know what role functional assessments play in behavior management planning. At the Summit Academy (Chapter 11), for example, after the staff complete a functional assessment, they design behavior intervention plans for each child that include the manipulation of antecedents, reduction of behavioral challenges, and teaching of adaptive alternative behaviors. Each of the programs described in this book uses functional assessments to guide behavior intervention planning.

Are Visual Supports Used to Augment Teaching?

Visual supports are frequently used in teaching children with autism. A simple raise of an eyebrow can be sufficient to prompt a particular verbal response, and lightly touching a child's shoulder can prompt him or her to sit. Whether incorporated in everyday instruction or part of a formalized program, such as the *Picture Exchange Communication System* (PECS;

Bondy & Frost, 2001) and activity schedules (McClannahan & Krantz, 1999), visual supports can be very effective and essential teaching tools.

In the following chapters, the reader will learn how visual supports are introduced very early in educational programming. Chapter 8 describes various examples of visual supports, such as schedules, labels, checklists, choice boards, and cognitive picture rehearsal, all of which are used at the Groden Center. The reader will also find detailed descriptions of activity schedules in Chapter 2 (Ascent) and Chapter 3 (Alpine Learning Center).

What Kinds of Naturalistic Teaching Methods Do You Use?

Recently, naturalistic teaching has become an integral part of ABA with students with autism. There are a number of specific naturalistic teaching methods that are available: incidental teaching (Hart & Risley, 1968), natural environment training (NET; Sundberg & Partington, 1998), pivotal response training (Koegel & Koegel, 2006), and the natural language paradigm (Koegel, O'Dell, & Koegel, 1987). Each draws on the natural environment and naturally occurring events in the acquisition, generalization, and maintenance phases of instruction.

The reader will find in the following chapters strategies that are designed to embed learning opportunities in naturalistic situations and techniques to dispense naturally occurring reinforcers. For example, at the LEAP Program (Chapter 9), "milieu-teaching" is used; it includes strategies such as incidental teaching and pivotal-response training. All contributors report the use of naturally occurring experiences to enhance learning.

What Role Do Families Play in the Educational Program of Their Children? What Types of Supports Are Provided to the Family?

It is well known that parental and family involvement is critical for establishing and maintaining behavior changes by students with autism (Lovaas, Koegel, Simmons, & Long, 1973; Schopler & Reichler, 1971). It has been repeatedly shown that parents can master a full range of teaching techniques and use them reliably to facilitate their child's mastery of communication, social, self-help, and related skills (Harris, 1983; Howlin,

1981). It is also recognized that there are a variety of supports that are necessary to maintain optimal family functioning (Harris, 1994).

Each contributor to this book describes efforts to collaborate with families and to provide parents with supports. In Chapter 6, Romanczyk and his colleagues describe their family focus model, which addresses the needs of the child and family. At the Early Start Denver Model (Chapter 4), parents play an integral role in selective objectives, curriculum, and teaching practices.

What Types of Inclusion Experiences Are Available to the Students?

There has been active exploration of the value of integrating students with autism with their normally developing peers (e.g., Odom & Speltz, 1983; Strain, 1983). It is widely accepted that exposure to typically developing children is essential to the child's education (Handleman & Harris, 2001). The field of ABA is increasingly successful at preparing students with autism to enter mainstream educational settings (Fenske, Zalenski, Krantz, & McClannahan, 1985; Handleman & Harris, 2001; Lovaas, 1987).

The programs presented in this book each have a commitment to providing their students with opportunities to be included with typically developing children. For example, at our program at Rutgers (Chapter 7) and the LEAP Program (Chapter 9), systematic efforts to blend children with autism and their typical peers are described.

How Is Transition to School-Age Programs Conducted?

While the advances in the education of the preschool child with autism should be celebrated, it is important to focus our attention on transitions to school-age programs. An early commitment to preparing students for post-preschool settings, followed by the creation of a transition plan with milestones throughout the preschool years, should be components of educational planning. Collaboration between professionals and parents is vital to the success of any transition effort.

In the following chapters, the reader will find consideration for transitioning students either within a particular program or to a novel placement. Each program in this book describes efforts to transition students to post-preschool settings. For example, CABAS programs (Chapter 5)

provide continuity of programming from preschool to the early elementary grade level. Each program in this book offers visits to potential placements as a key component of the transition plan.

How Do You Measure Outcome for Your Students?

Where are preschool children going after they graduate? How are they doing in those new placements? Are there any standardized measures of change for the children from admission to graduation? Are there other measures of outcome? In general, how is outcome measured for the preschool child with autism? Whether a statistical measure or an accounting of acquired programs, outcome information provides validation of the success of educational efforts.

Each contributor in this book emphasizes the importance of accountability, and each program is data based. Some programs have compiled statistical data regarding the outcome of their students. For example, in our program at Rutgers (Chapter 7), we found relationships between IQ and age of admission upon outcome (i.e., more younger children and children with higher IQs were placed in inclusive settings in their school districts after graduation; Handleman & Harris, 2001). At the Summit Academy (Chapter 11), the percentage of annual objectives achieved is used as a measure of student outcome.

What Are Questions That You Feel Are Still Unanswered Regarding the Education of Preschool Children with Autism?

Each chapter concludes with questions that the contributor believes should be addressed by educators and researchers in the future. What are the limits of our knowledge about available intervention methods for the preschool child, and what should we be planning to do next? The reader will find an interesting variety of questions that are presented by the contributors. For example, Andy Bondy and Kris Battaglini (Chapter 10) address the challenges professionals face in dealing with parental response to their child's disabilities. Staff at the Groden Center (Chapter 8) are interested in the relative effectiveness of center-based versus home-based preschool programs.

Conclusion

It is our hope that this book will enable service providers to communicate more clearly with one another about their models of intervention. Specifically, we hope it will help the newcomer to identify those approaches most consistent with his or her program goals and to adopt a teaching model most consistent with those objectives. Many of the contributors to this book are available for consultation and would be pleased to provide additional information.

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