This practicum designed and developed a program to implement a reverse mainstreaming model of inclusion for 7 toddlers (ages 1 to 3) with disabilities (Down syndrome, profound mental retardation, cerebral palsy, neurofibromatosis, stroke, and hearing impairment) and 3 of their typically developing peers. Emphasis was on the provision of appropriate peer role models for toddlers with disabilities and the encouragement of an appreciation of children with differing abilities by typically developing children. The program was provided within a community day care facility. Analysis of pretest and posttest test scores (on the Early Intervention Developmental Profile) before and after 3 months of program implementation revealed that the program's seven children with disabilities improved in their social/emotional and language scores. The program's three typically developing children also showed increased social/emotional scores and no regression in other developmental domains. All families expressed appreciation for the program, felt it had been beneficial for their children, and wished to see it continue. Appendices include the parent survey form, teacher/therapist interview questions, interview questions for parents of typically developing children, the family satisfaction survey, sample newspaper publicity, the consent form, and a discipline statement. Contains 85 references.
Enhancing Services for Toddlers With Disabilities: A Reverse Mainstreaming Inclusion Approach

by

Ernestine E. Cormany

Cluster 47

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February 2, 1994
Date

This practicum report was submitted by Ernestine E. Cormany under the direction of the adviser listed below. It was submitted to the Ed. D. Program in Child and Youth Studies and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

Approved:

April 22, 1994
Date of Final Approval of Report

Mary Ellen Sapp, Ph. D., Adviser
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ABSTRACT


This practicum was designed to develop and provide a reverse mainstreaming model of inclusion for toddlers with disabilities and their typically developing peers. It addressed the need for toddlers with disabilities to have appropriate role models from which to learn as well as for typically developing peers to gain an appreciation for children with differing abilities. A community day care center wing was renovated during the organizational phase of implementation to provide classroom space, a snack area, a family visitation room, and office space. Enrolled children came from low to moderate income households. Services and materials were provided at no cost.

Two grants were submitted. They were written by the writer and funded through the Department of Housing and Urban Development (HUD). Grant monies were combined with other existing resources. The writer conducted a public awareness campaign; developed intake procedures; trained staff; gathered family satisfaction survey results; and administered a developmental pretest and posttest.

Analysis of the data revealed that the program's seven children with disabilities improved in their social/emotional and language scores. The program's three typically developing children also showed increased social/emotional scores and no regression in other developmental domains. All families expressed appreciation for the program, felt it had been beneficial for their children, and wished to see it continue.

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CHAPTER I
INTRODUCTION

Description of Community

The community setting for this practicum work is located in a county on the east coast of a rapidly growing southern state. The county is considered rural by most standards and is comprised of several bedroom communities and beach resort areas located directly adjacent to a large metropolitan area.

Census figures compiled in 1990 showed a county population of 405,494 residents. Heavy growth potential is projected to include an additional 136,000 persons by the year 2000. Of the current population 91,314 are children and youth under the age of 18 and 16,988 of these children are infants and toddlers between birth and age three. Within the infant and toddler population, approximately 2,300 are identified as having established conditions, developmental delays, or multiple high risk factors.

The socioeconomic makeup of the area represents a predominance of low to moderate income families. Further review of the statistics compiled in 1990 indicates that 19.2% of the county’s children are living in poverty.

Numerous inland pockets are comprised of unskilled/unemployed black
families. Concerned residents and law enforcement officials express fears regarding escalating substance abuse and crime.

Tourism and high technology corporations provide the majority of employment for the area’s work force. The lack of a public transportation system in the area makes it difficult for those without private vehicles to reach their employment sites, to keep medical appointments, and to maintain community ties.

The beach areas of the county consist of a fairly segregated population of white middle income families with a significant representation of upper income senior citizens and retirees. In a recent countywide referendum held to fund children's services, it was reported that the overwhelming defeat was due in part to the senior population who appear to be interested only in their own agendas (McAleenan, 1992).

**Writer's Work Setting and Role**

The writer's work setting is a countywide early intervention program for infants and toddlers with diagnosed conditions, developmental delays, and significant high risk factors. The program is operated under the auspices of a private not-for-profit organization which serves children and adult clients with developmental disabilities.

Although in its 35 years of existence the umbrella organization has concentrated its major services on adult clients with mental retardation, recent
interest has been generated in serving infants and toddlers. This interest was fostered by the passage of Public Law 99-457, The Education of the Handicapped Act Amendments, in 1986 and by the addition of new staff who advocated for progressive programming for children.

With the support and direction of the organization's Board of Directors and a visionary strategic plan, a new department for children and youth services was added to the organization in January, 1992. One function of this department is early intervention programming for infants and toddlers with developmental disabilities (i.e., physical impairments, cerebral palsy, Down Syndrome, prenatal substance exposure, etc.).

Children under the age of one are served in the early intervention program via a home based model. Children between the ages of one and three are served in three center-based classrooms located in the north, central, and south parts of the county. Thirty six children with special needs are currently enrolled. The program is family centered with a focus on parent/professional partnerships and team treatment. The services of physical therapists, occupational therapists, and speech pathologists are also available on a daily basis in the classroom environment.

The writer's position in the organization is director of Children's Services. Early intervention programming for infants and toddlers is one program responsibility of this position. The writer has a close working relationship with the organization's executive director and board of directors and is afforded a
great deal of latitude for progressive and creative approaches to program
development.

The writer supervises a staff of eight teachers and eight therapists in the early intervention program. A participatory management style is used whereby all staff members are encouraged to offer input into program development and problem solving. Weekly staff meetings and monthly inservice days afford the opportunity for close communication and sharing. All suggestions and opinions are valued, and the writer has received support, enthusiasm, and a feeling of camaraderie relative to this practicum.

Outside the workplace, the writer is a member of several county boards of directors which serve the needs of children. The writer is also serving as chairperson of the countywide organization which is assessing and planning programs for all children with special needs between birth and age 5. These involvements allow the writer to be visible and provide numerous opportunities for networking and for marketing new program concepts.
CHAPTER II
STUDY OF THE PROBLEM

Problem Description

Within the writer’s organization, young children with developmental disabilities and their families were receiving early intervention services in classroom environments which were segregated and self contained. In addition, only limited opportunities existed in the community at large for inclusion of disabled children with their typically developing peers.

Historically, this situation had been accepted by children and their families for many years. Children with disabilities had been thought of as individuals to be cared for at home or in specialized care centers and institutional settings. Interaction between children with special needs and the mainstream of society had been minimal at best. Even with the passage of such heralded legislation as Public Law 94-142, the Education of the Handicapped Act in 1975, which had as part of its mandate the need for least restrictive environments (LRE), only the needs of children between ages 5 and 21 were considered (Schliefer & Klein, 1992).
New hope for the needs of infants and toddlers was fostered in 1986 with the passage of Public Law 99-457, the Education of the Handicapped Act Amendments. Although the majority of states bought into services for infants and toddlers with special needs, few of them complied with the letter of the law regarding LRE, integration, and inclusion.

With this backdrop, the problem of segregated service delivery continued to be a major concern within the state, the county, and the organization with which the writer is associated. Such excuses as insufficient funding and lack of coordination of services had been used as scapegoats for not following through with integration and inclusion programs.

Also, within the writer's organization, the needs of adult clients had often taken priority. Throughout the life of the organization, little emphasis had been placed on progressive programming for children. Only limited attention had been given to the need for integration and inclusion by parents and professionals who had been tending to the basic details of merely securing and providing services.

Briefly stated then, infants and toddlers with disabilities in the organization's early intervention program had limited opportunities to interact with their typically developing peers. For the purposes of this practicum, the writer has chosen to deal with this situation as it relates to the toddler population alone.
Problem Documentation

Documentation of this problem was supported by observations, reviews of the records, parent/teacher surveys, and personal interviews with parents of children with disabilities and parents of typically developing peers.

It was easy to document the existence of the totally segregated nature of the classroom environment by observation alone. Enrollment at the three sites operated by the organization was limited only to children with diagnosed conditions, developmental delays, or multiple high-risk factors. The only sign of integration was evident when an occasional volunteer brought her typically developing child for the day or when a sibling interacted with an enrolled child at drop off or pick up times.

The Family History and Demographic Profiles which were a part of the intake procedure for enrollment in the program provided documentation that only 7 of the 22-center based children had siblings living at home with whom they could interact outside the classroom. This meant that two-thirds of the children with disabilities did not have age appropriate role models outside the classroom. Informal interviews with families also revealed that their disabled children had limited contact with any formalized structure of mainstreamed activity in the community at large.

In a parent survey (see Appendix A) administered by the writer in November, 1992, nine of the eleven parents responding to items related to "Most Needed and Most Desired Services," chose an integrated classroom as
their first preference. The presented options had been identified in the organization's strategic plan as viable programs to be implemented within a 5-year period.

Interviews (see Appendix B) conducted by the writer with 6 classroom teachers and 9 therapists in November, 1992 indicated a concern that appropriate social and language "role models" were needed in the classroom. Interaction with children with normal language development and normal play schemes was recommended by 11 of the 15 individuals interviewed. The goal of classroom interaction was to provide stimulation for the children with disabilities.

Further documentation of the problem was seen during interviews (see Appendix C) with 7 families of young typically developing children. These interviews were conducted by the writer in December, 1992. Concerns were voiced regarding the impact which "mainstreaming" or "reverse mainstreaming" would have on their own children's development. Particular concerns were expressed regarding inappropriate social behaviors and overall regression which they feared might occur.

Causative Analysis

Several causal factors for the problem were identified. As discussed earlier in this chapter, the problem was one which fostered legislation to deal with the issues of integration and inclusion. However, even with the passage of
legislation, many states and local entities were slow to react. Nonetheless, the backbone had been provided through legislative mandate for greater opportunities for life in the mainstream, increased socialization, and an improved academic structure.

Paramount among the causes for this societal problem was the lack of education among professionals including service providers, medical personnel, and educators on the value of integration and inclusion. Moving forward from a philosophy of custodial care and isolation required many giant steps on the part of all players in order to begin integration and inclusion models.

Attitude adjustments were necessary as this evolution took place. The transformation of the professional community into one willing to take a fresh look at what individuals with disabilities could do instead of what they could not do was necessary. Also the parent/caregiver's willingness to share problems and frustrations had been a concern. Believing that their children could profit from exposure to typically developing children without fear of ridicule and harm was another essential ingredient.

Although the intention of the new legislation had been honorable, another cause for the problem was related to the logistics of program development. Training teachers, designing classrooms, networking with community groups, and educating families of typically developing children had been major causes for the retarded development of quality programs.
Specific causes for the problem in the writer's work setting reflected some of these same concerns. As mentioned earlier one of the major causes had been the priority given to adult services over children's services by the organization's administrators and line staff. This did not necessarily reflect opposition to children's programming but rather a lack of information on community needs and the valuable service which could be provided through prevention and early intervention.

It was evident that another cause for the lack of inclusion had been the complacent attitudes of families. They had appeared to accept the limited services available to them without realizing that the legislation had addressed such issues as LRE and mainstreaming. In conjunction with an agency parent training class on procedural safeguards and due process, a poll was taken of parents' perceptions of their rights regarding integrated placements. The overwhelming majority said they had never realized mainstreaming was an option for their children and made such statements as "I was happy to get anything I could for my child" and "I was so frustrated and thought something was better than nothing."

Only through information and education received as a part of the organization's parent network, were parents empowered enough to begin advocating for the needs of their children. Also families and service providers had not been assertive in their quest for "inclusion" in the community at large.

Even though the classroom teachers and therapists in the early
intervention program had given lip service to the need for integrated programming, in actuality they had been apprehensive about change. More often than not, they had appeared to be content with the status quo. Garnering the energy to organize and develop a new classroom curriculum had not appeared to be a priority.

Added concerns regarding the physical environment of the classroom had also been viewed as obstacles to integration. Not only would the classroom design need to be revamped to provide more natural opportunities for integration, but the fact that the early intervention program was located on the same campus as the adult program had been a concern. Marketing the reverse mainstreaming concept to families of typically developing children in this environment obviously presented more challenges.

Lack of education on the value of inclusion for the general public, and for families with typically developing children in particular, had presented another barrier. Families who were fearful about possible regression and the adoption of undesirable behaviors, needed opportunities to learn about the positive aspects of inclusion for their children as well as for themselves.

Finally the availability of sufficient financial resources to fund an integrated model had created a major concern. With cutbacks in social services in the writer’s state amounting to approximately 15% over the past 3 years, most organizations had barely been able to continue with present services, let alone consider new ones.
Relationship of the Problem to the Literature

A review of the literature provided evidence and documented the fact that historically a lack of integration and inclusion was deeply rooted with a myriad of causes. Although the studies reviewed varied in nature, the existing literature showed recurring themes, concerns, and emerging philosophies on the prospective causes of the problem and evidence as to its definitive existence.

Throughout history, society has typically cast children and adults with disabilities as different, to be feared, and in need of special treatment (Buswell & Schaffner, 1992; Peterson, 1987). As little as two decades ago families were still encouraged to institutionalize their children with disabilities with little hope for the future (Burke, 1991). Turnbull and Turnbull (1991) reported that individuals with special needs were considered second class citizens and included and accepted only by professionals and others with similar problems.

The first ray of hope for a formalized structure providing equitable educational opportunities to children with disabilities came in 1969 when the Handicapped Children's Early Education Program projects started the national trend of early childhood special education (Suarez, Hurth, & Pretridge, 1988), followed by Public Law 94-142 in 1975 and Public Law 99-457 in 1986 (National Council on the Handicapped, 1986). Prior to this time, integration and LRE were concepts only to be revered but not realized.
Even with this legislation, Early Childhood Special Education (ECSE) and Early Childhood Education (ECE) have reflected different developmental principles and have often had difficulty finding common ground. It appeared that ECSE was well grounded in the philosophy of Skinner, Pavlov, and Watson while ECE preferred the principles proposed by Piaget, Erikson, and Montessori (Graham & Bryant, 1993). A unification of these philosophies was advocated (Burton, Hains, Hanline, McLean, & McCormick, 1992; Graham, 1991; Hakes & Lockenbach, 1991; Peterson, 1991; Schleifer & Klein, 1990; Yesseldyke, Thurlow, Wotruba, & Nania, 1990) in order to reach mutually acceptable goals of integration and inclusion.

According to Salisbury (1991), models of integration often implied a system of "pushing in" (p. 147). Smith and Strain (1988) along with Radonovich and Houck (1990) corroborated this and reported on the difficult process of implementing the LRE mandate.

A misunderstanding of the difference between integration and inclusion was reported by Chaum and Blacher (1990). They described integration as a means of providing individuals with special needs an opportunity to participate with their nondisabled peers to the maximum extent possible in academics and extracurricular activities. Strully and Strully (1991) defined inclusion as much broader, incorporating all the components of integration including a feeling of being "welcome...invited in...a regular" (p. 32).
The literature (Anita & Kreimeyer, 1992; Gallagher & Coleman, 1990; Gloeckler, 1991; Impact Childcare Project, 1990; Ludlow, 1987) further revealed several clear cut causes and barriers related to professional caregivers. Inadequate teacher preparation, lack of staff development and inservice training, along with inconsistent certification standards were viewed as the greatest barriers to successful integration and inclusion. The apparent apprehension on the part of the staff in the writer's work setting was no doubt linked to similar concerns which needed to be addressed for successful program development.

McEvoy and Vandercook (1991) discussed evidence that regular educators had been hesitant to include children with disabilities due to fear of the adverse effects which might be seen on their typically developing peers in the same classroom. A study by Ross (1992) reported that it was very possible for regular caregivers in child care settings to be trained to provide a good portion of the special care needed by disabled children, and that teachers trained in special education would only be necessary on a consultative basis. The writer's work setting provided evidence of this, where classroom teaching assistants with regular education background were successfully managing classrooms in consultation with seasoned special education teachers. Of significance also was a report by Diebold and Voneschenbach (1991) which concluded that regular educators were often underestimated in their competencies and their positive attitudes toward integration and inclusion.
There has been a wealth of research (Carnahan, 1986 b; Johnson, Kilgo, Cook, Hammitte, Beauchamp, & Finn, 1992; Salisbury, 1990; Wiedmeyer & Lehman, 1991) on the connection between successful integration and administrative support. Johnson et al (1992) summarized by saying that administrators needed to buy into a family-centered approach, to be committed to service coordination, and to possess excellent interpersonal skills.

A common cause for apprehension about integration and inclusion was the need for program curriculum to accommodate the varying needs of children with disabilities and typically developing peers in the same classroom. Teachers, therapists, and the program coordinator in the writer's work setting had expressed concern about designing a curriculum which would be stimulating for the typically developing children, and yet would accommodate the needs of the children with disabilities.

Interviews conducted with parents of typically developing children in the writer's community showed evidence that reluctance was felt regarding a workable curriculum design for integration, and the value which would be derived for all children. The crux of the matter was that the parents showed reservations about inclusion models and were concerned about negative effects such as regression. Bogin (1991) reported on this concern, and discussed the enormous amount of "selling" to families of typically developing children which was necessary in order to encourage enrollment in a reverse mainstreaming program.
Hundert and Houghton (1992) and Templeman, Fredericke, and Udell (1989) reported that careful planning must go into programs to encourage positive social interactions, lest segregation occur even in an integrated environment. An intentionally provocative article by LeLaurin (1992) stated that no definitive research existed regarding peer interaction in the infant and toddler age group. White and Mott (1987) called for longitudinal studies of integrated models.

Another concern regarding the classroom environment was the modifications which would be necessary to the physical plant for integrated programming. Strain (1990) discussed structural changes which were often necessary for the classroom and stated that some considered them to be cost prohibitive. The writer did not see this as a major factor in her work setting because of the young age of the participants. She did however recognize that this would be a consideration in a setting for older children and in settings where adaptive equipment was not available and structural barriers were present.

The literature (Bailey & McWilliam, 1990) also revealed another cause for concern. Since a wide variety of quality preschool programs for children with disabilities did not exist in this age group, and since school systems did not normally provide services for typically developing children at this young age, parents and professionals were often forced to look to unstructured day care centers for services. Abery and McConnel (1989) reported that placement in
day care centers had been a concern because of either resistance from management or lack of trained personnel. Comparable situations were found in the writer's community. Although a few of the local day care centers agreeable to accepting children with disabilities, the attention given to them was minimal, and developmental activities were not generally appropriate.

Another cause of the problem addressed in the literature (Chaum & Blacher, 1990; Zantal-Weiner, 1988) was the failure by professionals to solicit the support of parents and to educate and empower them to advocate for their own needs. In contrast to this, new programs and parent advisory councils have been organized within the writer's work setting as a result of the writer's Practicum I implementation (Cormany, 1992). These programs and councils have major components of education, child advocacy, and empowerment. Although the work is underway and definite inroads have been made, the writer's organization continually strives for parent involvement.

Germane to the lack of integrated services was the inability to provide adequate funding for programs of integration and inclusion (Kjerland & Mendenhall, 1991; Smith & Rose, 1991; Turnbull & Turnbull, 1990). Rose and Smith (1992) reported however that Chapter I funding as well as many other traditional and creative resources have begun to earmark dollars with a special interest in integration. Although organizations know that funds are limited, many are working hard to competitively vie for available monies.
CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectations

The goal for the practicum was that toddlers with disabilities in the writer’s early intervention program would have greater opportunities to interact and to build friendships with their typically developing peers. The expectation was that children with and without disabilities as well as their families would accrue benefits from the enhanced program services.

Expected Outcomes

The following outcomes were projected for this practicum:

1. Enrollment in the early intervention program will move from segregated to integrated with three typically developing children and seven children with disabilities for a 1:3 ratio for 3 out of 4 days each week when attendance records are reviewed.

2. Involvement in a community play group, story group, or recreational activity will take place once each month with all seven children with disabilities participating as validated by the case management log.
3. Positive attitudes about program participation will be expressed by at least 7 out of the 10 parents/caregivers whose children are enrolled in the program as measured by the Family Satisfaction Survey following practicum implementation.

4. All seven children with disabilities will improve in the following developmental areas after 3 months in the program as measured by the Early Intervention Developmental Profile: (a) social/emotional, and (b) speech/language.

5. No typically developing peer will regress in the six areas measured on the Early Intervention Developmental Profile after 3 months in the program.

Measurement of Outcomes

A written Family Satisfaction Survey was designed by the writer (see Appendix D). The survey contained 11 statements to be considered at the conclusion of the implementation period. Families recorded their answers by responding to statements on a scale ranging from 1 to 4 reflecting the extent of their feelings. The items were ranked from strongly agree (1) to strongly disagree (4). The survey concludes with a request to record whether their enrolled child did or did not have a disability. Space was provided for comments.

The survey was written in language designed to be "family friendly" in keeping with the mandate of Public Law 99-457. Written instructions indicated
that it was not necessary for families/caregivers to sign their names when completing the survey. In order to encourage honest communication, the writer believed this was necessary. The survey was given to families 2 weeks prior to implementation completion. Each adult family member or caregiver who interacted with the child regularly and had occasion to observe the classroom setting was given a survey along with a self-addressed stamped envelope to complete at home and mail to the Center. Special arrangements were made for the teaching assistant to read the statements privately to one illiterate family participant during a home visit.

The measurement tool used for assessing each child’s progress in the six developmental domains (perceptual/fine motor, cognition, language, social/emotional, self-care, and gross motor) was the Early Intervention Developmental Profile (EIDP). The EIDP is a criterion referenced test shown to have concurrent validity. It has highly significant test-retest correlations ranging from .86 to .99 and is based on normal development spanning the birth to 36 month age range (Schaefer & Moersch, 1981; Schaefer, Spalding, & Bell, 1987). The EIDP was chosen as the primary measurement tool because of the staff members’ familiarity with it as well as its acceptance by the local education agency (LEA) as their primary tool for evaluating infants and toddlers.

This instrument was administered as a pretest during the first 2 weeks of attendance and as a posttest during the final 2 weeks of implementation. The test was administered with an interdisciplinary approach using special
education teachers and therapists as examiners. Parents/caregivers were also consulted as full members of the assessment team.

Attendance data and daily journal entries were used to document results of ongoing participation in the project. Case notes were kept by the classroom teacher/outreach worker to record all family and community contacts as well as to monitor each child's progress throughout the implementation period.
CHAPTER IV
SOLUTION STRATEGY

Discussion and Evaluation of Solutions

The problem addressed in the writer’s work setting was that toddlers with disabilities who attended the organization’s early intervention classroom program had limited opportunities to interact with typically developing peers. Varied ideas, solutions, and models of integration and inclusion which had been tried by others facing similar problems were reviewed to garner information and related data for use in this practicum.

Perhaps the most common of all reported models of integration (Wessel, 1993) was that used by the public school system for children with disabilities who fall in the traditional age range between 5 and 21. Implemented as a mainstreaming model following the passage of Public Law 94-142, it provided a partial solution to the need for a least restrictive environment (LRE) as the preferred setting for children with disabilities. Dileo and Meloy (1990), Ludlow and Lombardi (1992), and Walters and Gerber (1986) reported on this model where mainstreaming in all instances showed the overwhelming majority of children being nondisabled.
Numerous programs (Guralnick & Groom, 1988; Karnes, Schwedel, Lewis, Ratts, & Esry, 1989; Radonovich & Houck, 1990) reported using a "reverse mainstreaming" approach with typically developing peers incorporated in classrooms predominately made up of children with disabilities. Parents and teachers alike gave this concept a positive endorsement when it was used with very young children. Hetzel (1990) also endorsed this model with a slightly different twist in a classroom integrating age ranges from 12 months to 10 years. Reporting from the perspective of a parent of a typically developing toddler, Giordano (1983) discussed his study on reverse mainstreaming, and referred to it as "sidestreaming."

Thios and Foster (1991) discussed an impersonal model which used life size dolls and pictures of children with disabilities to sensitize typically developing children to individual differences. Results showed attitudinal changes but no changes in social interaction with children with disabilities after using only doll models and pictures.

To further explore service delivery, literature reporting on practices in other countries was reviewed. Sharp differences were reflected between individual countries. Although most European countries have made great strides toward integration in the last two decades, many differences continue to be seen. Sweden, Norway, and England have enacted legislation promoting integration. Italy is viewed as the most progressive with 90% of their students mainstreamed and Germany is seen as the least progressive with strong inclinations toward
continued institutionalization (Murray-Seegert, 1992). Other less progressive
countries include Japan which still favors institutional care with strong family
support (Sudia, 1988), Australia which leaves the decision making regarding
integration up to individual principals (Bain & Dolbel, 1991), and Canada which
reports dissatisfaction with integration from regular educators and minimum
academic gains for students (Saint-Laurent & Lessard, 1991).

According to the literature, integration by itself did not automatically yield
successful results for young children with disabilities nor promote an
appreciation of individual differences in nondisabled children. Instituting a
staffing pattern where teachers could work as facilitators to orchestrate the
learning and interactive environment was recommended (Bordner & Berkley,
1992; Graham & Bryant, 1993; Jenkins, Odom, & Speltz, 1989). Buswell and
Schaeffner (1992) reported on the designation of a specific individual who acted
as an "integration facilitator" to coordinate the inclusion of children. Radonovich
and Houck (1990) reported on the use of a "floater" to assist with friendship
development, feeding, assessments, and a home visitation component.

Another basic ingredient to successful programming was an appropriate
teacher-to-child ratio. The National Association for the Education of Young
Children (NAEYC) recommends a ratio of 1:3 or 1:4 with a group size no
greater than 10 (Carnahan, 1986 a; Graham & Bryant, 1993; Katz, 1992).

In order to embrace the diversity of an integrated classroom, the
curriculum was seen as part of the solution which needed careful design.
Fewell and Oelwein (1990) reported that the quality of program design was more important than time in the program. Studies showed developmental gains particularly in the social/emotional and language domains through such quality program designs (Guralnick, 1976; Handelman, Harris, Kristoff, Fuentes, & Alessandri, 1991). Katz (1992) estimated that meaningful data could be gathered for preschoolers in as few as 3 to 4 weeks. She stated that the older the child in the integrated program, the longer the time period required for reliable assessment.

Many successful integrated classroom programs for young children promote play as the primary mode of learning (Rogers, 1988; Barbour & Seefeldt, 1992). Circle time was designated by Burstein (1986) as a key component to integration, where all children are working toward a common goal. Music used at that time was seen as a welcome common denominator (Gunsburg, 1991; Radonovich & Houck, 1990).

Several studies (Billings, Curry, Leutz, Franklin, & Shaefer, 1991; Border & Berkley, 1992; Burstein, 1986) reported that small group activity was used as an integral part of the curriculum design to facilitate pairing and intimate relationships. Incorporating therapies into the classroom setting as opposed to "pull-out" therapy was also recommended as a "state of the art" approach (Graham & Bryant, 1993). Not to be forgotten in any program design was the important aspect of documentation of daily activities and resultant developmental gains (Keogh & Sheehan, 1988).
The literature (Pucciarelli, 1987) further revealed several key strategies for marketing integrated programs. Advance planning and approval in writing from parents of children with and without disabilities were reported as essential. Education campaigns regarding the "best practice" approach of integration complete with hard data on developmental gains, on improved relationships and self concepts, on parent satisfaction data, and on personal success stories were seen as approaches for program promotion (Bricker & Sheehan, 1983; Davern & Schnorr, 1991; Kantrowitz & Wingert, 1989; Kemple, 1991; Myers, 1991; Ross, 1992). Direct parent involvement in the program was also recommended by Peck, Carlson, and Helmstetter (1992) although Miller, Strain, Boyd, Hunsicker, McKinley and Wu (1992) found that the amount of parent involvement did not influence parent attitudes toward the program's value.

In order to address successful inclusion in the community, the writer reviewed literature which reported strategies for service providers to solicit community "buy-in." Providing speakers to service groups and parent groups was one such suggestion (Chaum & Blacher, 1990; Siegel & Brians, 1992). Aber and McConnel (1989) reported on the interagency employment of a LRE facilitator who would identify programs in the community interested in inclusion and subsequently make the arrangements and negotiate service agreements. Successful community integrated after-school programs were reported by Ledman, Thompson, and Hill (1991) and special summer programs were
discussed by Hamre-Nietupski, Krajewski, Riehle, Sensor, Nietupski, Moravec, McDonald, and Cantine-Stull (1992) as other options.

In addition to these ideas generated during the literature search, the writer had considered the following other options: (a) developing a consultative model by placing infants and toddlers with disabilities in community child care centers and providing support and consultative services periodically, (b) using siblings of children with disabilities as the typically developing peers in a reverse mainstreaming model, (c) using children of staff members as the typically developing peers, (d) physically locating the program in a community child care center and selecting typically developing children from the enrolled population, and (e) promoting parent knowledge and interaction by encouraging one family member to be a volunteer parent each day in the classroom.

When critiquing the solutions presented, the writer believed that the solution involving a "reverse mainstreaming" approach held the most promise. Also, locating the program on a campus which housed a community child care center seemed to provide the greatest opportunity for enrolling typically developing children. Garnering the support of parents of all enrolled children and working toward the desired outcome of inclusion appeared possible with this approach.

Although the other possible solutions had significant merit, it was felt that this approach would be a good first step to full community inclusion. It
appeared that if positive outcomes could be attained through this project, that work with other private and public settings which regularly serve typically developing children would be forthcoming. Elements of many of the other possible solutions were also incorporated within the scope of the selected solution.

**Description of Selected Solution**

A "reverse mainstreaming" inclusion model for children between 1 and 3 years of age to be located on the campus of a local community center was selected as the primary solution for implementation. The targeted community center was a former elementary school which had been renovated to serve as the home for numerous not-for-profit groups and organizations including a child care center. The location was selected because of its size, and its close proximity to typically developing children within the 1 to 3-year-old population. The cost effectiveness of developing an agreement with the Board of County Commissioners which managed the center to provide rent-free space was also a factor.

Plans were made to enroll a total of 10 children in the classroom program. A 1:3 ratio was planned consisting of three typically developing children and seven children with disabilities. The child care center at the targeted site was be explored as the source for typically developing peers. Two children with disabilities who were previously included in the early intervention program's
segregated model, and who still met the age guidelines were to be given priority for enrollment in the reverse mainstreaming model. Plans were made to conduct intake interviews with the families of all prospective enrollees. The program was to be provided at no cost to parents. Individual therapy was to be billed to Medicaid, to private insurance carriers, or to be absorbed by the organization.

It was decided that classroom scheduling would consist of 3 hours of programming during 4 mornings each week. Afternoons would be left free for home visits. One full day each week would be used for planning time, for scheduling community excursions for the children, and for teacher/therapist consultative sessions.

The selected staffing pattern was to consist of one lead teacher, one teaching assistant, one outreach worker, and three therapists. It was planned that each staff member would be hired on a part time basis with schedules not to exceed 20 hours each week. Three inservice sessions were to be used for training the early intervention staff. An additional session to include child care providers for training/team building was planned.

The curriculum design was to be selected after the classroom staff was hired and had been given the opportunity to review available materials. The Early Intervention Developmental Profile was selected as the assessment instrument to be used for pretests and posttests. A satisfaction survey
designed by the writer was to be administered at the end of the implementation period to measure the parent’s perceptions of the program.

Report of Action Taken

In order to set the stage for the practicum, the writer along with two parent representatives and two other staff members traveled to the western part of the state to observe a similar pilot project of "reverse mainstreaming." Findings during this site visit were compatible with the writer’s program design. Following this trip, the writer provided an overview of the final implementation plans to the organization's Board of Directors, the Children's Advisory Council, the Executive Director, the Early Intervention Coordinator, and the lead teacher from the organization’s segregated classroom. Enthusiasm and ownership were developed in this team approach.

The cost of the project for a 12-month period was estimated to be $136,000 including therapies. As a not-for-profit organization operating on a tight budget, it was obvious that a great deal of energy needed to go into grant writing and contracting.

In response to a request for proposals from a state agency, a grant proposal was written but not funded. At the same time the writer prepared and submitted two other grant proposals to the Department of Housing and Urban Development (HUD) under the public services division of the Community Development Block Grant Program. Although each of the HUD grants was not
initially recommended for funding, the writer filed an appeal and subsequently went through two public hearings before funding was granted.

Because of the low and moderate income requirements of the HUD grant sources, it was necessary that the enrollment criteria in the writer's model be changed to address these income eligibility guidelines. In order to accomplish this, community screening activities were conducted in specific neighborhoods which were designated by HUD as target areas. The enrolled population therefore represented a more narrow field of participants than had been included in the original plan. The writer then faced a dilemma regarding one of the remaining children from the previously segregated model who was "over income". A decision was made to absorb the cost of programming for this child in order for her to receive classroom services. HUD was agreeable with this decision.

Political maneuvering and strategizing were then necessary to develop a contract with the Board of County Commissioners for space. After several weeks of planning and negotiating, three rooms of rent-free space in a former electrical shop at the targeted community center were donated by the Commissioners. The writer's organization, however, became responsible for utilities, fire alarms, hot water installation, and general building renovations to meet state child care standards. Because of the extent of the renovations, the writer spent the greater part of 3 months in bringing the site up to fire, safety, and health standards in order to meet the state licensing requirements.
During the same time period, the writer worked closely with the community center's child care provider to develop a "memorandum of understanding." With only minor revisions, an agreement was signed permitting typically developing peers from the child care center to attend the program during specific hours each day. Also a part of the agreement called for sharing playground areas and certain designated toys and equipment.

Beginning with the 1st month of the project, the writer instituted a public awareness campaign which continued throughout the 8-month implementation period. The writer spoke at meetings of numerous community groups and civic organizations about the benefits of the inclusion model. An article about the program and the dollar awards appeared during the 2nd month of implementation and a front page full-color feature article appeared about the program's operation during the 7th month (see Appendix E). A third article will be published addressing the developmental outcomes of the children enrolled in the program.

Staff members were recruited and hired by the writer through newspaper advertising and internal job postings. The lead teacher, the speech therapist, and the occupational therapist who had worked in the program's segregated model were given contracts to work in the reverse mainstreaming program. A new teaching assistant and physical therapist were employed. The half-time position of the outreach worker was combined with the half-time lead teacher's position yielding one full time employee.
After reviewing various new curriculum materials, the writer and the teaching staff decided to again consider the curriculum which had been used in the segregated model. Since the previously used curriculum was also designed for typically developing children, and the lead teacher believed that it met the needs of all targeted children, the writer decided to continue its use. The curriculum was supplemented with written materials gathered during the research portion of this practicum. New pieces of adaptive equipment and developmental toys which were purchased by the writer to accommodate the needs of the children.

Inservice sessions for the early intervention staff were conducted for a full day during 3 consecutive weeks in the 3rd month of implementation. An additional session was held in the 4th month to include the staff who provided child care for the typically developing children. Inservice sessions covered the following subject areas: (a) inclusion principles, (b) inclusion facilitation, (c) curriculum adaptation, (d) family-centered philosophy, and (e) evaluation and record keeping. The writer provided two training sessions on community outreach for the staff member who had taken this position.

Prior to implementation, the writer had anticipated that new forms, parent packets, and handbook revisions would be necessary in order to accommodate the enrollment of typically developing children. With the amount of work which was required to get the project "up and running", the writer found it necessary to modify earlier plans. A consent form (see Appendix F) and a discipline
statement (see Appendix G) were the only new forms which appeared essential. These were developed and adequately met the needs of the program.

Interviews with families of children with disabilities who desired enrollment took place during the 4th month of implementation. Seven children with disabilities were accepted on a first-come-first-served basis. Following a conference between the writer and the child care personnel during the same month, potential children were identified who could serve as typically developing peers. The lead teacher then made several visits to the child care center for observations. After narrowing the field down to three, the teacher conducted interviews with the families and provided them with a tour of the facility. All three families chose to make application to the program, and the children were accepted.

In retrospect, a better plan for accepting the typically developing children would have included developmental testing prior to program acceptance. This may have avoided the later concern which developed when one of the typically developing children needed to be referred for an evaluation of a developmental delay. Although the child's family was receptive to the suggested evaluation, earlier identification would have resulted in more timely intervention services.

Seven children with disabilities and three typically developing children began the reverse mainstreaming program 4 mornings each week at the beginning of the 5th month of implementation. The developmental disabilities of the children enrolled included cerebral palsy, Down Syndrome, profound mental
impairment, neuro fibro mitosis, stroke, and hearing impairment. The makeup of the classroom consisted of six African American children, two caucasian children, and two children of mixed ethnicity.

Within the first 2 weeks of enrollment, all children were tested using the Early Intervention Developmental Profile to obtain baseline data. This instrument had been used by the majority of the staff previously and they were comfortable in administering it. For the next 3 months, the children attended the classroom program. Goals were set for each of the children in the areas of cognition, motor development, communication, socialization, and self-help. The teachers worked daily, integrating developmental activities into circle time, small group work, motor play, and snack time, with careful monitoring of "inclusion" in all settings. Therapists were scheduled in the classroom, 2 days each week. Due to a family emergency, the speech therapist was out of the program for 4 consecutive weeks during the 2nd month of implementation.

The outreach/home visiting portion of the program was also begun within the same time period. Under the conditions of one HUD grant, a minimum of 1 home visit every 10 days was made in order to provide good carryover between the classroom program and the home environment. Referrals for additional services (i.e., audiological evaluations, nutrition services, counseling, etc.) were made regularly, and families were accompanied on visits to additional therapies, to public school sites, or to receive any other service where assistance was needed. The relationships which developed through this model
were positive. Some parents requested home visits more often and a strong bond was evident. The dynamics of the situation, however, needed to be closely monitored by the writer. Consistent supervision and regular case reviews were necessary in order to assist the outreach worker in maintaining a professional distance.

Because the outreach worker's position received only partial funding under the terms of the HUD grant, the writer found it necessary to eliminate the previous plans for contracting with other groups for extracurricular inclusion activities. Alternate plans were made which did not require vehicular transportation or exorbitant amounts of time. With a community recreational facility within walking distance and a mobile library which was used by numerous children in the community, the writer was able to create a reasonable substitution for the original plan. Groups of three children were taken once each month for a special "outing" in this manner. As expected, the first few visits into the "real world" drew stares and whispers from some of the children and parents. By the end of the 2nd month however, the children began acknowledging each other and developing relationships.

Two special social activities were planned during the implementation period. One consisted of a combined picnic between the staff, children, and parents of the reverse mainstreaming model and the child care program. The other was a community open house held near the Thanksgiving holiday for those persons who were directly involved in the program as well as the
community at large. Specific invitations were sent to funding sources, the media, government officials, community service providers, families, and extended families.

Throughout the implementation period, regular staff and board meetings were held to reinforce success, to trouble shoot, to evaluate, and to support classroom and outreach activities. During the final 2 weeks of implementation, the *Early Intervention Developmental Profile* was administered as a posttest for all enrolled children. During this same time period, the *Family Satisfaction Survey* was distributed to families who were instructed that the surveys should be completed anonymously and returned to the center.
RESULTS, DISCUSSION, AND RECOMMENDATIONS

Results

Toddlers with disabilities needed opportunities to interact with and learn from their typically developing peers. Evidence existed that these needs were not being met in the writer's early intervention work setting. It was also evident that typically developing young children in the community had no formalized structure for interacting with their peers with differing abilities. The solution strategy utilized included funding, developing, and operating a "reverse mainstreaming" inclusion model. The writer's early intervention program teamed with an existing child care center to blend their populations. Enrollment materials were developed, inservice training sessions were held, and developmental testing was completed for all enrolled children. Family satisfaction was measured by use of an anonymous survey.

Outcomes for the practicum were projected, and the results relative to each are presented here.

Outcome 1. Enrollment in the early intervention program will move from segregated to integrated with three typically developing children and seven
children with disabilities for a 1:3 ratio for 3 out of 4 days each week when attendance records are reviewed.

This outcome was met.

An integrated program was developed by relocating the existing segregated program to a community center campus where a child care program agreed to share their enrolles as typically developing peers. A total of 10 children were enrolled in the reverse mainstreaming model. Seven of the children had diagnosed conditions or developmental delays, and three of the children were typically developing peers. Table 1 presents evidence of this achieved outcome with a demographic profile of each enrolled child and his/her family.

A 1:3 ratio of typically developing peers to children with disabilities was maintained a minimum of 3 out of the 4 attendance days each week. A review of the enrollment/attendance records showed that this occurred. The attendance data also reflected, that because of the frequent illnesses of children with disabilities, a 1:2 ratio existed on 14 of the attendance days.

Outcome 2. Involvement in a community play group, story group, or recreational activity will take place once each month with all seven of the children with disabilities participating as validated by the case management log.

This outcome was met.

Grant limitations for van leasing and extra chaperons, prevented the writer from carrying out the original plan. Other opportunities which could be more
## Table 1

### Demographic Profile of Program Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child's age at pre/posttest (in months)</td>
<td>23/26</td>
<td>18/21</td>
<td>20/23</td>
<td>27/30</td>
<td>33/36</td>
<td>33/36</td>
<td>23/26</td>
<td>17/20</td>
<td>28/31</td>
<td>18/21</td>
</tr>
<tr>
<td>Child's Diagnosis/condition</td>
<td>Cerebral Palsy</td>
<td>Hearing Impaired</td>
<td>Downs Syndrome</td>
<td>Stroke</td>
<td>Neuro Fibro Mitosis</td>
<td>Profoundly Mentally Retarded</td>
<td>Cerebral Palsy</td>
<td>Role Model</td>
<td>Role Model</td>
<td>Role Model</td>
</tr>
<tr>
<td>Mother's age at post test</td>
<td>45</td>
<td>24</td>
<td>36</td>
<td>36</td>
<td>27</td>
<td>31</td>
<td>45</td>
<td>28</td>
<td>23</td>
<td>25</td>
</tr>
<tr>
<td>Mother's education</td>
<td>H.S. + 1</td>
<td>11 yrs.</td>
<td>H.S. + 2</td>
<td>H.S. + 1</td>
<td>H.S. + 2</td>
<td>GED</td>
<td>H.S. + 1</td>
<td>11 yrs.</td>
<td>H.S.</td>
<td>H.S.</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>&gt;mod.</td>
<td>low</td>
<td>&lt;mod.</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>&gt;mod.</td>
<td>&gt;low</td>
<td>&gt;low</td>
<td>&lt;mod.</td>
</tr>
<tr>
<td>Family configuration</td>
<td>foster father &amp; mother</td>
<td>father &amp; mother</td>
<td>father &amp; mother</td>
<td>father &amp; mother</td>
<td>father &amp; mother</td>
<td>mother</td>
<td>foster father &amp; mother</td>
<td>mother</td>
<td>father &amp; mother</td>
<td>mother</td>
</tr>
</tbody>
</table>

Note. Socioeconomic status is based on income guidelines as designated by the Department of Housing and Urban Development.
easily provided were substituted. Arrangements were made to incorporate the children with disabilities into activities going on at the community child care facility as well as the nearby park and recreation complex once each month. Holiday parties, mobile library/learning center visits, and recreational playground activities rounded out the schedule for a successful outcome, substantiated by a review of the case management log.

Outcome 3. Positive attitudes about program participation will be expressed by at least 7 out of the 10 parents/caregivers whose children are enrolled in the program as measured by the Family Satisfaction Survey following practicum implementation.

This outcome was met.

Results of the survey are presented in Table 2. An analysis of this data shows that all 10 of the families felt that typically developing children were gaining a greater appreciation of individual differences and were increasing their own comfort level around others with differing abilities. Because of the small class size and the special attention given, 9 of 10 families felt that their children received better instruction. Of special interest was the reaction to the question regarding typically developing children "picking up" undesirable habits from children with disabilities. All respondents indicated that this was not a concern.

An analysis of surveys received from families of children with disabilities showed their enthusiasm for including their children in play activities, for receiving fair treatment, for improving in language skills, and for benefiting from
### Table 2

**Family Satisfaction Survey Analysis**

<table>
<thead>
<tr>
<th>Statements</th>
<th>Degree of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>As a result of the class, I believe non-handicapped children...</td>
<td></td>
</tr>
<tr>
<td>1. ...will feel more comfortable around children who have handicaps.</td>
<td>8</td>
</tr>
<tr>
<td>2. ...will understand more about what children can do who look and behave differently.</td>
<td>7</td>
</tr>
<tr>
<td>3. ...are more accepting of their own mistakes and limitations.</td>
<td>6</td>
</tr>
<tr>
<td>4. ...received better instruction because of the class size and special attention given to them.</td>
<td>5</td>
</tr>
<tr>
<td>5. ...tended to &quot;pick up&quot; undesirable habits from the children with handicaps.</td>
<td></td>
</tr>
</tbody>
</table>

As a result of the class, I believe handicapped children...

<table>
<thead>
<tr>
<th>Statements</th>
<th>Degree of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. ...were &quot;included&quot; in play activities by the other children without handicaps.</td>
<td>8</td>
</tr>
<tr>
<td>2. ...were treated fairly by the children without handicaps.</td>
<td>7</td>
</tr>
<tr>
<td>3. ...imitated positive activities which they saw the nonhandicapped children doing.</td>
<td>8</td>
</tr>
<tr>
<td>4. ...improved in their language and were better able to communicate their needs.</td>
<td>7</td>
</tr>
<tr>
<td>5. ...received better instruction because of the nonhandicapped &quot;role model&quot; children in the class.</td>
<td>6</td>
</tr>
<tr>
<td>6. I would like to see the class continue and would recommend it to others.</td>
<td>10</td>
</tr>
</tbody>
</table>

*Note.* N = 10 (7 families of children with disabilities, 3 families of typically developing children). 1 = Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Strongly Disagree.
better instruction. The program received the endorsement of all 10 families regarding their desire for program continuation and their recommendation of the model to others.

Outcome 4. All seven children with disabilities will improve in the following developmental areas after 3 months in the program as measured by the Early Intervention Developmental Profile: (a) social/emotional, and (b) speech/language.

This outcome was met.

Results of the testing in the social/emotional domain are presented in Figure 1. An analysis reveals that all seven of the participants showed developmental gains of 3 or more months. Classroom observations by the writer and comments from the teacher also substantiated this improvement.

Professionals in child development theory and maturation may view the attained results for social/emotional development with some skepticism. They may wish to argue that participants F and G who gained only 3 months developmentally in the social/emotional domain would have done so through maturation alone. The writer would concur if these were "typically developing" children. However, the fact that participant F was profoundly mentally handicapped with an I. Q. of 38, and that participant G was an unstimulated twin with cerebral palsy living in a foster home (see Table 1) presents a different picture. From past experience in working with segregated programs, the writer believes the developmental implications show that all enrolled children with
disabilities benefitted in the area of social/emotional development and that the amount of benefit derived was proportional to the disability. Of particular interest is participant B, a hearing impaired 21-month-old child, who showed a gain of 7 months in the 3-month period of inclusion. Comments from the teacher and parents led the writer to believe that his exposure to the socially rich classroom environment contributed to his desire to make friends and become an active participant.
Results of the testing in the speech/language area are shown in Figure 2. An analysis of the results indicates that all seven of the participants showed gains of 2 or more months. Although this clearly represents a gain, it was of lesser proportions than in the area of social/emotional development.

The writer discussed these findings with the classroom teacher and speech therapist. The following questions were raised: (a) could it be that the typically developing peers were not as verbal as one would have liked? (b) could it be
that the enrolled children had disabilities so severe that they could not respond to language stimulation as predicted? or (c) could it be that the 3-month period between pretest and posttest was not enough time to show a more marked improvement in this complex area of development? Although any of these concerns could have kept the gain scores from being higher, the writer would like to explore a longitudinal approach with continued testing in the language domain throughout the additional 9-month period of the funded grant. This would help ascertain whether a greater proportional gain would result from a longer time period in the program.

Outcome 5. No typically developing peer will regress in the six areas measured on the Early Intervention Developmental Profile after 3 months in the program.

The outcome was met.

Results of this testing are presented in Figures 3, 4, and 5. On review, this data shows that all three of the typically developing children showed improved social/emotional scores of 4, 2, and 8 months respectively. Two of these children clearly showed gain scores beyond what would have been expected through maturation alone leading the writer to believe that the reverse mainstreaming model was a contributing factor.

Child I, however, (see Figure 4) showed a gain of only 2 months in the social/emotional area. Further examination shows that this child's pretest scores showed evidence of possible delays in other developmental areas.
Scores in all Developmental Domains for Typically Developing Child H:

Figure 3. The developmental scores in all developmental domains as determined by the Early Intervention Developmental Profile are depicted for child H who was enrolled for 90 days in the reverse mainstreaming program.

Scores in all Developmental Domains for Typically Developing Child I:

Figure 4. The developmental scores in all developmental domains as determined by the Early Intervention Developmental Profile are depicted for child I who was enrolled for 90 days in the reverse mainstreaming program.
Scores In all Developmental Domains for Typically Developing Child J

Figure 6. The developmental scores in all developmental domains as determined by the Early Intervention Developmental Profile are depicted for child J who was enrolled for 90 days in the reverse mainstreaming program.

An unanticipated outcome of this practicum is that the child has now been referred to a psychologist for further testing. If a developmental delay is confirmed, the child will be reclassified from a typically developing peer to a child with a developmental delay. The child will then become eligible for therapy and other related services.

As was projected, no regression was noted in the scores of the typically developing children in the six developmental areas tested. This helps to negate
concerns sometimes voiced regarding the negative effects of exposure to children with disabilities. Of particular interest was the developmental gain noted in the area of cognition for all three of the children. Since the children came from low and moderate income households, it is suspected that the rich learning environment of the early intervention curriculum may have been partially responsible for the gains of 4, 5, and 7 months.

Discussion

A large body of research (Hakes & Lockenbach, 1991; Graham, 1991; Katz, 1992; Schliefer & Klein, 1992; Suarez, Hurth, & Prestridge, 1988; Turnbull & Turnbull, 1991) exists documenting the need for inclusion and the resultant positive outcomes which may occur for children and families. The writer’s problem-solving experience yielded results from the Family Satisfaction Survey and the children’s developmental posttests which gave credence to the belief that toddlers with disabilities and their typically developing peers could benefit from a reverse mainstreaming model of inclusion.

Through this practicum, the local barriers between Early Childhood Education (ECE) and Early Childhood Special Education (ECSE) as described by Graham and Bryant (1993) and Burton, Harris, Hanline, McLean, and McCormick (1992) were all but eliminated. By housing the reverse mainstreaming model on the same campus with “regular kids,” the day-to-day interaction and the combined ECE and ECSE staff inservice sessions greatly
contributed to reaching a common ground on developmental principles and philosophies.

The 1:3 teacher/child ratio recommended by Bordner and Berkley (1992) and maintained in this classroom model proved to be compatible with the children's needs and the ability of the special educators and therapists to give individualized attention to the children and to facilitate small group interaction. With the knowledge that successful integration and inclusion would not occur merely by placing children in the same classroom, careful planning and orchestration of activities with appropriate staffing patterns became necessary components.

Marketing the reverse mainstreaming model to families of typically developing children proved to be a much easier task than was anticipated. According to Bogin (1991), a great deal of selling was necessary to gain enrollment in his reverse mainstreaming program. Fortunately the location of the writer's program provided a natural base from which to draw typically developing participants. It was interesting to note that initial interviews with families of typically developing children yielded immediate positive responses from "mothers" but reluctance from "fathers." Fear of being perceived as intrusive kept the writer from exploring this further, but much in the literature about fathers and their children with special needs, substantiates that the male ego and protective posture often contribute to the concern.
The success of the practicum experience as viewed from the family perspective was well documented by the Family Satisfaction Survey results shown in Table 2. In addition to the positive responses on all numbered items, several families chose to write comments. Selected comments are as follows: "I strongly feel that the role-model children are an excellent addition to the program"... "I think this is great, I am the grandfather of one of the children and would like to volunteer to help"..."Although my child has a disability, I feel she is a good role-model herself for others" ... and "The staff members have been extremely helpful."

The only parent comment which could be perceived as negative was the following. "It would be nice if the classes were even smaller. I do realize however that not all the enrolled kids are always there at the same time because they are sick or at the doctor." Although it would be helpful for the writer to follow up on this comment, it has not been possible to do so because of the anonymous nature of the survey.

A further implication of the project's success was the receptiveness of families to the home visiting component and to the individual conferences at the center. An average of 1 visit every 10 days was made to each family home and at least one opportunity was given weekly to each caregiver to meet personally with the teacher at the project site. It appeared that families of children with disabilities were more eager and required more time than families of typically
developing children. Families of typically developing children, however, were always good natured and were receptive to all program components.

Perhaps of greatest interest to the writer as an early intervention practitioner was the data collected on developmental outcomes in the reverse mainstreaming model of inclusion. Applying research as reported by Guralnick (1976) and Handelman, Harris, Kristoff, Fuentes, and Alessandri (1991) to help solve the problem in the writer's early intervention setting was helpful and added much to the writer's understanding of inclusion.

Also worthy of mentioning is the positive aspect of the newspaper publicity generated from the reverse mainstreaming program. A number of families made calls to the center wanting additional information. Some expressed an interest in enrolling their typically developing children in the program. To date, one mother has offered to work as a volunteer in the program if she may bring her own toddler as a role-model child.

In summary, this project met, and in most cases, exceeded expectations. It served to enhance programming for toddlers with disabilities, provided an opportunity for typically developing children to gain an appreciation for their peers with differing abilities, and introduced a new inclusion model to the county for others to replicate.
Recommendations

Based on experience gained during this practicum, the following recommendations are offered:

1. That confidentiality and sensitivity be maintained in all situations.

2. That families of all enrolled children be well grounded in their understanding of the benefits of inclusion.

3. That a pretest be given to typically developing children who are being considered for enrollment prior to their acceptance in order to validate their suitability for the classroom.

4. That program funding for children of all socio-economic levels be obtained.

5. That parents be given a scheduled classroom visitation time in order to observe the program and their own child's involvement.

6. That families of children with disabilities and role-model children have additional opportunities to interact in social settings.

7. That dependable transportation be arranged for all children to promote regular attendance.

8. That the program continue through the remaining nine months of the grant period with posttests administered at 90 day intervals.

9. That the model be replicated within the writer's agency at a minimum of two additional sites.
Dissemination

Interest in this project has been evident throughout the county and state because of the legislative mandate for early intervention services under Public Law 99-457, Part H, which became effective in October, 1993. Interestingly enough, as announcements were made of the writer’s project, the local education agency (LEA) started a similar program and worked with the writer to replicate her model within the confines of the "special school" setting. The writer was also contacted by the state Department of Health and Rehabilitative Services for information on the model's operation.

Plans are being made to disseminate materials and findings to the state's Interagency Council for Infants and Toddlers and the state Parent Resource Organization. Data on developmental gains are also being disseminated to members of the state's Developmental Disabilities Planning Council and the County Exceptional Student Education Advisory Council where the writer will be giving presentations. The writer also plans to prepare an article for submission to the Journal of Early Intervention.
References


APPENDIX A

MOST NEEDED AND MOST DESIRED SERVICES
PARENT SURVEY
For the purposes of program development and strategic planning, please let us know what you see as most important. Number your preferences (1 through 5). Keep in mind your own needs as well as the needs of your child.

_____ Parent training on developmental skills to help my child.

_____ More opportunities to meet informally with other parents.

_____ A center-based classroom where typically developing children serve as role-models.

_____ Opportunities for personal counseling.

_____ More direct therapy (physical, occupational, and speech) in the classroom.

Comments ____________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

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APPENDIX B

TEACHER/ THERAPIST INTERVIEW QUESTIONS
1. In your opinion, how do you think the organization could best improve center-based classroom services for children with disabilities?

2. Of the recommendations you made, name one which you feel would hold the most promise for improved developmental scores. Why?
APPENDIX C

INTERVIEW QUESTIONS FOR
PARENTS OF TYPICALLY DEVELOPING CHILDREN
INTERVIEW QUESTIONS FOR
PARENTS OF TYPICALLY DEVELOPING CHILDREN
DECEMBER - 1992

1. Has your child had an opportunity to play with children with disabilities in the past?

2. When you were in school, were there any children with disabilities in your school? In your class?

3. Have you heard of a concept called mainstreaming or reverse mainstreaming?

4. If given the opportunity, do you think you would be interested in having your child make friends with children who have disabilities?

5. Can you name some advantages to this? Disadvantages?
FAMILY SATISFACTION SURVEY

Responses to the following statements will help the First Step Early Intervention Center in evaluating your child's class. It is not necessary to sign your name. Results of this survey will help the Center assess the value of the program and determine your interest in its continuation. Please read each statement and circle the choice which most clearly reflects your feelings.

As a result of the class, I believe that nonhandicapped children...

<table>
<thead>
<tr>
<th>Statement</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ...will feel more comfortable around children who have handicaps.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. ...will understand more about what children can do who look and behave differently.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. ...are more accepting of their own mistakes and limitations.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. ...received better instruction because of the class size and special attention given to them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. ...tended to &quot;pick up&quot; undesirable habits from the children with handicaps.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

As a result of the class, I believe that handicapped children...

<table>
<thead>
<tr>
<th>Statement</th>
<th>STRONGLY AGREE</th>
<th>AGREE</th>
<th>DISAGREE</th>
<th>STRONGLY DISAGREE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ...were &quot;included&quot; in play activities by the other children without handicaps.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. ...were treated fairly by the children without handicaps.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. ...imitated positive activities which they saw the non-handicapped children doing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. ...improved in their language and were better able to communicate their needs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. ...received better instruction because of the non-handicapped &quot;role model&quot; children in the class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I would like to see the class continue and would recommend it to others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

* My child is a: a. Child with special needs (handicapping condition)  
  b. "Role model" child (nonhandicapped)

Comments: ____________________________________________
______________________

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APPENDIX E

NEWSPAPER PUBLICITY
ROLE MODEL: Two-year old Michael McIver, 2, serves as a role model for Laura Doyon, 1, of Mims, who has Down syndrome at The First Step Early Intervention Childrens Program, operated by the Association for Retarded Citizens. Watching the interaction are lead teacher Debbie Flewellin and Laura's grandfather, Edward Doyon.

Children share lessons with each other

By GEORGE WHITE
Star-Advocate Writer

The simple idea of having children teach other children how to play is taking root in Titusville in a very special way.

The First Step Early Intervention Childrens Program, operated by the Association for Retarded Citizens, has found a home in the former shop at the Gibson Community Center in Titusville.

There, three children ages 1 through 3 are the first in the county to "reverse mainstream." As peers, they are lending a helping hand to eight children with disabilities. The initial results are remarkable, said Ernestine Cormany, director of children's services for ARC.

"Traditionally, children with disabilities have been segregated into programs of their own, with mainstreaming usually starting about age 5," said Cormany, who also is studying the results of the program for her doctoral thesis at Nova University in Fort Lauderdale.

"What we're doing here is different because we're using the typically developing children as role models.

"A child's work is, of course, play. The way they learn all of their different
Children share lessons with each other

"It has been said that the beginning of morality is sensitivity. These children want their counterparts to succeed, and they help along the way," Cormany said.

Even though the program only started in October, Flewwellin said she has already noticed some profound changes in both groups.

"At first, the typically developing kids were not interacting that much. Now, they are helping totally on their own, even helping hold the other child's hand so they can pick something up. It has been amazing," she said.

One-year-old Laura Doyon of Mims, who has Down syndrome, has progressed in her play activities, Flewwellin said. "Now she crawls over to toys by herself and does her own thing. And it's just from seeing the other kids do it."

Even after only a month with the program, Denise Nobles of Tuscawilla has noticed dramatic improvement in her 20-month-old daughter, Samantha, who has trouble hearing and is behind her age group developmentally.

"I think this is a wonderful program because of the changes I've seen in Samantha since coming here," she said. Samantha now is starting to use a sipping cup instead of a bottle and has begun to use sign language to communicate, she said.

The biggest reward for teachers in the program is seeing both groups of kids progress, Cormany said. "It's just so neat to come to a parent support group meeting and hear how great the kids are doing."

The yearlong program, which may be expanded to other areas of the county, is funded through $22,000 in city and county Community Development Block Grants.

For more information on the First Step program, call 690-3464. To reach the AC's Childline for help matching available services to special needs, call 631-8944.
ROLE-MODEL CHILD CONSENT FORM

THIS IS TO CERTIFY THAT THE UNDERSIGNED parent/guardian has requested enrollment of __________ as a role model child in the First Step Early Intervention Children's program; and

THAT THE UNDERSIGNED RECOGNIZES AND ACKNOWLEDGES that the developmental preschool program provides learning opportunities to support optimum developmental levels based on a curriculum designed to support social, emotional, cognitive, and physical development; and

THAT THE UNDERSIGNED AGREES to provide required current immunization records and health and social histories; and

THAT THE UNDERSIGNED HAS READ AND UNDERSTANDS the discipline policy of the First Step Early Intervention Children's Program.

Signature: ____________________________

Parent/Guardian

Date: __________________________

Witness: ____________________________

Date: ____________________________
APPENDIX G

DISCIPLINE STATEMENT
DISCIPLINE POLICY

FIRST STEP EARLY INTERVENTION CENTER

ARC-BREVARD, INC.

The environment of the FIRST STEP EARLY INTERVENTION CHILDREN'S CENTER is structured so children may make choices of play activities and materials. This ability to choose and plan gives the child power and prevents many conflicts.

Children are encouraged to develop language skills that help them to communicate their needs and feelings. Language is modeled for them by adults and other children so that they may learn to use language as a problem-solving tool. A speech/language therapist is available in the classroom to assist with developing expressive and receptive language skills.

If a child is experiencing difficulty being self directed and using language to solve problems in one area of play, he/she is offered another play activity. In the event that the child is still unable to control his/her behavior and cannot make appropriate choices for him/herself, using language to get his/her needs met, he/she is removed from the problem area and given a personal space away from others. He/she may return to the group or activity whenever the behavior is under control.

Guidelines for behavior are clearly explained to the children. Appropriate behavior is modeled and language is continuously encouraged in order to avoid conflict and allow the children opportunities for decision making and self direction. The First Step Early Intervention Children's Center strives to provide an environment that allows child and adult alike to function to their fullest in solitary and group activities. The goal of the entire program is to support the development of an internal control system which enables the individual to grow and function within a social setting.

Assertive discipline is advocated at the FIRST STEP EARLY INTERVENTION CHILDREN'S CENTER. Assertive discipline is a balance between empowering the child and empowering the adult to maintain a safe environment conducive to age appropriate learning.
Child-directed interaction occurs in the following manner:

A. Describe the appropriate behavior
   ("You are making a tower")
B. Imitate appropriate behavior
   (Adult makes a tower)
C. Reflect appropriate talk or gestures
   (Child claps when tower is complete. Adult claps)
D. Praise appropriate behavior
   (This is a terrific tower!)

Adult directed interaction occurs in the following manner:

A. Knowledge feelings
   "It's hard to have to do what others want."
B. Communicate choices
   1. You may pick up blocks with your right or left hand.
   2. You may pick up blocks by yourself or I will take your hand
      and help you. How do you want to pick up blocks?
C. Take action
   1. Praise child for picking up blocks.
   2. Assist the child by taking his hand and provide hand
      over hand assistance in picking up a block.
D. Warn
   If you don't pick up the blocks you will sit in a chair.
E. Chair
   Take the child calmly to a chair.
   Tell him "you didn't do what I asked you to do so you will have
   to sit." Have the child sit for 1 minute with 5 seconds of
   quiet at the end. Ignore behavior while child is in
   the chair.
F. Return to the task and praise for compliance.

CORPORAL PUNISHMENT IS NEVER APPROPRIATE AND NEVER USED.

As a parent/guardian or primary caregiver I have read and understand
the aforesaid discipline policy and desire that my child be enrolled
in the First Step Early Intervention program.