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# Current trends in early intervention programs for handicapped children birth to 3 years

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Current Trends in Early Intervention Programs  
For Handicapped Children Birth to 3 Years

by  
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of the requirement for the degree  
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This research paper has been  
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of the Cardinal Stritch College by

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## CHAPTER I

## Introduction

Virtually every newspaper or newscast encountered in the late 1980's made mention of some factor contributing to the disabilities of children in the handicapped population. Drug use, teen pregnancy, alcohol abuse, premature births, and child abuse were all in the news. These issues were at a peak of public awareness.

Legislation was passed to allow for provision of services to the handicapped child from birth. Public Law 99-457 was enacted in 1986. It provided funds for states to plan, develop and implement a comprehensive, multidisciplinary interagency statewide system of early intervention for infants and toddlers. States were given 5 years in which to comply with requirements of the law.

The ground work for this law was laid back in the civil rights movement of the 1950's and '60's. There was much legislation enacted to secure equal rights for minorities. As time went by, the concept of minority was applied to groups other than racial minorities. Some legislation provided equal access to education for the handicapped.

Considerable interest in the normal development of children was also apparent during this time frame. It became evident that early intervention is effective for handicapped children. In 1974, Public Law 99-142, the Education of Handicapped Act (EHA), was passed. The major features of PL 99-142 were: a free

appropriate public school education was provided for all handicapped children, handicapped children were educated in the least restrictive environment (LRE), an individualized education program (IEP) was developed for each child, and parents played an active role in decisions about their child's education program.

Much research had been done on the effect that age of identification of handicap and the amount of family involvement in the child's program had on the efficacy of services. PL 99-457 directly addressed these two areas although research was inconclusive on the effect of these factors (Casto, 1986, Guralnick, 1989). Part H, an amendment to the EHA was created.

Part H provided early intervention for disabled children from birth to age 3. Services for the children and their families were included.

Early intervention had proven its worth. It was no longer a question of "Is it good?" "How will we do it?" became the question of the day.

#### Purpose

How can early intervention for handicapped children from birth to age 3 be effectively implemented? The author collected information related to this topic. The writer was teaching in an Early Childhood classroom for handicapped children 3-5 years old. The possibility that children from birth to 3 could be educated in a public school setting was of great interest.

It seemed that because of the requirements of PL 99-457, the

public schools might take more of a role in servicing the birth to 3 handicapped population in the future. How could infants and toddlers be serviced? What strategies were being used effectively with the very young? What were the requirements of the new law? These were some of the questions the researcher endeavored to answer.

The author wanted a first hand look at what was happening in early intervention locally. Interviews and observations at selected early intervention centers added information about what practices were being used in southeastern Wisconsin.

Readers of this research will find factual information about Part H, about Wisconsin's method of implementation, about research in early intervention, and about current practices in Wisconsin.

#### Scope and Limitations

The content of this paper was limited to early intervention for children birth to age 3. Interventions used in neonatal intensive care units and in-patient hospital settings were excluded.

The review of literature was confined to periodicals published in 1987, 1988, 1989, and early 1990. Some general information was used from books published between 1985 and 1990.

Interviews were conducted at early intervention centers in Milwaukee county and nearby centers to the north and northwest of Milwaukee.

The requirements of PL 99-457 were described in general.

Specific applications of the law in Wisconsin were included as they were available. This paper was written before the 5 year deadline to comply with federal requirements. Wisconsin was still working on the requirements in many areas.

#### Definitions

Assessment - Any activity designed to elicit accurate and reliable samples of infant/toddler behavior upon which inferences relative to developmental skills states may be made.

Incidental teaching - The use of child initiated activity during unstructured time to teach a specific skill. The teacher arranges the environment previously and determines the skill.

Integrated programs - Programs designed primarily for handicapped children with nonhandicapped children making up less than 50% of the enrollment.

Interactive match - Strategy designed to increase interplay between the caregiver and the child. The adult becomes sensitive to the child's cues and reacts at the child's level. Imitation, turn taking and expansion of the child's activity are used.

Mainstreaming - Practice of educating handicapped children in a regular classroom with nonhandicapped peers. Nonhandicapped children make up 50% or more of the enrollment.

Sensory play - A lower level of play in which the child learns about the environment by interaction with objects and the environment and through use of the senses. Sensory play is characterized by exploration and repetition.

Symbolic play - A higher level of play in which the child uses one object to represent another.

Turn taking - strategy designed to increase interplay between the caregiver and the child. The adult imitates child initiated activities or vocalizations and then waits for the child's response.

#### Summary

Factors which were thought to contribute to the disabilities of handicapped infants and children were frequently in the news in the late 1980's. Events in the 1950's and '60's led to the passage of PL 99-142, the Education of the Handicapped Act, in 1974.

Much research on the effects of age at identification of handicap and the amount of family involvement in the child's program has been conducted. PL 99-457 was enacted in 1986; providing funds for services to infants with disabilities and their families.

Readers of this paper will find information on Part H, Wisconsin's implementation plans, research in early intervention, and current practices in Wisconsin.

The information on early intervention was limited to materials published in the last 5 years. In Chapter II the research is reviewed.

## CHAPTER II

### Review of Research

Children who are handicapped have some condition which prevents them from interacting with their environment as freely as a nonhandicapped child (Peterson, 1987). Early intervention facilitates optimal interaction with adults, peers, and the physical aspects of the environment.

Special needs children may have sensory or cognitive deficits which affect their ability to perceive things accurately. The children's disabilities may limit their responsiveness to the learning situation. Oftentimes these children have double jeopardy. They are limited by their disability and by the effect their limitations have on their interactions with others.

Early intervention teaches skills the children will need as they mature. Sensory, motor, cognitive, speech and language, self help and social/emotional needs are all addressed. A primary goal is to help the children gain independence, to prepare them for the next stage in their development.

Early intervention can make a significant difference in the development of young children (Tingey, 1989). Patterns of learning and behavior are established in the early years. Intelligence, which does have a strong genetic component, can also be shaped by early learning experience. Research shows that there are critical periods when children are most responsive to learning.



Disabilities can interfere with early learning.

The kind of environment to which children are exposed can have a major effect on development. Parents often need help learning how to provide the optimal environment for their children during their early development. Early intervention can, in many cases, reduce the severity of problems with which society will have to deal in later years. It is possible to avoid secondary problems, e.g. emotional disturbance, and to develop the individual's potential for being a contributing member of society. Early intervention can prevent the need for many costly services later in life.

The government had been supporting research into the effectiveness (Guralnick, 1989) of early intervention for handicapped and at-risk young children for over 20 years. In recognition of the effectiveness and critical importance of early intervention, the United States government passed PL 99-457 in September, 1986.

#### Public Law 99-457

This public law established two new federal programs (Turnbull, 1988). One provided the right to education for all 3, 4, and 5 year old handicapped children. The other, Part H, established a voluntary program through which states could receive funds for handicapped and at-risk children from birth to three years. Some family needs were also included.

Children were eligible for the program if they were

experiencing delays (or had a condition which indicated a high probability of a delay, e.g. down syndrome or cerebral palsy) in physical, cognitive, speech and language, or psychosocial or self-help skills. Each state defined what medical and/or environmental conditions would constitute "at-risk" for developmental delay and would be eligible for early intervention (Healy, 1989).

The states were obliged to develop a public awareness program focusing on early intervention and a Child Find system. Preservice training and a comprehensive system of personnel development were required. A central directory of resource services, experts and research was to be developed.

A multidisciplinary evaluation of the function of all eligible children was to be conducted; the family was to receive services that were needed to facilitate their capacity to assist in the development of their child; a written individualized family service plan (IFSP) was developed for all children.

The IFSP stated the child's present levels of development and the family's strengths and needs as related to the child's development (Garwood, 1987). The major outcomes for both the child and the family were stated along with the criteria, procedures, and timelines for determining progress. The specific services necessary to meet the unique needs of the child and the family were itemized. The case manager was identified and procedures for transition from early intervention to preschool programs were outlined. The IFSP was to be reviewed every six months and

evaluated at least once a year.

Services provided to the child included a wide range of therapies and professional services. Family training, counseling, nutrition services, and social work services were among the services provided to families. The child received transportation to intervention services.

#### Implementation in Wisconsin

At this writing, some organizational work which was required by states was completed in Wisconsin (Wisconsin Department of Health and Social Services, 1989). The governor had established an Interagency Coordinating Council (ICC) and designated the Department of Health and Social Services as the lead agency. The 15 member ICC was assisting the Department of Health and Social Services in the development of a statewide coordinated system of early intervention services for children birth to age 3.

The ICC had established three task committees which included membership from the community at large in order to draw on expertise and interest of individuals from around the state. The eligibility committee's task was to define developmental delay, to give examples of mental and physical conditions known to have a high probability of resulting in developmental delay and to recommend if children at risk for future developmental delay should be included in Part H services.

The central directory task committee identified Wisconsin's need for a resource directory, explored models and resources in the

state and wrote a report recommending a central directory model.

The screening and assessment task committee identified appropriate screening instruments, recommended training to ensure qualified personnel and defined multidisciplinary evaluations.

The Department of Health and Social Services assigned the Wisconsin Personnel Development Project (WPDP) with the task of implementing a personnel development plan as required under Part H. Tasks of this organization included review of certification requirements, assessment and development of curricular materials, provision of supportive services to parents and implementation of training activities within the state.

The Birth to 3 newsletter was created. It provided news of the activities of the state-wide early intervention program. The newsletter was designed to facilitate communication between the many parties interested in the progress of the early intervention program: parents, professionals, advocates, service providers, administrators, and legislators.

Grants were awarded to set up differing models of coordinated interagency, family-focused early intervention systems in various locations around the state.

In spring of 1988 the governor signed Wisconsin Act 371 into law. This law defined the necessity for compiling information and statistics on the "occurrence of adverse neonatal outcome, a birth defect or developmental disability". The Birth & Developmental Outcome Monitoring Program (BDOMP) began January 1, 1990.

Physicians were required to report to the Department of Health and Social Services serious medical conditions in children birth to age 6. If the physician and the family felt the child needed special services, the family could give consent to be contacted by a local agency for assistance.

The state was required to have all policies, procedures, interagency agreements and service systems in place by October 1, 1991. Also, by that date, children and families identified as eligible for services were to receive an IFSP and case management. By October 1, 1992, all services identified in the IFSP were to be provided (Wisconsin Department of Health and Social Services, 1989).

#### Implementing the Individual Family Service Plan

The IFSP was to be developed by a team made up of family and professionals from multiple disciplines (Tingey, 1989). The need for a team approach could not be understated. It was impossible to isolate the many facets of a child--cognitive, sensorimotor, socioemotional, communicative . . . The interdisciplinary team worked together to collect information on various aspects of development. Then the information was interpreted, synthesized, and used in planning. A program which could promote the child's integrated development along multiple lines was put into practice.

The parents were an important part of the team. Parents who were involved in decision making had a sense of ownership in the plan. An inservice training in family assessment and collaborative

goal setting for interventionists in North Carolina emphasized the importance of family participation (Bailey, 1988). A focused interview with the family was used to discuss needs from a family perspective. The appropriateness of family goals was best judged by a third party expert.

Tingey (1989) described several assessment instruments available to help professionals write the IFSP. The Family Focused Intervention model used observation, rating scales, and a questionnaire. Family goals were identified and an interview was used.

The Family Needs Survey was a rating scale in which families identified their needs in six categories: information, support, financial, explanation of the child's condition, access to community services, and help with family needs.

In working with families, the most basic need was the establishment of an honest, caring relationship. The professionals needed to have respect for the parents and to truly listen to what they were saying. Healy (1989) says "the most incontrovertibly positive thing a professional does for a child can be to sincerely acknowledge the hard work and dedication that goes into this special parenting, to say to the parents, simply, 'this is not easy--you are doing a good job.'" (Pg. 47)

There are many kinds of parents with many kinds of needs. Early intervention programs seek to address this multiplicity. Parent services include parent support groups, respite care,

resource rooms, and toy lending libraries.

Deiner (1988) described how Delaware FIRST, a model demonstration project was expanded to provide respite care services. Some IFSP called for provision of respite services.

Brookman (1988) described Parent-to-Parent, a model program in Virginia designed to provide support and information for parents of children with disabilities and/or health impairments. The parents attended a 6-hour workshop. They were matched with parents of a child with the same or a related disability.

A review of demographic data (Bristol, 1987) on prevalence and types of single-parent families of handicapped infants showed that 45% of single mothers of children under age 3 were employed. Often the single mother resided with her mother and responsibility for the child was the grandmother's. The traditional hours of daytime early intervention interfered with employment or education and/or vocational training. Families were changing; intervention needed to change to meet their needs.

If the mother of a handicapped infant was an adolescent, she had special needs. Helm (1988) discussed provision of services according to the mother's age. For mothers in early adolescence, the focus was on caregiving, with concrete specific information needed. The professional needed to model interactive behaviors with the child for the mother.

It was felt that the middle adolescent may have had trouble generalizing. Concrete suggestions with practice using them in a

variety of situations was effective. To increase the likelihood of follow through, middle adolescents often needed an escort to insure that they took advantage of all services.

Late adolescent mothers needed to develop competencies to plan and effect change for themselves. Professionals assisted them in establishment of an external locus of control. Empowerment was an important source of self esteem and confidence for these mothers.

Teenage parents needed information on child development and appropriate parenting practices. A peer support group could provide invaluable emotional support. Physical support such as transportation or babysitting services helped reduce stress for young parents.

Hutinger (1988) discussed strategies used by birth to 3 projects in rural Illinois to reduce stress in families. A menu of services for a variety of needs was available. The first priority was to have the child medically stabilized. Then the parents were given information about the child's condition and emotional support.

As the child became stabilized, the parents were referred to social service agencies for social and economic stabilization. The parents often required some information or training in the use of personal stress reducers: nutritious diet, exercise, time management, etc.

It was important to build on family strengths. Professionals



needed to demonstrate acceptance of the family and to believe that they wanted the best for their child. Families had knowledge of the child and the family situation that no one else could access. That knowledge was another reason why all decisions were to be arrived at jointly with the family.

In helping families to cope, the professional's role was to assist the families in learning needed skills. No useful purpose was served by doing things for families which they could learn to do themselves. Service providers always needed to be cognizant of the fact that they could increase family stress by giving the family too much responsibility for intervention with the child.

Stress was evident in families of the handicapped (Tingey, 1989). Marital satisfaction was lower and the divorce rate was higher. Parents reported that they felt less complete and enjoyed their children less. Parents experienced the pressures of too little time, psychological stress and parental responsibilities.

Stress for parents was often increased by their feeling that they did not relate to their child properly. The Transactional Intervention Program (TRIP) (Mahoney, 1988) used two strategies--turn-taking and interactive match--to modify parents' interactive behavior. Research has shown that there was a positive relationship between a responsive nondirective interactive style and children's development. Parents became more sensitive to their children's style, developmental level and interests when they were trained in using these strategies. They used fewer directives and

responded more frequently to their children's behavior.

Cognitive gains made by children whose parents were most successful at improving their interactive behavior were 48% greater than for children whose parents were less effective at implementing program strategies. Child orientated responsive intervention strategies were a proven means of enhancing parent capacity to promote the learning and development of their special needs child.

Implementing activities that enabled and empowered families to meet the needs of their disabled children was an important goal of family focused intervention. A national survey (Mahoney, 1990) of 500 mothers of young, handicapped children identified five components of family focused intervention which were important to them--child information, instructional activities, family assistance, resource assistance, and legal information.

A national survey of 1,000 intervention providers revealed a discrepancy between theory and practice (Mahoney, In Press). While service providers did have policies for specific provisions related to the various aspects of family needs, in actual practice, a large proportion of activity was highly child centered. It appeared that the field of early intervention had accepted the concept of family focused intervention but, in reality, most services remained relatively child centered.

#### Assessment

In addition to completing a family assessment the law requires a multidisciplinary assessment of the child. Norm

referenced tests are considered inappropriate for children who are under 3 years of age (Rosetti, 1990).

Norm referenced tests do not allow for observation of items other than those on the test. It is important to take into account parental reports and observed and spontaneous behavior. Checklists and profiles are a more acceptable means of defining a child's level. In an assessment situation, Rosetti (1990) encouraged examiners to prepare a descriptive report if they were uncomfortable with the test results. The younger the child, the less predictive a test would be.

Rosetti (1990) explained that, rather than using an assessment predictively, a prescriptive view was to be preferred. The assessment results could help determine what steps should be taken next to help the child develop. After intervention was started, a serial assessment could be predictive. In a serial assessment the child was seen several times over a period of time to chart developmental change.

Children who displayed catch up growth--an accelerated rate of development which reduced the gap between where they were actually functioning and where they should be functioning--were considered to have a developmental delay rather than mental retardation (Rosetti, 1990). Catch up growth was found to correlate with first grade performance. A child who was born prematurely should have closed the gap by the age of 24 months.

To help chart catch up growth, parents were instructed to

keep a developmental log. When the child did something new, a description of the activity was recorded along with the date (Rosetti, 1990).

The teacher interpreted the data provided by the parent. The use of a corrected age (the amount of prematurity subtracted from the actual age) for children born prematurely was considered a valid practice until 18 months of age. In many instances the premature child was considered at risk.

#### At-Risk Children

PL 99-457 allows intervention services to be provided to the at-risk child. Graham (1988) identified three groups of children who were at-risk and could benefit from preventive services. Premature and low birth weight children were biologically disposed to problems. For some children the risk came from their environment--history of abuse/neglect, and adolescent mother, etc. An established risk existed in the presence of a developmental delay or its likelihood due to a medical condition.

Peterson (1987) noted that, in some cases, at-risk children had no apparent problem, but their life history or condition suggested that their developmental progress should be monitored. The child born to a mother who had an at-risk pregnancy might have been included in this group. Some factors contributing to at-risk pregnancy included low socioeconomic status of parents, maternal age (under 15 or over 40), maternal history of problem pregnancies, drug or alcohol abuse by the mother, chronic disease or maternal

health problems.

Dr. Steven Kopps (1990) said that it is difficult to predict which premature infants will have problems. Two possible predictors of future difficulty in infants who received care in a neonatal intensive care unit (NICU) were a seizure after the first 48 hours and the necessity to put children back on a ventilator after they had been successfully removed. It would be advantageous to develop a code for calculating children's risk for developing problems.

At this writing early assessment could not discriminate or predict which infants would have problems at a later date. Many at-risk infants, especially the premature, showed variable growth patterns so assessment on only one occasion was highly suspect. Many professionals did feel that early intervention for the child and support for the parents at the first sign of trouble was likely to yield a positive outcome. A major problem was the expense of screening infants.

The Infant Monitoring Project (Bricker, 1989) developed at the University of Oregon, provided a low cost system in which the parent completed questionnaires about their at-risk infant eight times between the child's age of 4 months and 3 years. Each questionnaire tapped information on gross motor, fine motor, adaptive, communication, and personal-social skills. The parent mailed in the questionnaire and it could be scored quickly. A referral letter was sent to parents who reported an abnormal

result. Cutoff points had been statistically determined for each developmental area. This instrument was in use in a number of states.

The Mother-Infant Transaction Program (MITP) located in Vermont operated on the assumption that except in extreme conditions, effective parenting can overcome the problems of premature birth. The parents began sessions before the child was discharged from the hospital. The purpose was to promote favorable mother-infant interactions and to help the parent adjust. After the initial 7 sessions, 4 more sessions were held in the home with fathers included. The program's purpose was to sensitize parents to infant cues and to provide contingent responses in every day life. A major goal was to promote enjoyment of the baby by the parents. Such early intervention was seen to be critical in reinforcing the positive self image of the baby. Expectations for failure had been seen in infants as young as 6 months old (Gunzenhauser, 1987).

#### Integrated Programs

While parental interactions were the most important in the child's life, other children were also used as educational change agents. Integrating handicapped and nonhandicapped into the same program had the potential to create a demanding environment which could assist in the continued development of the child's behavior repertoire (Bricker, 1986). Nonhandicapped peers expected and encouraged behavior which could produce significant changes in the

handicapped child.

Programs which included nonhandicapped children enhanced the possibility for learning by imitation. Children often imitated behavior of more competent individuals who were more skillful. In an integrated program good models were readily available. Active participation appeared to enhance learning by imitation. However merely placing nonhandicapped children in a program was not enough. Activities needed to be planned and organized to encourage interaction.

Kugelmass (1989) found that teacher involvement of a facilitative, rather than a directive, nature was needed to encourage cooperative and parallel play. Successful intervention included development of cooperative play stations and staff involvement as a play mate, mediator of conflict, and interpreter of language and behavior. Learning appeared to occur both through modeling and direct peer-to-peer teaching.

Tingey (1989) noted that a delayed child could be trained to imitate nonhandicapped peers. The use of a buddy system could facilitate such interactions. A younger child naturally imitated an older child of the same sex. Teacher praise could effectively increase social interaction, while dramatic play was conducive to interaction with less adult involvement.

A handicapped child could be mainstreamed in a regular education program or nonhandicapped peers could be integrated into a special education setting (reverse mainstream). Some of the

goals of mainstreaming included social integration, skill acquisition, and attitudinal changes of the nonhandicapped. Social interactions were more spontaneous when the handicap was mild. Interaction could be increased when the setting was structured to promote it. Structuring play could lead to more sophisticated and organized play and an increase in fantasy play.

There were many curricular approaches to mainstreaming. The developmental approach used normal developmental sequence to design tasks in a hierarchy of difficulty. This approach operated on the premise that handicapped were more like their nonhandicapped peers than they were different. The cognitive model, which was based on the child development theories of Piaget, emphasized attention to individual needs and active participation by the child. Good spontaneous interaction was often observed in these programs. A behavior modification approach was often best for children with behavior problems.

In selection of a program it was advantageous to match the child's needs to the program expectations. Techniques which foster social integration included joint teaching, buddy system, small group assignments and use of normally occurring events.

In a survey of special education administrators (McNulty, 1988) over 80% indicated that at-risk children should be served by the most appropriate day care or regular preschool setting with support services provided by early interventionists.

Proper training and support was a must for day care



facilities to provide effective early intervention services to children with handicaps. Project Neighborcare (Kontos, 1988), a comprehensive inservice training program for family day care providers, was an example of a successful training program. Using trained day care providers opened up a big resource of services for young disabled children in integrated community based systems.

Murphy (1989) asked day care teachers what skills they perceived as necessary for successful performance in day care. The results provided implications for preparing handicapped children to enter day care. Communication skills, independence, and social skills were considered most important, in the order listed. The conclusions of this study indicate the need to further identify areas in which handicapped children should improve so that teaching strategies and methods for teaching appropriate skills could be developed.

In Wisconsin day care licensing standards included a nondiscrimination section that prevented centers from refusing to serve a child because the child had a handicap.

#### Best Practices

McDonnell (1988) identified six major characteristics of exemplary programs:

1. Integrated services. Handicapped and nonhandicapped were grouped together to promote positive interactions. The arrangement of the facility and the materials used played a major role in promoting social interplay. Special techniques, e.g. peer

partners, were used to promote interaction.

2. Comprehensive services. A transdisciplinary approach in which all disciplines worked together to plan programming to meet all of the child's needs across settings and events was used.

3. Normalized services. Age appropriate placement and instruction was of paramount importance.

4. Adaptable services. Services had the flexibility to meet the needs of the child and the family.

5. Peer and family referenced services. The family was included in planning. Plans included methods to enhance the child's skill development within the daily routine of the family.

6. Outcome based services. The program was future oriented with development of skills needed for successful functioning as the child grew. Age appropriate skills were taught, along with skills which would be significant in the future. A variety of evaluation methods was used including attainment of IEP goals and criterion referenced tests. Planning for transitions was included.

Mahoney (1989) questioned teachers of young handicapped infants and children to identify typical attitudes and practices. The focus was on major features of programs, including goals, curriculum, and methods of instruction. The results showed that many teachers teach toward test protocols. Mahoney (pg. 266) concluded, "If the stated purpose of the test protocol is not curricular, teachers should not use the test for other than its intended purpose."

Most of the teachers questioned viewed instruction in the context of structured activity rather than play. If a basic tenet of child development is that children learn and acquire skills through play, why does play have a minor role in these programs?

There was much variability in the types of programs used, but most teachers said they were successful at accomplishing objectives, remediating deficiencies, maximizing social competence, and enhancing self esteem.

While PL 99-457 stated that consideration must be given to the emotional and support needs of the family and that instructional practices should be restructured so that parents can play a substantive role, most teachers said they spent little time with families and were not interested in incorporating the family into the program.

Mary Elder (1990) stated that exemplary birth to 3 programs are based on the shared values of teachers, staff and parents. The number of one criterion for determining what was best practice was if families were helped to attain their goals. A case manager was needed to advocate what was best for the family. Everything done was intended to strengthen and empower the family.

Family involvement at all levels of decision making was important. But equally important was the idea that individual families have a choice in the degree of their involvement. It was an option to minimize involvement when other problems intervened. In the menu of services offered, parents needed to have options in

the levels of involvement and times services were offered. Services were geared to fit family needs. The written program outcome had a family focus.

Special methods were used by the exemplary program to make services available and acceptable to all cultures. The program needed to be visible in the community so all groups were aware of what services were available. Instruments which were not exclusive of any group were used.

Planning transitions into and out of the program was a part of the exemplary program. A transition to independence was planned for families. The family needed to be able to manage its own responsibilities. A program was a failure if parents were reluctant to have their child leave the program and go on to the public school classrooms. Successful programming emphasized functional behavior which was needed to future settings.

#### Program Rationale

A major concern in instructional strategies was to aid the child in acquiring more functional and independent repertoires of behavior (Bricker, 1986). There was a move away from operant training which minimized flexibility and adaptability because reinforcement was given for adult-imposed tasks. The focus was on how to help the young handicapped child initiate and make choices based on self-determined needs.

Goals and objectives were specified but implementation was decided partially by events occurring in the environment and by the

interests of the child. Strategies were used which embedded training objectives in daily functional tasks that were of interest to the child. The teacher designed the environment and then elicited and reinforced appropriate responses from the child.

Appropriate forms of consequence were used. An educational situation was created in which the targeted behavior was functionally reinforcing for the child. The activities were inherently interesting to the child. Bricker (1986) deplored the past use of popping M & M's for reinforcement and the typical practice of routine social reinforcers, e.g. "good talking".

Bricker (1986) advocated activity based instruction which embedded training regimes into functional daily activities which were of interest to participating children. Because relevant antecedents and consequences were part of the activity, motivational and attentional problems were minimized. Generalization was encouraged because the skill was taught across a variety of materials and settings. Oftentimes one activity would address goals across several domains.

Individualized activities were sometimes needed to supplant activity based instruction if the child was not making satisfactory progress or if the child had severe delays and needed more structure and practice. Usually children could meet their goals by interaction with a group of other children who also had the same or similar objectives.

Tingey (1989) described the use of three naturalistic

training teaching techniques (often called milieu training). Coincidental teaching used activities such as language, self help and social skills which occurred on a daily basis. The environment was arranged to promote the desired outcome and the training occurred in context. Natural consequences and praise were used for reinforcement. The child was the initiator.

In using the mand model strategy, child initiation was not required. The teacher isolated the skill, set up the environment and offered the needed prompts to encourage the activity. The naturalistic time delay procedure required that the teacher delay in attending to the child's wants as a prompt to encourage production of the required skill.

The use of the natural training environment increased the likelihood that skills learned would be functional. Because the people involved in training were also the people who had regular contact with the child there was consistency and continuance of what the child had learned even when training sessions were over. Transfer of skills from one situation to another was less of a problem. Parents were trained to use naturalistic training at home.

Naturalistic training in an unstructured setting with nonhandicapped peers was a way to develop social skills. The area of social communicative development is often an area of curricular neglect (Bricker, 1986). Early social communicative exchanges were thought to be the foundation for conceptual and more advanced

pragmatic structure of later language usage. Play had an important role in the development of communication skills.

#### The Importance of Play

There was a growing body of research (Bricker, 1986) which supported Piaget's declarations on the importance of play for young children. Play was considered the work of the child. Through play many important behaviors were thought to be developed including: interactional skills, appropriate role playing, and successful engagement of the physical environment.

Rogers (1988) reviewed the literature on play and the young handicapped child. Sensorimotor play, play which is focused on the physical aspects of objects, had been studied with a range of handicapped children. When compared with normal children of the same developmental level, handicapped children showed a fairly normal progression in sensory play. It also appeared that this normal progression of development was true for symbolic play.

Handicapped children demonstrated the same developmental sequence as normal children but were affected by understimulating environments, lack of close relationships, and lack of appropriate social and language models. Some handicaps, by their nature, affected the qualitative aspects of play--especially spontaneity, creativity, attention and exploration.

The handicapped benefited from play models and materials which stimulated the most mature play of which the child was capable. Organization of the room and play materials, plus a

decrease in competing stimuli, increased the salience of the concepts or skills which play activities were meant to highlight. Imitation was an area of weakness for almost all handicapped; imitation games could be used to improve observational learning skills.

There was an apparent relationship between development of language and symbolic thought. Symbolic play appeared to be related to language development. The development of symbolic play appeared to be an important intervention with young handicapped children. Pretend schema were modeled and expanded upon by adults. Children with a cognitive level of 20 months or older could develop symbolic play.

Rogers (1988) explained that the link between language development and symbolic play was very strong. Almost all handicapped children had language development problems. Symbolic play enhancement activities were of great value for the young child. Unfortunately many early childhood educators were more influenced by educational methodologies used for older, severely handicapped children than by the play orientated philosophy of Piaget.

#### Language Intervention

Tingey (1989) reported that teaching language in a play setting required no extra time; and, teaching as part of a natural sequence made it more likely that the skill would be used regularly. Articulation, signing, and alternative or augmentative



communication often needed a formal setting, at least at first. Formal training was followed up by training in natural life settings.

In providing effective communication for children with severe handicaps Stremel (1987) recommended checking the routine to determine how the daily schedule could be adapted to provide opportunities to communicate. An interactive environment was arranged. Reciprocal interactions of infant and caregiver were critical. Before the age of 8 months the young infant was affected by the caregivers' interpretation and responsiveness to behaviors which appeared to be communicative, e.g. eye contact, vocalization, and facial gestures.

Mutual contingency was necessary. The more responsive the caregiver, the more the child would respond. At 8 to 12 months the infant started to intentionally communicate and use nonverbal signals. Caregiver responses provided the scaffolding to lead the child to more complex communication.

Analysis of the daily routine yielded ideas on ways to increase the number of positive interactions. The parents frequently needed help to interpret the child's attempts, to promote responsiveness, and to provide feedback. Touch or object cues helped the child to develop comprehension and to anticipate upcoming events. The importance of "wait" time could not be underestimated. The infant needed time to respond.

Many times handicapped children had most things done for

them. They did not realize the power of speech (Kakuska, 1990). Frequently, the normal methods of stimulating speech did not work for the special needs child. A systematic approach was needed to ensure that the child began to experience success. The child may have needed to start at a lower level and correction needed to be minimized. Some children had to try an activity hand over hand many times before they could accomplish it independently.

Ground rules were important: children needed to understand they had to perform the desired activity to receive what they wanted. The environment was set up so the child was required to communicate, e.g. no bubbles until the child said, "more" or "blow". Toys and play activities were the best motivators. The child learned to feel in control by his ability to control the situation through speech. If the child could not or would not give the desired verbal response, the therapist was ready to accept any positive response or even to move the child through a signing response. Success was important!

When the child was not using speech, intervention began with the precursors of speech. Toys and play were always the method and the motivators. Toys which had a cause and effect relationship helped lay the ground work for important concepts. "Do as I do" games gave the child early experiences with motor imitation which provided a basis for later speech imitation.

Rosetti (1990) explained that language development began from the moment of birth. The earliest stage in language development

was shown by visual attention in infants. Their attention was directed and focused, their head and body gave cues to the fact that they were attending.

Parents and caregivers needed training to identify and to respond appropriately to the cues that the infant was giving. Face to face interaction between mother and child provided the foundation of infant communication skills. Prelinguistic cues such as change in motor pattern or widening of the eyes were frequently inappropriately responded to by adults. Parents whose infants were confined to a neonatal intensive care unit often needed help to encourage language development in their newborn in this less than optimal environment.

Rosetti (1990) emphasized that as the infant matured, turn taking became a critical skill and tool for natural language teaching. The adult attempted to achieve a 50:50 ratio of child-to-adult turns in interaction. The adult and child shared the responsibility for selecting topics and activities. The caregiver followed the child's lead by imitating the child and then waited for the child's response.

The adult required instruction in responding in ways that ultimately would enhance and increase more conventional language responses on the child's part. Verbal output could not be forced. In some situations the adult was content to enhance language comprehension and provide a proper model when the child did not respond. Language eliciting techniques such as questioning,

paraphrasing, and language expansion were methods the caregiver needed to learn.

The use of music, books and art were strategies which came into play as the infant matured. Vocabulary and concepts needed to be expanded upon in many different settings and contexts. Open-ended tasks and open-ended questions provided the most opportunity for verbalizations. Children under the age of 4 learned best through the use of actions, real-life situations, and real objects rather than pictures. Emphasis was always on the communicative intent of language rather than grammatical correctness (Rosetti, 1990). Giving the child control through speech is the focus of language intervention.

#### Child Control of the Environment

Dunst (1987) described intervention designed to develop the infant's acquisition of interactive competencies. The major goal of this program was to shift the balance of power toward the child so that the child could exercise control over the environment by using conventional social adaptive behavior.

Strategies to foster interactive competency included being sensitive to child behavior, structuring the environment to produce reinforcing consequences, reading the child's behavior as intents to interact, encouraging child initiated episodes and supporting the child's attempts to increase competence.

The most useful technique for fostering interactive competencies was incidental teaching. Selection of the least

intrusive method possible was an important consideration in choosing a teaching procedure. There was a growing body of evidence that showed nonhandicapped as well as handicapped children were more likely to display competent behavior if interactive episodes were child initiated and caregivers were responsive and encouraging.

Intervention targets were taught in the context of the child's functional use of behavior in the daily routine. Context and content were related. When both dimensions were considered together the probability of success was improved. It was useful to combine intervention targets and daily routines into a matrix framework. This approach increased the probability of emphasizing a functional based approach to intervention. The number of learning opportunities were increased without having to add additional responsibilities to classroom staff or parents.

In using the systematic approach the types of behaviors which allowed the child to exercise control over the environment were identified. The role of the caregiver in encouraging competence was underlined. The context for functional display of competencies was identified (Dunst, 1987).

Hutinger (1988) agreed that infant and toddler programs needed to help the child meet functional goals for every day living. Enabling the child to act on the environment could overcome or prevent "learned helplessness". For the severely handicapped, electronics and computer technology were a means to

help children eliminate frustration and stress. With the uses of switches, computer programs, and special communication software, many severely handicapped children were able to communicate and make choices.

The concept of an early childhood computer curriculum seemed developmentally inappropriate. But computer applications could be integrated into the curriculum (Warren, 1987). The computer was a tool which assisted the teacher in promoting learning through a variety of media and activities. Switches and microcomputers were used to develop means/ends relationships in 6 month old Down syndrome infants. A game format computer program was used to teach young handicapped children about cause and effect.

#### Intervention with Special Groups of Children

Crittenden (1989) explained that the most outstanding characteristic of maltreated children was atypical social development. Those children showed a variety of coping patterns which required different teaching strategies. Compliant abused children were too concerned with pleasing others and needed encouragement to explore the environment. Defiant children required careful treatment to prevent compliance or achieving from becoming a battle. A controlled but stimulating environment was used to force disorganized children to see the consequences of an action. Repetition and structure prevented them from flitting to the next thing they saw. Passive children were the hardest with which to work. They responded to repetition of simple actions and

consequence paradigms.

Crittenden (1989) described a hierarchy of needs of the maltreated child.

1. All maltreated children needed predictability and control. If they could predict events they would be able to organize themselves.
2. They needed to learn how to influence events in socially appropriate ways.
3. They needed to learn to use and interpret affective communication.
4. Maltreated children required development of self control and motivation to learn. A highly structured situation usually met the needs of maltreated children best.

Appropriate discipline was firm and affectively neutral. The social benefits of appropriate behavior were emphasized. It was best to keep children busy to prevent the need for discipline. Either-or choices were a way to reduce the fear of negative consequences. When necessary, punishment was brief, mild, predictable, and delivered with neutral affect. Time out was the best form of punishment.

Cicchitti (1989) listed four developmental consequences of child maltreatment.

1. Intervention was to be started as soon as possible after the maltreatment had been confirmed.
2. The most appropriate and beneficial environment possible

was needed to give the abused support and to enhance their self perception.

3. Parents required education about normal development. They may have needed to be taught instructional styles which promoted positive self esteem in the child.

4. Developmentally appropriate strategies aimed at improving all areas of functioning were used to promote adjustment and the ability to adapt to the environment.

Behavioral observations (Fagot, 1989) of the play behaviors of abused children indicated that effective treatment included provision of a play group experience with normal nonabused children. Teachers who had training in working with problem children were needed to facilitate interactions.

Medically supervised early intervention programs in either health care settings or settings closely associated with medical centers or hospitals were recommended for children with chronic illness. Kahn (1987) described the Enrichment Program at the Hospital for Sick Children in Washington, DC. This program provided an individualized educational program for each child. Advantages of locating an intervention program in a health care setting included: absences were fewer, emergency care was readily available, simple medical procedures were performed by trained staff, and therapy services could be easily provided. This setting also provided many learning opportunities for parents and teachers.



A review of the literature on crying (Calhoun, 1989) in handicapped babies indicated that prolonged, frequent or intense crying was identified by parents as a behavior which interfered with social reciprocity. Crying was more common among children who had mental or physical handicaps. Some disabled children had a different cry which sometimes was a characteristic of their disorder. Frequent crying and low soothability was very aversive for adults and was linked to child abuse.

It was thought to be important in early intervention to develop strategies to cope with crying. Calhoun (1989) noted that the greatest contributors to crying in early intervention centers were bright lights, loud noises, and other children crying. Some strategies to reduce crying included environmental modification, rhythmic movement, soothing sounds, and transitional objects. Intermittent contingent reinforcement, provision for reinforcement when the child was not crying, helped children cope with a new situation, or difficult therapy. A predictable schedule with light and sound cues helped to establish rhythmicity for some children, especially those with central nervous system disease.

When crying was continued over a period of time, analysis of the problem could be helpful. A cry diary or a matrix framework which noted time of day, current activity and attempts to sooth were recommended methods of data collection. To gauge effects of soothing, a stop watch was used to time periods of noncrying during a time of high probability. A graph of the data showed

effectiveness of intervention at a glance. Crying was considered to be infant communication and showed the need for relief from discomfort, the need for different activity, or the need for soothing.

#### Transitions

PL 99-457 specified preparation of the child and parents for transition. Hanline (1988) surveyed parents of handicapped children to determine what information was helpful as transition to public school programs was made at age 3. The major concerns of the parents were lack of information about the program, teacher-child ratios, apprehension about separation from the child, and reduced level of parental involvement. Parents wanted to play an active part in the decision making process and desired to receive information before the time of transition. Having one person to whom questions could be addressed was appealing to parents.

A collaborative model (Hanline and Knowlton, 1988) for providing support to parents during their child's transition from infant intervention to special education programs was intended to address parent needs. The preparation began 4 to 5 months before the child's third birthday. Parents were first given information about the transition and assigned to work with a coordinator. The opportunity to join a support group was available. Several months before the actual transition parents were invited to visit the preschool and were assisted in preparing a sample IEP. The actual intake assessment, IEP meeting and placement occurred at age 3.

Individualized followup and support typically was provided for 2 to 6 weeks.

The Bridging Early Services Model (Rosenkoetter, 1990) stressed involving the parents at the level they wish to be involved. This program seeks to empower parents to advocate responsibly for the needs of their children.

Direct service providers were encouraged to share expectations with the sending and receiving programs by sharing records, visiting each other's programs, and by conversing informally before and after transition. It often proved helpful to make sending and receiving programs similar in some ways, e.g. routines, activities, ways of giving directions, skills required, and behavior management strategies.

#### Teacher Training

With the implementation of PL 99-457, young handicapped children could be educated in a variety of settings. Use of the least restrictive environment which was appropriate for the child was encouraged but developmentally significant programming occurred only when teachers were trained to facilitate interactions (Smith, 1988).

Begnato (1987) organized a descriptive research project including 13 day care programs which enrolled both handicapped and nonhandicapped children. This study indicated implications for areas of inservice training for staff. The problems of enhancing social skills were a primary area which required emphasis. Staff

also needed training in the use of peer tutors. Training in computer applications could provide staff with tools to serve a wide range of children from the gifted to the severely motorically impaired.

McCollum (1989) espoused creation of a birth to 5 certification to assure minimum beginning and professional competencies. The certification would have 2 levels: beginning professional, a general certification, and continuing professional with specialization in either infant/toddler or preschool. The curriculum would recognize the specific content areas necessary for working with special needs children and their families. Continuing professional development would be provided.

In Chapter III observations of early intervention centers are described.

## CHAPTER III

## Observations at Selected Centers

Observations and personal interviews were conducted at selected intervention centers to provide information about how area programs are implemented.

In Milwaukee County referrals from physicians, parents, public health professionals, community agencies, and social service workers are all directed to the Combined Community Services Board (CCSB). The CCSB's Collaborative Intake Project meets two times a month. Children are assigned to one of four Milwaukee centers according to location and child and family needs.

Curative, Easter Seal, Penfield, and St. Francis early intervention centers are part of the CCSB's intake project. Children are evaluated at the center to which they are assigned. In Milwaukee County an Exceptional Educational Need (EEN) is defined by 25% or more delay in two areas. Children who have an EEN are provided intervention services.

## Center for Blind and Visually Impaired Children

The Center for Blind and Visually Impaired Children is a small intervention center in Milwaukee serving children birth to 6 who have some type of visual impairment. Many of the children are multiply handicapped. Some children receive therapy in the home but most come to the center for intervention. Children come to the center between 2 and 5 mornings a week according to need.

Speech and language, occupational, physical and vision therapy are provided. The center has a half time social worker who assists parents and conducts monthly parent meetings. Parents are encouraged to come to the center with their child and become active in the child's therapy. The children are bussed to the program and parents may ride the bus with them. A toy lending library is open to parents.

Children who are developmentally 12 months or under are served in the infant room. There is emphasis on sensory motor integration, sensory play, and stimulation activities. Children who are more ready to interact with the environment are placed in the toddler program.

Children who are at the 2 1/2 to 3 year old level participate in the preschool program. Reverse mainstreaming is used in this classroom; several siblings of enrolled children and children of staff members are participants in this class. The preschool has a typical preschool curriculum with emphasis on independence. Mobility training is begun as needed.

Therapists frequently work with children in their classrooms. A low ratio of teachers to children is maintained. Aides and volunteers are used liberally. The program is held in classrooms rented from a church. The center receives funding from United Way.

Children are often referred to the program by their doctors or by other intervention agencies. Arena style assessments are conducted at intake with all professional staff and therapists

participating.

Some children do transition to public schools at age three; others continue with the center's preschool program until kindergarten age.

#### Easter Seal Child Development Center

The Easter Seal Child Development Center serves children between the ages of 1 and 3. Children are referred by the CCSB. Most of the children have speech and language delays, emotional and/or behavioral problems and are from Milwaukee's inner city.

Parents can be as involved in the program as they choose to be. Children are bussed to the center and parents are allowed to ride the bus with their child if they choose. Half day programs, either morning or afternoon, are offered Monday through Thursday. Friday is used for home visits by the staff.

The parents are encouraged to come to the monthly parent meeting by incentives and door prizes. This innovative idea along with the provision of babysitting promotes good attendance and enthusiasm at the meetings which are conducted by the two staff social workers. When there is interest, parent coffees, a support group type of program, are conducted with the social worker taking a backseat while parents lead the discussions. Craft auxiliary groups, which make items for classrooms, are another voluntary parent program. These groups are a natural vehicle to promote parent interaction.

A transdisciplinary approach is used for classroom planning.

Therapy sessions are usually kept short and pull outs are minimized. Where possible, therapy is conducted in the classroom and transdisciplinary sessions are frequently planned.

A heterogeneous mix of 6 to 8 children is included in each classroom. The center has its own definition of at-risk children. These children are included in classroom groupings as peer models. Children spend time in the gross motor room, an activity room and the outdoor play area in addition to the classroom. Play is emphasized. A daily snack is provided through a government food program.

Bus aides ride the bus with the children and help in the classroom. Parents of enrolled children are given first chance at these jobs.

Each classroom is staffed by an EC:EEN teacher and an assistant teacher. Speech and language therapists, and occupational and physical therapists are also employed by the center.

Most children transition to Milwaukee Public Schools at age 3. A systematic transition plan is followed. Children who have no EEN at age 3 may go on to Head Start or regular preschool programs.

#### Penfield Children's Center

Penfield provides intervention to children from birth to 3 years of age. Children from Milwaukee County, largely inner city youth, and are referred to the center through the CCSB. An estimated 80 to 90% of the children come from poverty stricken



homes.

Children come to the program 5 days a week for all day care and therapy. In 1989 optional half day morning or afternoon sessions were introduced. The half day option allows the center to serve more children. Some children come to the center for outpatient therapy only.

Free bus transportation is provided to children who live within one half hour of the center. A staff person rides the bus with the children. Parents are encouraged to follow through with intervention at home. Daily notebooks are used and parents are encouraged to visit the program. Therapy rooms have one way mirrors so the parents can observe but not disturb.

A staff social worker helps parents complete paper work, deal with daily problems and refers them to appropriate agencies for other services. A parent support group is available and parents are encouraged to attend monthly meetings.

Infants to the developmental age of 18 months are served in center based classrooms. A medically fragile room is located off the infant rooms. Children who require special monitoring or care are served in this room. Infants who cannot cope with the stimulation of the regular classroom also spend time here. They are gradually introduced to the regular program as they are able to tolerate increased stimulation. The ratio of children to adults is kept very low and the resident pediatric nurse is readily available. Because of the high stress of working with children who

require so much care, staff members are rotated out of the medically fragile room every two weeks.

Children who are 18 months of age to 3 years are served in a separate program. They are pulled out of the classroom for therapies which include speech and language, occupational and physical therapy. An outdoor play area is used when weather permits. For each 16 children there is an EC:EEN teacher, three aides, and available volunteers.

The program is play oriented with a variety of toys and play equipment appropriate for the children's ages. The program is loosely structured and follows the needs of the children. Nap time is scheduled and a nutritious breakfast and lunch is served.

Many of the children transition to Milwaukee Public Schools (MPS) at age 3. Penfield works closely with MPS to assure smooth transitions. An estimated 25% of the children are functioning at age level when they leave Penfield's at age 3.

#### Rehabilitation Center of Sheboygan (RCS)

The early intervention program of RCS serves children from birth to 3 years of age who reside in Sheboygan County. Children are frequently referred to the center by local physicians, public health nurses or social service agencies. Children under the age of 2 come to the center for individual therapy from speech, occupational, and physical therapists.

Children who are between the ages of 2 and 3 attend the center's preschool program. A speech therapist and an aide work

with the EC:EEN teacher with a group of 8 children. Parents are participants in the preschool sessions with their child. In each class several nonhandicapped children are included.

The classroom is centered around play activities and sensory motor integration activities. The children attend preschool several half days a week. Their therapy sessions are scheduled on the days they are not in preschool to avoid the disruption of being pulled out for therapy. Bus transportation is provided to the preschool classes.

Services are provided for children who show delays in physical, mental and speech development, who have vision or hearing impairment, who exhibit behavior problems or who have a high risk medical history. Ongoing support and evaluation of the needs of the children and their families is provided by a pediatrician, a psychologist and a family social worker.

RCS expected to open a new early childhood intervention center in spring of 1990. The new center would provide therapy and intervention services as well as an integrated day care program.

Most of the children transition to special education preschools in the public system at age 3.

St. Francis Children's Center Early Intervention Program

St. Francis Children's Center Early Intervention Program serves birth to 3 children from Milwaukee and Ozaukee Counties. Children are referred to the program by the CCSB.

Children are served by occupational, physical and speech and

language therapists, an audiologist, a vision specialist, a psychologist, a social worker, an optometrist, EC:EEN teachers, and certified aides. In addition to their certification requirements, all staff is required to participate in a course in behavior management taught by the school psychologist. The same course is offered to parents as a workshop.

Initial transdisciplinary assessments are conducted in a specially designed arena. The child and the assessor can be observed from every angle through floor to ceiling one way glass. Assessment is ongoing during the program.

The program for children birth to the developmental age of 18 months provides combined home and center based services. The focus is on the child and helping the parent meet the child's needs. The parent brings the child to the center for therapy.

Parents who have a newborn with a handicap which is readily identifiable from birth (e.g. Down syndrome) are contacted by Parents Project Help. Parents of a child with a similar handicap contact the new parent, share experiences and introduce them to the center.

Toddlers (18-36 months) are bussed to the center on a county operated bus 2 to 4 half days a week. They participate in an integrated program which was initiated in 1989. Day care is optional.

In the play oriented program, teaching is matched to the child's learning needs. Program adaptations are made to

accommodate the child. The emphasis is on achievement and appropriate reinforcement is used to promote continued success. Besides the classroom, children learn in an indoor large motor exploratory area, the swimming pool and the outdoor play area.

Daily use of the child's notebook allows the teacher to communicate instructions on follow up with the parents. The school newsletter, scheduled meetings and IEP conferences are used to facilitate communication between the family and school staff. Flexible scheduling permits conferences with single working parents.

Most children transition out of the program to MPS. A systematic transition routine is followed.

The program implements a follow up study to provide longitudinal data.

#### Threshold Early Intervention Program

Threshold Early Intervention Program is located in West Bend and serves children from birth to 3 years of age who live in Washington County. Children birth to 18 months are served in the home by the teacher/trainer and can receive needed therapies on an outpatient basis by occupational, physical or speech therapists. If the child's health is at risk, therapists visit the home.

Children attend the center based preschool program two times a week for half day sessions through the semester of their third birthday. Transportation is provided and parents are invited to participate every day. Structured and unstructured play activities

are the focus of the sessions. Children are grouped according to ability and the teacher/child ratio is often 1:1. Therapists and the EC:EEN teacher provide therapy in the context of the play group. A computer is used to help teach about cause/effect relationships.

Children are often referred to the program by physicians, day care providers, social service workers, or public health nurses. Children with a 25% delay in one or more areas are served by the program. Children who have the potential for delay either because of medical, family or environmental concerns are also served. Premature children are monitored for developmental problems.

The parent advisory board, which is like a PTA group, meets 4 times a year. Parents, a nurse, and a social worker serve on the board. A monthly family activity, usually a social or theme meeting, is planned. Respite care is arranged through the county.

Transitions to the West Bend School system are cooperatively planned for most children the semester after their third birthday. A meeting introducing parents to the school system's special education preschool program is conducted twice a year.

In the future, the center hopes to be able to provide some integrated programming by cooperation with day care facilities.

## CHAPTER IV

## Summary

The purpose of this paper was to investigate how early intervention for handicapped children from birth to 3 could be effectively implemented. Literature from 1987 to the present was reviewed.

Early intervention can make a significant difference in the development of handicapped infants and toddlers. The requirements of PL 99-457 were described and the progress which had been made on implementation of the law in Wisconsin was noted.

A variety of programs used to implement IFSP were reviewed. Meeting family needs, improving parent-child interactions, and empowerment of the parents were major themes of the programs reviewed. The discrepancy between many service providers' policies on providing family focused intervention and their actual practices was most notable.

Assessment of children under three could best be accomplished through parental reports, observations, profiles, and checklists. Norm referenced tests were not considered appropriate. Assessment at these ages should be used prescriptively rather than predictively.

Some criteria for identifying at-risk infants were enumerated and the difficulty of predicting which infants are likely to experience additional problems was discussed. Many professionals

felt that early intervention for the child and support for the parent at the first sign of trouble was likely to yield a positive outcome. A low cost system in which parents monitored development of their at-risk infants was described. The power of effective parenting to overcome all but the most extreme problems of premature birth was the primary rationale for the MITP.

Integrating handicapped and nonhandicapped children into the same program was found to have the potential to create a demanding environment which could assist in the continued development of the handicapped child's behavior repertoire. Merely placing nonhandicapped children in a program with handicapped peers was not sufficient. Activities needed to be planned and organized to encourage interaction. Many curricular approaches to mainstreaming existed; selection of a particular program was best accomplished by matching the individual child's needs to the program expectations. The use of trained day care providers opened up a big resource of services for young disabled children in integrated, community based systems.

Literature on best practices was reviewed. Characteristics of exemplary programs included: comprehensive, integrated, normalized, adaptable, outcome based services. While a family focus was also an important part of a quality program, some teachers spent little time with families and were not interested in incorporating the family into the program. Play was described as the way children learn and acquire skills, but many teachers



questioned used instruction in the context of structured activity.

A major concern of implementing instructional strategies was to aid the child in acquiring more functional and independent repertoires of behavior. Because relevant antecedents and consequences were part of the activity, motivational and attentional problems were minimized. Generalization was encouraged because the skill was taught across a variety of materials and settings. Naturalistic training techniques were described.

A growing body of research supported Piaget's declarations on the importance of play for young children. Handicapped children showed a fairly normal progression of development in sensory play and in symbolic play. Because of its relation to language acquisition the development of symbolic play appeared to be an important intervention with young handicapped children.

Language development begins from the moment of birth. The young infant is affected by the caregiver's interpretation and responsiveness to behaviors which appear to be communicative, e.g. eye contact, vocalization and facial gestures. Caregivers often need training in turn taking and language eliciting techniques. In the classroom teaching language in a play setting required no extra time and encouraged use of skills.

A major goal of some programs was to shift the balance of power toward the child so that the child could exercise control over the environment by using conventional social adaptive behavior. Research showed that nonhandicapped, as well as

handicapped children, were more likely to display competent behavior if interactive episodes were child initiated and caregivers were responsive and encouraging. Computer applications could be integrated into the program as a tool for teachers to help children communicate, make choices, and learn basic concepts.

The most outstanding characteristic of maltreated children was atypical social development. These children showed a variety of coping patterns which required different teaching strategies. The most appropriate and beneficial environment possible was needed to give the abused support and to enhance their self perception.

Crying was more common among children who had mental or physical disabilities. Frequent crying and low soothability was very aversive to adults and linked to child abuse. Strategies to reduce crying were discussed.

Parents had concerns about transitions from infant programs to public school preschools at age 3. They wanted to play an active part in the decision making process. The kinds of support provided to ease transitions for parents and their children in several models was described.

The implementation of PL 99-457 had implications for teacher training. Creation of a two level certification to assure minimum beginning and professional competencies was proposed.

Visits to selected early intervention centers in Milwaukee, Washington, and Sheboygan Counties were described.

#### Conclusions

Early intervention for handicapped children birth to 3 and their families is a new field characterized by its diversity. The interventionist can have many roles, in many settings, with very heterogeneous populations of children and families, and in concert with a variety of other professionals.

The passage of PL 99-457 has brought new challenges for which many are unprepared. Training, observations of exemplary programs and guided experiences in implementing best practices will help professionals grow into their new roles.

A primary area in which training, sensitization, and field experience is needed is that of empowering and involving the family. The discrepancy between policy and practice in this area is partially because it is a new concept for many professionals. Ongoing inservice programs which included awareness activities, observation and guided experiences could assist professionals in improving their abilities to teach, empower, involve and relate to parents.

Like family involvement, the use of play is an important element of early intervention to which some professionals merely play lip service. Some professionals do not have a depth of understanding of play and its implications for development of the whole child.

Applications of play as instructional strategy, agent of change, and cognitive, linguistic, and social fundamentals are missing from many teachers' repertoire of skills. Guided

observations could be used to help these interventionists understand what is happening when children are "just playing". A cookbook approach to give them ideas on using various levels of play in their classrooms would provide an invaluable starting point for using play as an instructional agent. Successful use of play could be a springboard for these professionals to increase their understanding of its meaning to child development and to create more applications of play to share with other professionals.

Mainstreaming handicapped children into day care and regular toddler preschool programs can facilitate development of social interaction skills when teachers provide the proper conditions. Teachers need training and actual experience in arranging the environment, grouping children, and facilitating interactions to provide effective mainstreaming and integration programs.

One final area in which some professionals need instruction is that of using and teaching others to use effective interactional strategies. Turn taking, interactive match, and language eliciting and expansion techniques are important tools for early intervention. Professionals need expertise in this area and need to know how to train parents and caregivers to use these methods in everyday interactions.

With the inclusion of at-risk infants as a group targeted for intervention by PL 99-457, the problem of predicting which infants need intervention to facilitate optimum development is very important. Intervention for children who have not demonstrated a

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