

PRINCETON CHILD DEVELOPMENT INSTITUTE

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ABSTRACT: The Princeton Child Development Institute, a nonprofit organization founded in 1970, provides behavioral intervention for people with autism. Services are provided in an early intervention program, in preschool and school, in community-based group homes, in families' own homes, and in a program for adults that features life skills and supported, competitive employment. All phases of PCDI's programs are based on behavior analysis, including educational services, staff mentoring and evaluation, and program administration. Ongoing research assesses new intervention strategies that are immediately implemented to ameliorate skill deficits and behavior problems. Technology dissemination is an important aspect of the Institute's endeavors, and there is continuing examination of variables relevant to program replication. Clinical data are supported by measures of interobserver agreement, and annual program evaluations by outside experts in behavior analysis show that 80% to 100% of all preschool and school instructional programs produce desired behavior change. PCDI has been recognized as an "enduring program in behavior analysis."

Princeton Child Development Institute (PCDI), a nonprofit organization, was founded in 1970 by the mother and grandmother of a young boy with autism. When they were unable to locate appropriate services in New Jersey, they launched a national search that culminated in the selection of an applied behavior analysis model. PCDI was the first noninstitutional program in the State that was specifically designed to provide intervention for children with autism.

Initially, the Institute offered only a school program. In 1975, it expanded to include data-based teaching and treatment services for both preschoolers and school-aged children, as well as individualized home programming services. Many children who received early treatment were mainstreamed to public school classrooms, often at their appropriate grade levels (Fenske, Zalenski, Krantz, & McClannahan, 1985). Others, who came late to treatment, or who presented chronic patterns of self-injury or aggression, progressed more slowly. As some of these arrived at puberty and continued to display severe behavior problems, they were no longer able to live at home with their own families. But neither parents nor Institute personnel believed that institutional placement was a viable alternative for these young people who had made significant progress in many areas. Thus, in 1977, PCDI opened Family Focus, the first community-based, family-style group home for youths with autism in New Jersey. With support from a National Institute of Mental Health grant and from the New Jersey Department of Human Services, this model was replicated four times; in

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1983, under PCDI's auspices, a fifth replication home, Family Focus at Mountainview, opened its doors. Subsequently, this model of professionally staffed, family-style treatment has been shared with many other agencies, in the United States and in other countries.

In 1984, when the first young person completed his schooling at PCDI but needed continuing intervention, the Institute embarked on the development of a program for adults with autism. The model features supported, competitive employment. Skilled PCDI professionals provide job coaching and ensure effective work performance; in addition, they teach "life skills," such as money management, good grooming, menu planning, and use of leisure time. Presently, some enrolled adults hold word-processing and data-entry jobs in corporate environments; others work in industry, in hotel housekeeping, and in the grounds maintenance department of a local college. Through income tax payments, reduced SSI benefits, and employer tax credits, these workers with autism contribute to levels of cost effectiveness that are superior to the costs of maintaining people in sheltered settings, while simultaneously enjoying the benefits of increased independence and social integration.

Increasing demand for applied behavior analysis technology set the stage for careful, ongoing examination of variables that are critical to program replication. Over a period of years, it was noted that those replications with greatest fidelity were most often achieved by professionals who, after significant periods of training and mentoring at the Institute, received technical support from PCDI during the first, formative years of their new agencies. On the basis of these findings, the Institute expanded opportunities for doctoral students and young professionals to pursue residencies at PCDI, and committed more monetary and personnel resources to technology dissemination. Presently, three developing agencies are receiving ongoing support: Nassau Suffolk Services for the Autistic, Levittown, NY; the New York Child Learning Institute, College Point, NY; and the Institute for Educational Achievement, Oradell, NJ, are substantial replications of intervention models developed at PCDI. In addition, training and mentoring are currently provided to professionals and graduate students from throughout the United States, and from Norway, Greece, Canada, and Russia, in order to expand the availability of intervention based on applied behavior analysis.

Program Description

Individualized programs (defined as documents that include response definitions, specified measurement procedures, descriptions of instructional procedures, graphs of students' performance, and interobserver agreement data) are designed for each young person, and the data on child performance are used to revise or redesign educational programs as necessary to ensure continued progress. Over more than two decades, these individualized programs have evolved into a data-based curriculum that addresses the development of academic, language, social

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interaction, self-care, leisure, and family- and community-living skills, as well as diminution of dysfunctional behavior such as aggression, self-injury, and stereotypy.

All instruction and treatment services are based on applied behavior analysis technology. Services are supported by ongoing research on intervention that is published in respected, juried periodicals and books. (A bibliography of published research is available upon request.) A scientist-practitioner model is an important feature of ongoing educational programming. Research topics emerge from observation of students' skill deficits, and positive research results are immediately implemented to address these problems and to promote progress. Current research focuses on strategies to advance language-development and social-interaction skills, and procedures to promote people's independence and help them learn to make choices.

The educational accountability system is based upon yoked outcomes for children, teachers, the teachers' trainers and mentors, and program administrators. Data on children's progress are reviewed on a day-to-day basis by teachers and their mentors. Teachers are recognized as successful when data on students' performance document positive behavior change. Teachers' trainers/mentors provide ongoing, hands-on training, and the training protocol (a battery of data-based observations) is later used as an evaluation protocol to document teachers' responses to training. The teachers' trainers/mentors are regarded as successful when teachers display target skills during their evaluations, *and* when data on students' performance document skill acquisition. Finally, school administrators experience success only when data document favorable outcomes for students, teachers, and the teachers' mentors. This system of linked outcomes is regarded as essential to effective program operation.

Evaluation

The Institute is one of only a handful of intervention programs to report that, of children with autism who enter treatment before 60 months of age, approximately half make the transition to public school classrooms, often at their appropriate grade levels (McClannahan & Krantz, 1994). Some former PCDI students are college graduates, some are now in college, and many others are in regular education placements, from kindergarten through high school. In response to data on the importance of early intervention, a toddler program opened in 1997.

Almost two decades of research on organizational and administrative systems, accountability systems, staff training and mentoring, and program evaluation were summarized in an invited article for the twenty-fifth anniversary issue of the *Journal of Applied Behavior Analysis* (McClannahan & Krantz, 1993) which recognized the Princeton Child Development Institute as one of three "enduring programs in behavior analysis."

External evidence of program quality is generated by an annual evaluation of all clients' individualized intervention programs, conducted by an outside, impartial expert. PCDI researchers developed and validated the evaluation protocol over more than a decade, and the data that are produced each year by highly qualified external

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evaluators (experts in applied behavior analysis and in developmental disabilities) show that, during the past decade, 80% to 100% of all preschool and school instructional programs produced desired behavior change. These effective programs taught new skills such as appropriate toileting, sampling of new foods, following teachers' and parents' directions, initiating conversation, making choices of leisure activities, and remaining engaged with learning activities for sustained periods.

In addition, feedback is annually solicited from many consumer groups, including parents, members of the governing board, funding agency representatives, group home neighbors, employers of workers in supported employment, and members of the professional staff. Their observations and suggestions continue to result in program enhancements.

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