DOCUMENT RESUME

ED 197 577 EC 132 438

AUTHOR	Schopler, Eric; Bristol, Marie
TITLE	Autistic Children in Public School.
INSTITUTION	ERIC Clearinghouse on Handicapped and Gifted Children, Reston, Va. Council for Exceptional Children.
SPONS AGENCY	National Inst. of Education (ED), Washington, D.C.
PUB DATE	Aug 80
CONTRACT	400-76-0119
NOTE	49p.: ERIC Exceptional Child Education Report Series, IAP No. 79-6.
AVAILABLE FROM	ERIC Clearinghouse on Handicapped and Gifted Children, The Council for Exceptional Children, 1920 Association Dr., Reston, VA 22091 (Free while supply lasts).
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Autism; *Clinical Diagnosis; *Curriculum; Educational Methods; Educational Principles; Elementary Secondary Education; Family Relationship; History; *Public Schools; Student Characteristics; *Student Evaluation; *Student Placement; Teacher Education

ABSTRACT

Intended for public school administrators and regular classroom teachers, the report discusses the nature of autistic children and examines aspects of successful educational programs for them. The historical background is traced down from Itard's wild boy through theories of faulty parental conditioning, to current thought on the causes of autism. Diagnostic issues, including distinctions between autism and schizophrenia, the impact of family socioeconomic status, and current criteria for autism are reviewed. The importance of individualized assessment in different areas of mental functioning is stressed, and the role of short term goals for classroom and family priorities is considered. A discussion of four issues concludes the paper: the educability of autistic children, expected gains, moral and legal requirements affecting placement and curriculum (including a review of considerations for placement in classes with other types of handicapped children), and teacher training. Among factors cited for teacher turnover are excessive paperwork, children's slow progress, and conflict with parents. Experiences of the Division for the Treatment and Education of Autistic and Communications Handicapped Children, a statewide program in North Carolina, are cited throughout the paper. (CL)

AUTISTIC CHILDREN IN PUBLIC SCHOOL

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August 1980

A Product of the ERIC Clearinghouse on Handicapped and Gifted Children
The Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

The preparation of this report was supported in part by the Bureau of Education for the Handicapped, US Office of Education, DHEW, Contract no. 300-77-0309. However, the opinions expressed do not necessarily reflect the position or policy of the US Office of Education, and no official endorsement of the US Office of Education should be inferred.

A publication of the ERIC Clearinghouse on Handicapped and Gifted Children. Publication Date, 1980.

The Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091

This publication was prepared with funding from the National Institute of Education, US Department of Education under contract no. 400-76-0119. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Prior to publication the manuscript was submitted to The Council for Exceptional Children for critical review and determination of professional competence. This publication has met such standards. Points of view, however, do not necessarily represent the official view or opinions of either The Council for Exceptional Children, the National Institute of Education, or the Department of Education.

TABLE OF CONTENTS

	PAGE
Introduction	1
Historical Background	4
Causes of Autism	6
Diagnosis and Assessment	6
Diagnostic Grouping	7
Autism vs. Schizophrenia	7
Autism vs. Mental Retardation	8
Family Socioeconomic Status	9
Criteria of Autism	10
Individualized Assessment	12
Short Term Goals	15
Behavioral Hierarchies	16
Classroom Priorities	18
Family Priorities	19
Educating Autistic Children	20
Educability of Children	20
Why Public School?	21
Appropriate Public Education	23
School Placement	23
Learning Structure	24
Communication Training	24
Behavior Modification	25
Parent Involvement	25
Mainstreaming	25
Individualized Curricula	26
Teacher Training	29

Table of Contents - 2

	PAGE
Teacher Turnover	32
Summary	35
Bibliography	37
Media Materials Available from Division TEACCH	42
The National Society for Autistic Children	44

Introduction

> "Autism is a severely incapacitating, lifelong developmental disability which usually appears during the first three years of life. It occurs in approximately five out of every 10,000 births and is four times more common in boys than in girls. It has been found throughout the world in families of all racial, ethnic, and social backgrounds."
> (National Society for Autistic Children, 1979)

Until recently, and in large part because of the mistaken belief that autism was primarily an emotional problem of social withdrawal, autistic children were largely excluded from public schools. Instead they were considered the exclusive province of mental health centers, institutions, and special research projects. Most public school administrators and teachers had little contact with these children and little need to understand or deal with their puzzling behavior and learning problems. When an occasional autistic child showed up he was usually placed in a classroom for the emotionally disturbed even though this was frequently an inappropriate placement.

A revolutionary change occurred with the passage in 1975 of the Education for All Handicapped Children Act, (Public Law 94-142). It mandated a free and appropriate public education for all handicapped children, including those with autism, in the least restrictive environment. For most autistic children, this means education in a local public school, with an Individualized Educational Program (IEP) developed in collaboration with the child's parents. This law has by now affected virtually every public school system in the country. It has resulted in the rapidly increasing presence of autistic and other handicapped children in public schools, a reality for

which public school administrators and teachers have not been adequately prepared. This lack of preparation should not come as a surprise to anyone. It is certainly easier to pass a law mandating appropriate education for an especially difficult group of children than it is to define how to educate them appropriately, especially when they had previously been excluded from educational efforts.

During the past five years there has been a growing number of court cases and due process hearings regarding the meaning of appropriate education for autistic and developmentally handicapped children. Some of this litigation has resulted in needed special education opportunities, but some has channelled large sums of money into legal fees which could have been more profitably used for the development of missing educational services. Much of this litigation could have been avoided if public school administrators, teachers, and parents had a better understanding of autistic children and their educational needs.

The lack of experience with autistic children in the public schools is not the only source of difficulty our schools face in educating autistic children. There has also been a lack of appropriate teacher training regarding the problems of autism. This monograph was written to help fill this gap. It is written not for the researcher or expert in the area of autism, but is designed to meet the unique needs of public school administrators, regular classroom teachers, and nonteaching staff without previous specialized training in autism--many of whom are encountering autistic children in their schools for the first time.

The material in our discussion is based on the most current and comprehensive reviews of research focused on autism (Rutter & Schopler, 1978; Paluszny, 1979; Koegel, Egel, & Dunlap, 1980). The reader interested in more

detailed information may want to refer to these sources. It is also based on 14 years of experience and research with the first state-wide psychoeducational program for autistic children -- the Division for the Treatment and Education of Autistic and Related Communication Handicapped Children, (Division TEACCH), located in the Department of Psychiatry at the University of North Carolina School of Medicine, in Chapel Hill. This program evolved out of collaboration between professionals and parents in order to improve adaptation of the children in their families, their schools, and their communities. This voluntary collaboration resulted in program organization and procedures almost identical with those later required by PL 94-142. In meeting these requirements in public schools it is important to realize that these procedures represent not only legal mandates, but the best current educational practices for autistic children.

The TEACCH Program has served autistic children and their families since 1966, first as a research project (Runck, 1979) and, since 1972, as the first legally mandated state-wide program for autistic children. It now includes a network of five regional centers and 28 public school classrooms located throughout the five regions (Schopler & Olley, 1980). Over 900 children and their families have been evaluated and studied during this period. It is the findings from our research and that of others, tempered by our direct experience, that informs our comments on the following pages. Hopefully this material will be of help to you in your subsequent contacts with these children and their families.

We will attempt to describe from a historical perspective changes in our knowledge of autistic children, their special diagnostic and educational needs, and the reasons why these children are in public schools. We will also attempt to delineate some of the key principles that should be followed

in designing educational programs for these children and some of the contributions that school personnel can make to the successful integration of these children into their schools. We will also suggest an abbreviated list of resources that are available from Division TEACCH for classroom teachers who have or expect to have an autistic child in their regular classroom.

Historical Background

Not long ago a teacher remarked that she didn't know where all the autistic children were coming from since there were so few of them only a few years ago. In fact, there have always been autistic children and adults, but they were assigned different labels, and understood quite differently from today. The term infantile autism was not introduced into our literature until the 1940's (Kanner, 1943), but there is evidence for the existence of similar children over 200 years ago. In 1795, Itard (1962) took on the education of a boy found in the wilderness, showing behavior we now consider autistic. He was called a wild boy, similar to other "feral children" believed to be raised by wolves. From working with this child Itard devised certain principles still useful today. They included the importance of daily routines and teaching self-help skills. Itard used the written word as an aid in developing the boy's language skills. He found it necessary to improve the boy's receptive understanding before he could teach expressive labeling. At the same time he developed methods of sensory training.

Although claims for the discovery of feral children continued into the 20th century, (Gesell, 1941) an elightened skepticism appeared regarding the wolf's ability or motivation to rear rather than devour young human children. Bettelheim (1959) was among the first to doubt the wolf den origins of these mysterious children. Instead he carefully traced behavioral similarities between the descriptions of feral children and behaviors he

observed among the autistic children at his Orthogenic School. He thought that feral children were actually autistic children abandoned by their mothers. He concluded that there were no feral children, there were only feral mothers. A decade later Bettelheim published another version of his psychoanalytic interpretation of the primary cause of autism. This time he claimed that autism was due to parents stressing their children like the Nazis did their concentration camp victims (Bettelheim, 1967).

Although other investigators did not use Bettelheim's picturesque metaphors, during that period there was widespread acceptance of the belief that autism was caused by "refrigerator mothers" and "schizophrenogenic parenting." With the publication of Rimland's (1964) scholarly review of the prevailing literature showing the absence of empirical evidence for these beliefs, there developed a growing interest among clinicians in replacing these myths with research data.

Researchers using operant conditioning techniques reported remarkable success in teaching skills such as speech and in eliminating bizarre and disruptive behavior in autistic children. This stimulus-response technology foreshadowed in Itard's work and rediscovered in experimental psychology laboratories held out the promise of curing autistic children by shaping any desirable behavior if only the appropriate reinforcement contingencies could be found. Although the empirical commitment of behavioral research has made a substantial contribution to the understanding and treatment of autism (Schreibman, 1979) the claims of a cure were premature (Lovaas, Koegel, Simmons, & Long, 1973) and, unfortunately, gave rise to a new myth about autism. Mistaking the remedy for the cause, some theoreticians (Ferster, 1961) suggested that since autistic behavior could be changed by operant conditioning, it must have been caused originally by faulty parental conditioning. At the

present time, there is no evidence that any kind of conditioning could have caused autism in a biologically normal infant, nor that any kind of parenting could have prevented autism in an organically impaired autistic child.

Causes of Autism

Today, the majority of scientists believe that autism is the result of some form of brain abnormality present from birth and is not produced by any kind of faulty parenting. No unique physiologic disorder has been found in all autistic children, but a range of genetic, biochemical, and viral agents have been implicated in at least some cases of autism. Rubella (German measles) during pregnancy is related to a higher than normal incidence of autism in children (Chess, 1971). Other conditions which affect the central nervous system such as infantile spasms (Taft and Cohen, 1971), meningitis and encephalitis (Paluszny, 1979), or perinatal complications (difficulty at birth) (Folstein & Rutter, 1978) may also be associated with autistic patterns of behavior.

For most autistic children, however, no such clear link is found, although many show evidence of neurological dysfunction as measured by EEG and from one-quarter (Rutter, 1970) to one-third (Bartak & Rutter, 1976) of autistic children develop epilepsy at some time during their lives.

Knowledge of causation can be summarized in the following propositions: (1) For individual children, the specific causes are usually unknown. (2) There is probably no single underlying cause to account for autism. Instead there are multiple causes. (3) Most likely the primary causes involve some form of brain abnormality or biochemical imbalance characterized by impairment in perception and understanding.

Diagnosis and Assessment

PL 94-142 guarantees all handicapped children the right to a free and

appropriate education in the least restrictive environment. The law also stipulates that, in collaboration with the child's parents, an Individualized Education Plan specifying skill levels with objectives for each child must be maintained.

In order to make appropriate placement, and to provide an individualized curriculum, both school administrators and teachers will need to know how to identify and evaluate such children. We have found it important to distinguish between diagnostic grouping and diagnostic assessment for programming. The former relates to diagnostic label or category, the latter to assessment of developmental levels, and specific learning deficits and skills.

Diagnostic Grouping. A diagnostic label by definition refers to the features of a disorder shared by all children with that disorder. It does not refer to all the behaviors and characteristics unique to each child or shared with only some children. Such a diagnostic label is especially useful for administrative and funding purposes and is frequently required by law in order for a child to receive special education in the public schools. It is less useful for specific research purposes and treatment plans (Schopler & Rutter, 1978). Because of the misunderstanding surrounding the early definition of autism, some confusion still exists about the diagnostic labeling of autism (Schopler, 1979).

At the present time, there is no medical test which unequivocally establishes the diagnosis of autism. The diagnosis must be made on the basis of child behaviors or symptoms and is usually made only after ruling out other handicapping conditions that share some features in common with autism.

Autism vs. Schizophrenia. Based on Kanner's (1943) original report it was widely believed that autism was the earliest form of childhood schizophrenia. Subsequently Kolvin (1971) and others found that age of the disorder's onset

distinguished autistic from schizophrenic children. Autistic children have an early onset of difficulty usually before three years of age, while schizophrenia seldom occurs before five and usually not until adolescence. Periods of remission during which the child appears to be functioning normally are common among schizophrenic, but not among autistic children. Autistic children usually do not manifest hallucinations or delusions and rarely do they develop schizophrenia in later life. Instead, as they reach adolescence and adulthood they are more likely to show mental retardation, with problems of communication, social adjustment, and obsessive behaviors unyielding to change.

Autism vs. Mental Retardation. According to Kanner's early definition the autism label was confined to children with special peak skills in areas such as music or number manipulations. This led most clinicians to believe that autism was confined to children with near normal or better intellectual potential. Since then repeated follow-up reports have shown that most autistic children also suffer from varying degrees of mental retardation (Lockyer & Rutter, 1970; Gittelman & Birch, 1967; and DeMyer, Barton, Alpern, Kimberlin, Allen, Yang, & Steele, 1974). The Kanner type, higher intellectually functioning child does not represent the majority of autistic children, and occurs only in 15 to 20% of the identified cases.

Since autistic children can be either retarded or non-retarded, they will have more or less in common with other retarded children depending upon their intellectual level (DeMyer & Churchill, 1971). Like autistic children, retarded but nonautistic children show delay or deficiencies in language, but unlike autistic children, they will use whatever language they do have for communication. They will also use gesture or mime language commensurate with their intellectual ability. (This obvious intent to communicate with whatever means possible also distinguishes deaf and aphasic children from autistic

children). Similarly, retarded but nonautistic children may have limited play skills, but their play is appropriate, like that of a younger child, while an autistic child shows little appropriate play. The retarded nonautistic child may push a toy truck back and forth while the autistic child may simply spin the wheels on the truck or bang the truck on the table. Retarded, nonautistic children also seek out interactions with adults and peers even though the level of such interactions may be limited by their cognitive and language deficits. Autistic children initiate little contact with adults and almost none with peers. Higher functioning autistic children may have splinter skills especially in motor tasks that are at or near their chronological age. Retarded, nonautistic children are more likely to have flatter profiles of skills. Autistic children who are more severely retarded may have profiles resembling those of retarded, nonautistic children.

Family Socioeconomic Status. In Kanner's original sample the parents were reported to be highly educated professional people, whose intellectual preoccupations prevented them from normal emotional interactions with their children. Most other investigators at that time only included under the diagnosis of autism children whose parents came from upper middle class socioeconomic status. Since then a number of investigators reported that the autism syndrome was not confined to the upper middle class, but could occur in any social class (Ritvo, Cantwell, Johnson, Clements, Benbrook, Slagle, Kelly, & Ritz, 1971). Our own studies have identified certain selection factors, (Schopler, Andrews, & Strupp, 1979) which caused many reported samples to include disproportionate numbers of autistic children from the upper middle class. In our North Carolina program the social class and educational levels of parents with autistic children is quite comparable to the social class distributions of the state as a whole.

Criteria of Autism. Although universal agreement has not been reached on the definition of autism, a growing consensus regarding the essential features is emerging from empirical research. Creak (1961, 1964) and her associates outlined nine characteristics common to children who shared a number of related labels. These nine points were further clarified by Rutter (1978) in light of subsequent research. He identified four criteria which were also incorporated in the definition used by the National Society for Autistic Children (1978). They include: (1) Severe impairment in relating to parents, family members, and other people; (2) Delayed and deviant language development, characterized by inappropriate use of language when it does occur, and including peculiar patterns of speech such as echoing words or phrases and reversing pronouns; (3) Stereotyped behavior ranging from repetitive body movements such as finger flicking or twirling to ritualistic behaviors such as insisting on lining up toys or furniture in a particular order, and becoming upset when this insistence on sameness is interfered with; (4) These behaviors have an early onset and are present from the beginning of life, usually prior to three years of age. It is now recognized that these primary behavioral features will vary according to the child's level of development (Schopler, Rutter, & Chess, 1979). Some characteristics such as hyperactivity or lack of eye contact may change with age and their presence or absence may be indicative only in younger children. In fact, the importance of the relationship between autism and such developmental considerations has been explicitly acknowledged in the official definition of autism by the National Society for Autistic Children, (Schopler, Rutter, & Ritvo, & Freeman, 1979); and also in the inclusion of autism in the 1975-78 Developmental Disabilities Act (PL 94-103, and 95-602).

Several scales have been developed for distinguishing autism from other handicapping conditions, (Rimland, 1971; Ruttenberg, 1971). In the TEACCH

Program a behavioral rating was devised (Schopler, Reichler, DeVellis, & Daly, 1980), the Childhood Autism Rating Scale (CARS). It is a 15-item scale which incorporates the most current criteria for autism and is suitable even for young autistic children. It yields behavioral ratings based on direct observation of the child. The CARS distinguishes three groups of children, those with autism in the moderate to severe range, those in the mild to moderate range, and those who have communication handicaps without autism.

These scales provide a reasonably objective and reliable basis for identifying autistic children. Although this diagnostic information is not sufficient for planning individualized curricula, it does have some general implications for educational programming. It is now widely recognized that autism is a form of developmental disability rather than an emotional disturbance. This is not to say that autistic children do not show disturbed emotions. However, their disturbed feelings are the result of their disabilities and the frustrations these cause for them. Research data have demonstrated that autistic children learn best in a situation structured in terms of their disability (Bartak & Rutter, 1973), and that they show more psychotic behavior in an unstructured than in a structured situation (Schopler, Brehm, Kinsbourne, & Reichler, 1971).

These research data are in direct conflict with a rather persistent tendency of school systems to include autism in the emotionally disturbed category Classes for emotionally disturbed children are often designed with m num structure to allow free expression of feelings, learning problems e interpreted verbally for their emotional meaning, and most of the children included have near normal language skills.

Any review of the literature shows that most autistic children will not have their educational needs met in such traditional classroom settings. Many parents have complained that the special education establishment

has been slow to respond to the needs of autistic children. However, it must be remembered that, until recently, autistic and other developmentally disabled children were primarily excluded from the public schools and few school personnel had any experience with this group of children. Only recently have steps been taken to correct this diagnostic error. The Office of Special Education (OSE) in collaboration with NSAC is removing autism from the Emotionally Disturbed category (Martin, 1980) and including it under other disabilities. But even when general grouping of children is brought into line with their general learning needs, differences among such children are sufficiently great to still require individualized education.

Individualized Assessment. A diagnostic label is not sufficient for targeting behavior to modify and for designing curricula for children who differ in their learning skills and deficits. In the past, autistic children were considered "untestable." Several reasons for this assessment failure can be cited (Schopler & Reichler, 1971). First, the wrong tests were often used. Projective tests like the Rorschach or intelligence tests dependent on language usage are inappropriate for autistic children with their severe language problem. Second is the common confusion between the autistic child's negativism or lack of motivation on the one hand and his learning deficit on the other. Too often the untestable learning deficit was ascribed to lack of motivation. Research data have shown that autistic children who are unresponsive to test items near their age level will often respond to developmentally earlier or easier items (Alpern, 1967; Gittelman & Birch, 1967). If the child completes an easy item, lack of cooperation cannot explain unresponsiveness to other items. In other words, it is not a simple question of whether a child has either motivation or ability to respond. Autistic children, like others, are most motivated to work on tasks for which they have skill and least motivated

for those which depend on their deficits.

Because autistic children typically have uneven developmental profiles, it is important to assess development in different functional areas. For example, one 5-year old child had the motor coordination of a normal 5-year old but the language comprehension of a 2-year old. When his father attempted to teach him to ride a tricycle using verbal instructions appropriate to a 5-year old, the child's hand flapping increased and he failed to learn to ride the trike. When the father learned to match his instructions to his son's 2-year old language level, the hand flapping decreased and the child learned to ride the tricycle.

In the TEACCH Program we have developed the Psychoeducational Profile, (PEP), useful for constructing an individualized learning profile for each child (Schopler & Reichler, 1979). This instrument was developed from the kinds of tasks autistic children can usually master. The results are presented in a profile showing each child's developmental level in different areas of mental functioning. These include imitation, perception, gross and fine motor skills, eye-hand coordination, receptive and expressive language, and behavior problems. The test identifies the uneven mental functions characteristic of autism, and shows the emerging skills which are used for designing an individualized curriculum (Schopler, Reichler, & Lansing, 1980).

Recently it has become fashionable to malign the use of intelligence tests, and some strict operant conditioning programs make a virtue of not administering them. However, by avoiding assessment they lose the opportunity for rational planning of behavioral and educational priorities. The mindless misuse of testing has led to some valid criticism. Perhaps the most common misuse is to make placement decisions based only on a test score, rather than on an understanding of the child's educational needs. Another

misuse is the confusion about the use of IQ scores for short-term rather than long-term planning.

Both long-range goals and short-term teaching objectives involve some kind of prediction of the results we anticipate from our teaching efforts. It is difficult to make short-term predictions with certainty. It is even harder to predict what we ourselves or a child we are teaching will be doing 10 years from now. There are too many determining factors, yet unknown, to make long-range predictions with certainty. For this reason, we must be very cautious about expectations projected more than a year into the future.

Long-term expectations most often reflect the teacher's hopes and expectations for the child, and the understanding of prognosis for various handicaps. Such expectations are likely to be general and fewer in number than the more immediate goals. Clearly, the more a teacher or parent knows about their child, the more reasonable their long-range expectations are likely to be. Hence, a moderately retarded autistic child will not be expected to attend college. One of our studies (Schopler & Reichler, 1972) showed that parents' understanding of their own child's developmental level was quite accurate when compared with subsequent test results. However, their prediction of future achievements was often quite inconsistent with their current assessment. Their long-range expectations seemed to be affected by their hopes and desires for major educational effects, not limited by their child's current disability.

Teachers also sometimes project unrealistically high future expectations for their charges. This tendency reflects their need for optimism in order to maintain their own demanding efforts with the child. The other extreme is for teachers and parents to forecast unreasonably poor prognosis, often leading to minimal efforts for the child. We now have considerable improved data to provide more realistic long-term expectations based on statistical predictions.

Follow-up studies using standardized intelligence tests have shown that autistic children with scores of less than 50 remain stable in their subsequent testing and have a long range outcome similar to retarded children without autism. However, predictability from IQ and developmental data becomes less reliable when the child is functioning above the IQ level of 50. Some individuals show sudden and rapid improvement despite initially low levels of performance.

The prognosis, then, for autistic children is guarded both because of their initial limitations in ability, and also because we have so much to learn yet about teaching all severely handicapped children effectively. With early and continuous intervention and improved methods of instruction, the prognosis for all autistic children should improve in the coming years. We would be less than honest, however, in our dealings with parents and teachers if we were to suggest that we can "cure" autism or that we are presently able to teach severely retarded autistic children to eventually function in the normal range.

For these reasons it is important to recognize that long-range expectations can only be general and attitudinal. Nevertheless, they can have a pervasive negative effect on daily work with the child when expectations are unrealistically high or low. Optimum effort seems to occur more often for both teacher and child when focus is maintained on short-term goals, with immediate teaching objectives geared to the child's emerging abilities.

Short-term Goals. Unlike long-term expectations, short-term goals refer to progress expected in less than one year's time and include the teaching objectives planned with the Individualized Educational Program (IEP) (Lansing & Schopler, 1978). These usually include both curriculum content and management of difficult behavior. The teacher must evaluate whether the behavior problem is mild and can be managed in the context of the teaching task, or if it is severe and must be managed independently of the task. For example, if a child

is repeatedly tapping his fingers on the table while learning new words, the teacher may ignore the tapping because it is not interfering with the learning. However, if the child bangs the table repetitively without learning and is disrupting the others, then behavior management may have to take precedence over the task.

An evaluation of the child's behavior and developmental level for particular teaching tasks can be made formally with the Psychoeducational Profile and informally on a day-to-day basis. However, additional information is needed from both the home and the classroom. One of the educational characteristics of most autistic children is that they have difficulty in generalizing from what they have learned in one context to another. Such a child may learn that a ball used in the classroom is red, but the color of his mother's red sweater appears to be a brand new problem for him. This is one of the major reasons why the shared diagnostic information between parents and teachers is an important part of providing an appropriate education. There are certain priorities for targeting behavior problems for joint parent/teacher effort. We have found that parents and teachers usually agree on the following hierarchy.

Behavioral Hierarchies. First priority is given to problems that risk the child's life. These could include running into a busy street, eating poisonous substances, self-destructive behavior, or dangerously agressive behavior towards others. Improved adaptation in these situations can be produced by changing the child's behavior or by changing the conditions that create the risk. If, for example, the risk is created by the child's inability to cope with traffic hazards, the risk may be reduced by teaching him traffic signals, keeping him in the room when unattended, or fencing in his outside play area. The choice of the most appropriate strategy should be guided by the child's developmental level and the source of danger. Teaching the child spoken,

written, and visual signals for traffic danger is simpler and cheaper than building fences. On the other hand, in some circumstances, building a fence will be more appropriate than keeping him under constant adult supervision when outside. Both parents and teachers can accept that this kind of problem needs first priority. The method for resolving it can best be chosen in collaboration between parent and teacher regarding their particular child.

Second in importance are risks to the child's survival within his family. Direct threat to the child's life is less common than threat to his survival within his family. Behavior problems such as temper tantrums, persistent sleeping difficulties, strange food preferences, messy eating habits, poor toileting habits, strange repetitive sounds, and interference with siblings are examples of the most serious threats to family adaptation. Only the life style the family is trying to build or maintain can define these survival problems. The handicapped child's survival in the family is best insured if adaptation can be made with only minimum imposition on the family, that is, in addition to what is already required by the child's handicap. The teacher's help with special behavioral interventions or teaching can make a critical difference.

The third priority is the child's access to the best available special education program. For younger children, risks to home survival usually come first, while with the older children school adjustment becomes increasingly important. To get along in school the child needs a minimum ability to inhibit impulses, get along with other children, use the toilet, and show some responsiveness to the teacher. The child's chances for success and survival in a school program are enhanced when teacher-parent communication is open, and when efforts to socialize and teach the child in both places are integrated. Often the teacher is convinced that the most disruptive behaviors originate in

the home, and parents believe the classroom is not providing adequate education. Teachers must recognize that some behaviors are acceptable at home but not in school, and parents must realize that classroom structure and peer group pressures may demand behavior controls not necessary at home. Frank discussions between parents and teachers about the respective standards for behavior, and collaborative effort in designing the needed training efforts, offer the best opportunities for the child. Equally important, we have found that parents and teachers can offer each other emotional support with a first-hand understanding denied most other professionals. The effectiveness of this support can rarely be purchased with consultation or salary increases.

A fourth order of priority is the child's adaptation to the community outside the home and school. This involves going on family outings, visits to friends, relatives, shopping centers, and the doctor's office. Community adjustment is not necessarily less important than the three other areas cited above. However, skills and social behaviors required in the community are not always applicable to school or home. The importance of these training hierarchies are primarily that they offer a framework for productive collaboration between teachers and parents.

There are also valid teaching goals that have a different priority in the home than they do in the classroom. When the teacher and parent effectively communicate with each other, they can help each other realize teaching goals important to the child's survival, both at home and at school.

Classroom Priorities. A number of goals are likely to improve the child's adjustment both at school and at home. Others are especially important for school adjustment. These are likely to involve getting along with other children and using classroom routines. Does the child need practice sitting in a chair, walking with the group, holding another child's hand, attending to the

teacher's directions, communicating his needs? Does he need help with switching from one task to another, controlling his impulses, taking turns? Questions such as these can be important in the classroom but not at home. For example, if the autistic child has no siblings, his mother may not have had occasion to teach him about taking turns. However, once the teacher explains the importance of this for school adjustment, the parent can help the child's school adjustment by including "turn taking" on specific home teaching program activities.

Family Priorities. Just as there are certain priorities especially applicable to the classroom, a similar set of diagnostic questions can be asked about the home. What are the parents' immediate priorities for improving the child's safety at home? Does he run out of the yard, into the street? Do they want improvement in sitting at the table for meals, staying out of a brother's room, dressing himself for school? Do they have strong feelings about controlling impulses or funny behaviors in public schools, and so on. For example, if the child repeatedly makes a barking sound which is stressful for the mother, the teacher may help to decrease the sound by using behavior modification procedures in the classroom. It is also helpful for the teacher to know the family and activities they enjoy with their children. Mothers may enjoy gardening or dancing with their children. Fathers may enjoy carpentry, playing ball or games. When such pleasurable and familiar activities are included in the curriculum, they can often be used for teaching new skills.

The point we are making is that the most appropriate and effective teaching program comes from three sources of diagnostic information: (1) The child's developmental profile and readiness for specific skill teaching, (2) the teaching priorities arising in the individual home situation, and (3) the

teaching priorities arising from the classroom situation. Parents and teachers have not traditionally collaborated much in the education of their children. For autistic children, our experience has suggested that collaboration is a necessity, and that the occasional extra effort required by both teacher and parents results in more satisfactory and appropriate teaching efforts. A more detailed description of this collaborative effort can be found in Schopler, Reichler, and Lansing, 1980.

Educating Autistic Children. Most school administrators and teachers are familiar with the basic issues of special education. They include: (1) whether the child is educable, (2) what gains can be expected, (3) what moral and legal requirements affect placement and curriculum, and (4) what preservice and in-service training is necessary for the teacher. We will review these issues regarding autistic children since they have only recently been brought into public school education.

Educability of Children. Among those who have taught autistic children, most would agree that all children can be taught. However, the extent and kind of behaviors or tasks that can be taught to a particular child are not so self-evident.

What is clear from follow-up studies is that all autistic children, even the most severely retarded, profit from educational intervention. For example, in a four-year follow-up study comparing three kinds of classroom types, Rutter & Bartak (1973) found that all the autistic children made considerable increases in social skills and decreases in bizarre and disruptive behaviors. Two-thirds of the children learned to communicate using at least phrases, one-third were reading on an 8-year old level or better, and a third of the children had learned the four basic arithmetic skills. The children in the most highly structured classroom, which focused on teaching specific skills, made the most

progress. Higher functioning children needed less structure than the more retarded children. The children with IQ's above 50 made progress in traditional academic areas such as reading. The lower IQ children made progress in behavioral and nonacademic areas.

Similar results have been found in our teaching and research at Division TEACCH. Autistic children can learn if an Individualized Education Plan based on the child's unique pattern of skills and deficits is followed in a structured and responsive classroom environment.

Although all the children can be taught, their slow progress is frustrating to many teachers. However, the autistic child's unique learning style has been a challenge found rewarding by some of our best teachers.

Why Public School? There are some compelling reasons underlying the desirability of public school education for autistic children. First is the fact that all parents in our society are led to expect community support in child rearing via the public schools. Most parents themselves were raised in this system and all contributed to it by paying taxes. If a child is excluded from school the entire socialization effort is shifted to the parent. This violates our sense of fairness, especially when parents have already suffered because of having been blamed erroneously for the child's learning problems.

Equally important, autistic children need the same experiences that all children need. This includes participating, to the maximum extent possible, in the lives of their families and communities. At one time, it was suggested that autistic children would be better served in institutions where they might get more intensive treatment. We know that in reality they received little more than custodial care. Even the highest quality residential treatment has not been shown to be superior to day treatment. Research on day treatment

versus high quality residential treatment (Rutter & Bartak, 1973) has shown that autistic children in residential care do not make any greater progress and, in fact, their parents lose skills in dealing with them while they are away. Collaborative effort between the child's parent and teacher appears to be one of the most effective ways for overcoming the very difficult learning and behavior problems the autistic child presents. This cooperation can take place most easily in a school in the child's home community.

For those not swayed by moral and educational rationales, one of the more compelling reasons for teaching autistic children in the public schools is the issue of cost of alternative placements. Before educational programs were available in local communities, autistic children were often warehoused in large, overcrowded custodial institutions. Those who think that the small teacher-pupil ratios in classrooms for autistic children are a burden on the taxpayer should consider that the annual cost of maintaining a single autistic child in these institutions today is estimated to be between $24,000 and $30,000. When the child is able to remain at home with appropriate school placement the cost is considerably less even if additional expenses are incurred in a special class.

Not only is the cost less, but the child is also provided with a more humane life. It is obviously better for the child to be in an understanding and supportive community system. What is less obvious is that it is also better for the rest of us. Most of us prefer to know that the community in which we live is able and willing to help out those of us struck by a natural disaster. Although the risk of autism may be less than that associated with some other disasters, no potential parent is immune from the risk of such a developmental disability.

Finally, the passage of PL 94-142 was the congressional response to the

social considerations described above. It provides for a free, appropriate public education in the least restrictive environment for all handicapped children, including autistic children. In addition to moral, educational, and financial reasons for educating autistic children in public schools, there is now the weight of federal law and regulations. Unless there are extreme circumstances, autistic children have a legal right to be educated in local schools.

Appropriate Public Education. The widespread acceptance of the principles underlying 94-142 has led to a generally positive response to the law in virtually every state. This has been due to the rather unusual convergence between research data and political need. Research evidence has shown that autism is best understood as a developmental disability, and public policy has translated these data into appropriate law and regulations.

However, acceptance of the principles and laws has not immediately led to implementation. The law has called for appropriate public school education. The lack of consensus among both educators and consumers about the nature of an appropriate education has led to a great deal of litigation and many due process hearings, some of which appear unnecessary and wasteful. Since PL 94-142 was passed, millions of dollars have been spent on legal fees, many of which would have been better spent on the educational needs of the children.

The details of these legal conflicts vary from one school system to another, but most cases involve one of three aspects of an appropriate education-- school placement, individualized curricula, and teacher qualification.

School Placement. One source of litigation continues to be the lack of appropriate classroom placement for autistic children. School administrators often ask: Can an autistic child be placed in a class for children who are emotionally disturbed, retarded, or learning disabled, or is a special class for autistic children required? The problem here is more with the question

than with the educational decision. It is almost impossible to make an appropriate placement decision when the classrooms under consideration are identified by special education labels rather than by the special learning needs the classrooms are designed to meet.

In the case of children with autism, a great variation of individual learning needs occurs. This is because most autistic children are functioning at a mentally retarded level and fewer than 20% function at a normal or mildly retarded level. In spite of these individual variations, most autistic children do have certain similar educational needs, regardless of how their classroom is labeled.

Learning Structure. It is clear both from our research and experience that autistic children progress better academically and behaviorally in a classroom structured (Schopler et al., 1971; Bartak, 1978) by the teacher to accommodate the social and language deficits characteristic of the disorder. We found that children with lower mental age or at younger developmental levels need structure more than a child at a higher developmental level, with internalized learning structures. The so-called classroom for emotionally disturbed is usually not appropriate for autistic children because of the typical selection of intellectually near normal children, whose verbal skills are at a level at which they can understand interpretation of their feelings and behaviors. The following aspects of special education are especially important for autistic children, regardless of how their classroom may be labeled.

Communication Training. Most autistic children need a classroom with special language training. For example, a severely retarded autistic child without language may learn to parrot a few words after extensive language training. For the same child, signing, taught as part of a total communication program, can dramatically improve communication skills (Bonvillian, Nelson,

& Rhyne, in press). The child's placement must be adaptable to the child's individual needs in learning communication.

Behavior Modification. The learning problems of autistic children frequently result in a child's frustration and behavior problems. Classrooms for these children need provisions for behavior modification procedures, with a teacher knowledgeable about behavioral principles and how to implement them.

Parent Involvement. One of the major educational problems for autistic children is their inability to generalize skills learned in one situation to another. The involvement of parents with their child's classroom is an important avenue for overcoming this problem. A good collaborative relationship between parents and teacher also enables them to help each other with the problems of the autistic child, and to provide mutual support. In our experience this kind of collaboration between parent and teacher, when worked out on an individual basis with parents (Schopler, Reichler, & Lansing, 1980), (Bristol & Wiegerink, 1979), provides a most substantial improvement to the child's education. An equally important effect is that such collaboration also meets the requirements of PL 94-142.

Mainstreaming. PL 94-142 guarantees autistic children the right to education in the least restrictive environment. This may mean a regular classroom with extra tutoring provided to assist in special problem areas. Mainstreaming, however, cannot be recommended for all autistic children on the assumption that simple exposure of the autistic child to normal models will result in imitation and learning. Although effective methods for large group instruction of autistic children in regular classrooms have been developed (Russo & Koegel, 1977), most young autistic children require classrooms with small numbers of children (four to six) with a teacher and assistant teacher.

We have found it most instructive to schedule regular play sessions between normal children and those in our self-contained classrooms (McHale & Boone, 1980).

If a high level autistic child is placed in a regular classroom, what should the classroom teacher expect? Before the child enters the classroom the teacher should be aware of the child's developmental levels in different areas. The teacher should expect that, at least initially, he or she may need to provide more structure in the form of explicit directions and a consistent schedule for the autistic child. Support services such as tutoring in special problem areas should also be available to the student. The teacher should also be prepared to deal with a temporary increase or re-emergence of previous bizarre or disruptive behaviors by the child. Transitions and changes in routines are difficult for most children, but particularly frightening for autistic children. Increased structure and reinforcement of appropriate behavior may be sufficient to reassure the child and reduce the disruptive behavior. If the disruptive behaviors persist and they are high priorities for intervention, specific behavioral interventions are available for reducing or eliminating even extreme forms of behavior (Koegel, Egel, & Dunlap, 1980). Before implementing a behavioral intervention, the teacher should check to see if the classroom programming in all or some areas needs to be adjusted to be within the child's ability level.

Individualized Curricula. In the previous section we discussed some of the main elements of an appropriate classroom placement for autistic children. When these educational opportunities have been withheld, parents frequently initiated class action suits in order to secure them for their autistic children. This kind of litigation was frequently necessary to implement the legal educational requirements. However, an increasing number of law suits and due process hearings are being generated by differences between parents and school personnel over issues of individual curriculum. In our experience, such issues are much better

resolved through voluntary collaboration between parents and teachers than through litigation. Such wasteful litigation often arises from confusion among both educators and parents over the distinction between individual child and family needs on the one hand, and the social needs of the community and school system on the other. They are not the same. Like the distinction between diagnostic classification and individualized assessment, individual needs and school needs must be integrated with each other if appropriate education is to be implemented in any lasting way.

Here problems to be resolved by class action suits are too often confounded with problems of individual education. When a community fails to provide special education facilities in any of its school systems, class action suits have often been necessary to create the rightful educational facilities. On the other hand, when disagreement develops between a parent and a teacher over a specific teaching technique or behavior modification procedure -- for example, whether to use tokens or potato chips for reinforcement -- these individualized teaching differences can be resolved optimally only through joint parent-teacher collaboration, not litigation. Resolution depends on agreement to questions such as, "Are the children at a developmental level where they can understand tokens?", "Are potato chips an acceptable part of this particular youngster's diet?" and so on. When individual educational issues like this are resolved through litigation, both parties tend to become fixed in their position. The so called winner is usually left without the collaborative relationship needed for subsequent implementation of sound special

education practices. There are, of course, cases where the difference between individual and social needs is ambiguous. However, we have frequently found that a deliberate effort to make the distinction can decrease the number of such cases significantly. Most importantly, such litigation can often be prevented when parents are included as respected members of the educational team (as mandated by PL 94-142). If continued open communication is maintained between home and school, these individual educational concerns can be resolved in an IEP conference instead of a court of law. This not only better serves the needs of the individual child, but prevents the real danger that an educational strategy which should be optional for any one child becomes mandated or prohibited for all.

Another major problem of implementation is the belief held by many that the optimum appropriate education includes the direct services of many professional specialists. In addition to a teacher and assistant teacher, requests are often made for each classroom for a speech therapist to teach signing, an occupational therapist to teach sensory integration, a physical therapist to teach motor skills, a social worker to work with families, a school psychologist to make diagnostic evaluations, and then the Cadillac programs may want also to include a music therapist, dance therapist, and so on. In our experience such a multidisciplinary teaching team is not only excessively costly, it is also much less effective.

The most common disadvantages of the multidisciplinary direct service

team is that each specialist is primarily concerned with the aspect of the child that relates to his or her specialty. If one of the specialists does become interested in the whole child and the child's family, he or she intrudes on the terrain of another specialist. This leads to a situation where responsibility for the child's education is passed from one specialist to another. The teacher becomes an administrative coordinator of special services. Communication with parents is fragmented. No one has the responsibility for the child's integrated individualized educational program, coordinated with home teaching.

A more effective organization, also used in our TEACCH Program, puts the primary responsibility for the integrated curriculum with the head teacher. He or she should be knowledgeable in the relevant elements of special education including behavior management, teaching of language, social behavior, motor, perceptual and cognitive skills, and collaborating with parents. Specialists contribute best in their roles as consultants when needed. Some argue that knowledge in all these areas is expecting too much from a classroom teacher. This is simply not true. Teachers, like parents, must work with all aspects of the child's learning functions anyway. In our TEACCH Program in North Carolina we have used this organizational strategy (Schopler, Reichler, & Lansing, 1980) and found that teachers can implement it most effectively. Their job satisfaction is improved when the responsibility they already have is recognized and supported, and teacher burnout is reduced. The effectiveness of this system requires consultation support and in-service training.

Teacher Training

We have consulted with several school systems who used a multidisciplinary team of specialists for direct teaching, and they all had serious problems along the lines mentioned above, especially with parent-teacher relationships. The main reason they gave for having all these specialists is that they did not

know where to find appropriately trained teachers. This turns out to be no trivial concern. In too many Schools of Education, teacher training in autism is still excluded from teacher training curricula. When it is included, autism is often still regarded as an emotional disturbance rather than a developmental disability. This may mean that student teachers are exposed to the literature of the 1950s and 60s and are not exposed to the current research on the understanding and treatment of autism. The vacuum left by untrained or mistrained special education teachers is rapidly filled by the ever increasing cadre of specialists.

In the past when we looked for teachers to staff our TEACCH classrooms in North Carolina, it was most difficult to find applicants with appropriate education and experience. In Schools of Education, teachers who expected to teach autistic students were taught mainly the psychodynamic underpinnings for teaching in a classroom for the emotionally disturbed. This led us to develop our own in-service training program, supported in part by U. S. Department of Education grant #G007901339, for both our new teachers and psychoeducational therapists. Our in-service training occurs twice a year, in the summer for new staff and in the winter for all our staff. We also conduct a workshop program for other teachers in the North Carolina Department of Public Instruction.

Our summer in-service lasts an intensive 2 weeks and includes both reading and seminars. In addition, our parents bring in their children to form several training classrooms. Our trainees then obtain direct experience with children, parents, and classrooms. Nine basic topics are covered during the in-service period.

1. Classroom organization and structure
2. Behavior management
3. Parent collaboration

4. Language training, alternative forms of communication
5. Social skill development
6. Individual developmental assessment
7. Individualized curricula
8. Individualized instruction
9. Pre-vocational/self-help skills

These are the nine areas of competence basic for a teacher of autistic children. Our in-service program has been most effective in preparing teachers for their work with autistic children in the classroom. However, we do not want to create the immodest impression that we can train the perfect teacher for autistic children in 2 weeks. Our training success also depends on locating the best teacher applicants available for the job. To find such applicants we depend on three major selection criteria.

Successful teachers of autistic children must have: 1) a willingness to make a meaningful commitment to teaching these fascinating and difficult children and their families; 2) a lively and enlightened enthusiasm for the teaching process and the ability to discover effective individualized teaching procedures by learning from the child; and 3) previous education or experience with autistic children.

Since most teacher applicants have not had any formal education regarding autism, in-service training programs such as those offered by TEACCH fill a general void. They provide new information, but also help new teachers to reorganize their past training and experience so they can apply to it the needs of autistic and similar children. TEACCH training includes learning to use the child's uneven developmental profile to tailor an individualized teaching program. Teachers also learn to use behavior modification in the context of the teaching interaction, and they learn to negotiate classroom teaching

priorities with parents' home teaching priorities. After the in-service period, on-the-job training continues through regular consultation with our diagnostic center staff and specialists according to the teacher's needs. Much continued support is necessary to insure adequate programming for children and to avoid excessive teacher turnover.

Teacher Turnover. Jobs that have a high rate of turnover or burnout often entail a great deal of responsibility, little authority, and include restricted or distorted feedback about the success of one's efforts. Teachers, especially teachers of autistic children, accept an enormous burden of responsibility for extremely difficult children, have little real authority over decisions regarding their programs, and seldom hear from administrators or other teachers unless there is a crisis or disruption in the school caused by one of their charges. Their frustrations and the reasons given for leaving their demanding jobs include: poor pay, excessive paperwork, slow child progress, conflict with parents, and lack of school or community support. In the TEACCH Program we have not eliminated staff turnover, but we have found the following ways to reduce burnout:

1) Teacher Salaries. Teachers need adequate salaries and are too often underpaid. However, this is probably not the major reason for job dissatisfaction. If teachers were primarily motivated to make as much money as possible, they could do better in other fields. More important than financial considerations seem to be other job rewards too often denied to them. Teachers should be given the responsibility required for teaching these difficult children, rather than assigning responsibility to the many professional and behavioral specialists. These specialists can help to enhance the teaching job by providing consultative support as needed.

2) Excessive Paperwork. Many teachers complain that meaningless paper-

work that they are required to do, takes up too much of their teaching time. An IEP must be written up for each student every semester. Too often parents sign it without reading it, and it has no meaningful bearing on what happens on a day-to-day basis. We found that when teachers can design a developmentally appropriate curriculum for a child, and when they see the effectiveness of keeping behavioral data, the forms used are a direct reflection of the teaching process, and are not usually experienced as an unnecessary burden.

3) Children's Slow Progress. This is a frequent source of teacher frustration and demoralization. The problem often arises from unrealistic expectations regarding child outcome. Publications which promote special teaching or behavioral techniques are often written as if a particular technique could reverse the effects of any developmental handicap. The enthusiastic zeal to mainstream all handicapped children has been interpreted by many to mean that all handicapped children are expected to become "normal". These factors and our national tendency towards overcoming all handicaps all contribute to unrealistic expectations. However, when long-range goals include realistic acceptance of the handicaps, and short-term teaching objectives are based on the child's own emerging skills, opportunities for success increase. In our experience even the limited improvement of the severely handicapped child can bring satisfaction and pleasure to the child, his parent, and teacher, especially when the improvement comes from realistic understanding of the child's handicap and potential.

4) Teacher-parent Conflict. Such conflict often unnecessarily undermines teacher satisfaction. Its most common manifestation is when either teacher or parent blame the other for the child's behavior problems or lack of progress. Although both parent and teacher obtain some gratification from the conviction that the other is undoing their best work, the continuous friction is usually

maintained at the child's expense. When the educational procedures are based on teacher-parent cooperation, both can learn to accept differences in their roles with the child without loss of mutual respect. Autistic children often present special stress at home and at school. We found parent-teacher collaboration is enhanced when both can agree on some general priorities for targeting behavioral problems for joint modification efforts.

5) Lack of School Support. Too often teachers of autistic children are isolated from other teachers in the school system. This isolation is based on misunderstanding, caused at least partly because autism had not been included in the general teacher training curriculum. Some regular teachers think that the special education teacher with a small class or fewer regular hours has special privilieges. Others are concerned that the handicapped child poses uncertain threats to the rest of the children. In our program teachers for autistic children often had to take the initiative to overcome misconceptions and the isolation. They involved the other teachers in open house visits to their special classrooms, or gave talks on autistic children with films or slides in the teacher's lounge. Moreover, they developed regular visits from normal age-peers and organized social play activities (McHale & Boone, 1980). These visits gave regular students an opportunity to learn about the handicaps of autism at the same time as they found new competence in teaching play activities to the handicapped children. These visits to our TEACCH classrooms became so popular that some regular teachers used them as special rewards for children in their classes. Isolation can be avoided from the outset with a bit of encouragement and direction from school administrators.

There are still other ways of reducing teacher turnover. For classrooms located near universities and junior colleges, teachers can contribute their special skills to relevant research projects. For teachers who gain high levels

of expertise and excellence, opportunities for conducting workshops and training sessions offer other opportunities to use their experience to the benefit of the school and children.

Summary

Disagreements over theories about the nature of autism are being replaced by greater consensus on definition, based on empirical data. However, diagnostic assessment must still be made in two parts. First is the classification. Does the child show the essential features of the disorder? This is a rough grouping only. Second is the individualized assessment which takes into account the unique behavior problems and learning needs of each child. This assessment includes information about the child's own learning profile, the family's home teaching priorities, and the classroom teaching priorities. These are often different for home and school, but can be negotiated through parent/teacher collaboration. Such collaboration has the further advantage of helping the child to overcome characteristic problems of generalizing learned skills from one situation to another. It also prevents unnecessary and wasteful law suits.

We reviewed ethical, legal, and practical reasons why autistic children can and should be taught in the public schools. The appropriate placement of autistic children is not often accomplished in classrooms for emotionally disturbed children, though this placement occurs because autistic children have been inappropriately grouped as emotionally disturbed rather than as developmentally disabled. The confusion between autism and emotional disturbance can frequently be found in the curriculum of schools of education, where autism continues to be taught as part of the training for educating the emotionally disturbed.

Our comments are based on both research and experience. They also include opinions about questions for which we do not yet have the final answers. How-

ever, the response to PL 94-142 has been favorable and strong across the country, in spite of the many implementation problems. It reflects an attitude among educators and the public in the direction for marked and continued improvement in the education of all children.

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Media Materials Available from Division TEACCH

Department of Psychiatry
School of Medicine
University of North Carolina at Chapel Hill
Chapel Hill, NC 27514

"You Have to Start So Small to Even Make an Inch . . ." (1978, 16mm film, color, 30 minutes) This award winning documentary examines the TEACCH program's approach to the treatment and education of autistic children. Special attention is paid to TEACCH's innovative use of parents as cotherapists. The film also explores the effects of the individualized assessment and treatment programs used in TEACCH centers and classrooms on the autistic child and the family. Rental $30 - Purchase $300

"Autistic Children: Response to Structure" (1975, 16mm film, black and white, 15 minutes) This film illustrates a study which tested the effects of both structured and unstructured teaching situations on autistic children. The results depicted in the film show that autistic children do better in structured than in unstructured teaching situations. Rental $25 - Purchase $110

"Developmental Progress of a Psychotic Child" (1969, 16mm film, black and white, 30 minutes) The film was shot over a three year period and shows the recovery of a three year old boy from childhood psychosis. The program involved the use of parents as cotherapists. Some of the educational techniques are demonstrated. Rental $25 - Purchase $125

"Interview With an Autistic Adult" (1980, 3/4" videocassette, color, 55 minutes) This tape shows a 22 year old, high level, autistic male being interviewed by Dr. C. Thomas Gualtieri, Department of Psychiatry, NCMH. The interview illustrates many of the classic symptoms of autism including self-abusive behavior, fascination with spinning or blinking objects, and resistance to change from the perspective of the autistic person. (**NOTE**: This tape is not available for dissemination to the general public. Please contact Peter Coogan at (919) 966-2173 to discuss whether this tape is suited for your intended use.)

"Interview With an Autistic Adolescent" (1978, 3/4" videocassette, black and white, 20 minutes) This tape shows a 13 year old autistic male being interviewed by two TEACCH therapists. Among the points illustrated in this tape are the difficulties an autistic person faces in speech, understanding abstract concepts, and establishing social relationships. (**NOTE**: This tape is not available for dissemination to the general public. Please contact Peter Coogan at (919) 966-2173 to discuss whether this tape is suited for your intended use.)

Training Module for the Psychoeducational Profile (PEP)
The PEP is the primary diagnostic and assessment tool used with autistic and developmentally disabled children. The PEP is used to assess a child's level of functioning in seven areas of development: 1) imitation, 2) perception, 3) gross motor, 4) fine motor, 5) eye-hand integration, 6) cognitive performance, and 7) cognitive verbal. The test also includes behavioral items to assess the degree of the child's psychosis in five major pathology areas: 1) affect, 2) relating, cooperating, and human interest, 3) play and interest in materials, 4) sensory modes, and 5) language. The profiles generated by the test are then used to develop individualized curricula for use at home and at school. The training module for the PEP consists of the following three tapes:

a. Scoring the PEP: Training Tape (1979, 3/4" videocassette, color, 35 minutes) This tape introduces the PEP, demonstrates the scoring criteria, and explains the use of the test as a diagnostic tool, an assessment instrument, and an individualized programing guide.

b. Scoring the PEP: Test Tape (1979, 3/4" videocassette, color, 55 minutes) This tape presents a complete test for the viewer to score along with the examiner. An explanatory answer key is provided for checking purposes.

c. An Indivudualized Education Program (1980, 3/4" videocassette, color, 19 minutes) This tape demonstrates how to translate the function and behavior profiles generated by the PEP into individualized teaching programs for specific children.

Rental $75 - Purchase $250

Training Module for the Childhood Autism Rating Scale (CARS)
This set of two tapes demonstrates the scoring and uses of the CARS. The CARS is a behavioral screening instrument which classifies children according to whether they are non-autistic, mildy-moderately autistic or severely autistic. For more information see Schopler, E., Reichler, R. J., DeVellis, R. F., and Daly, K. Toward Objective Classification of Childhood Autism: Childhood Autism Rating Scale (CARS). Journal of Autism and Developmental Disorders, 1980, 10, 91-103.

a. Demonstration Tape (1980, 3/4" videocassette, color, 28 minutes) This tape illustrates the fifteen items on the rating scale and demonstrates the scoring criteria. The final segment of the tape describes how to interpret the results of the CARS.

b. Practice Tape (1980, 3/4" videocassette, color, 37 minutes) This tape is an edited PEP, during which the viewer can score the CARS. The correct scores are provided at the end of the tape.

Rental $50 - Purchase - $175

The National Society for Autistic Children

The National Society for Autistic Children (NSAC) is an organization of parents, teachers, and other professionals dedicated to the education and welfare of children and adults with autism. There are over 160 chapters of NSAC in the United States and Puerto Rico.

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NSAC members receive:

- The Advocate, a bimonthly newsletter, about autism and developments in the field.
- The NSAC Bookstore, a mail order service featuring a variety of books about autism, teaching methods, and related subjects.
- The NSAC Information and Referral Service which answers questions about autism, service delivery, and resource development.
- Advance information about national and regional conferences.
- Information about Federal programs, legislation, and legal developments.