The Infancy/Preschool Education Specialization program at the New York State University College at Buffalo is described. This personal training program prepares master's level candidates to become certified educators of infants and preschoolers with handicapping conditions. It is a cooperative program between the Exceptional Education, Psychology, and Speech Language Pathology and Audiology departments of the school, and students must take courses focusing on infant specialization from each department. It trains educators to serve both at-risk and preschool children and their families. Project goals are to: teach them to assimilate and use knowledge from many disciplines to assess at-risk infants and preschoolers; plan intervention methods; and work effectively with family members. Program components include training in infant/preschool assessment, developmental and neonatal intervention, managing family and child stress, and language and communication strategies. Practicum sites include infant and preschool intervention programs and medical and hospital programs. From 1985-1988, 14 educators have graduated from this program and 30 more are enrolled. Append are a copy of the pre/post specialization questionnaire and a copy of the graduate exit evaluation form. Contains 3 references. (Author/SM)
INFANCY/PRESCHOOL EDUCATION SPECIALIZATION
State College at Buffalo

Project Co-Directors: Dr. Judith Bondurant-Utz
and Dr. M. Virginia Wyly

Contact Person: Dr. Judith Bondurant-Utz
State College at Buffalo
Exceptional Education Dept.
1300 Elmwood Ave.
Buffalo, NY 14222
(716) 878-5429

Dr. M. Virginia Wyly
State College at Buffalo
Psychology Department
1300 Elmwood Ave.
Buffalo, NY 14222
(716) 878-5027
AASCU/ERIC Model Programs Inventory Project

The AASCU/ERIC Model Programs Inventory is a two-year project seeking to establish and test a model system for collecting and disseminating information on model programs at AASCU-member institutions—375 of the public four-year colleges and universities in the United States.

The four objectives of the project are:

- To increase the information on model programs available to all institutions through the ERIC system
- To encourage the use of the ERIC system by AASCU institutions
- To improve AASCU's ability to know about, and share information on, activities at member institutions, and
- To test a model for collaboration with ERIC that other national organizations might adopt.

The AASCU/ERIC Model Programs Inventory Project is funded with a grant from the Fund for the Improvement of Postsecondary Education to the American Association of State Colleges and Universities, in collaboration with the ERIC Clearinghouse on Higher Education at The George Washington University.
ABSTRACT

The Infancy/Preschool program is a personnel training program that prepares master's level candidates to become certified educators of infants and preschoolers with handicap conditions. It is a cooperative program between the Exceptional Education, Psychology and Speech Language Pathology and Audiology Departments of the State College at Buffalo. The interdisciplinary program trains educators to serve both at-risk and preschool children and their families. From 1985-1988, 14 educators have graduated from the program. Currently, 30 graduate students are enrolled in this specialization. These students graduate with a New York State Teacher of Special Education certificate with preparation for special infant/preschool populations.

The program components include training in infant/preschool assessment, developmental and neonatal intervention, managing family and child stress, infant/preschool intervention strategies, language and communication strategies. Field placements provide experiential training for students. Practicum sites include infant and preschool intervention programs as well as medical and hospital programs. These components enable graduate students to develop expertise as educators of infants and preschoolers with disabilities.
INTRODUCTION AND BACKGROUND

A description of the interdisciplinary Infant/Preschool Specialization course is contained in this document. The program, begun in 1985, was sponsored for three years by the U.S. Department of Education, Division of Personnel Preparation.

The research literature consistently points to the fact that positive developmental outcomes are associated with early programming for young children and infants who are handicapped. The effectiveness of early intervention programs depends in part upon appropriately trained personnel (Bricker, 1984; Gilkerson, Hiliard, Schrag & Shonkoff, 1987).

At present there are no generally accepted New York State certification criteria for educators of infants or preschoolers with handicapping conditions. Guidelines for the special educator's role are emerging from existing infant/preschool intervention programs (Bricker, 1986). The present State University College at Buffalo Infancy/Preschool program will impact on the development of certification criteria for teachers of infant/preschoolers with disabilities in New York State.

In 1980-1981, family courts in New York State placed over 11,000 preschool children with handicaps into educational programs. This number was up from 8,000 the previous year. According to data from the New York State Education Department the number of infants/preschoolers being served has increased each year by 9-12 percent over the population served the previous year. Based on these data it is clear that there is a definite need for well-trained, competent infant/preschool special educators.

1) Preschool programs were mandated for children with handicaps below age 5 under article 89 of the New York State Education law meeting the following criteria:
   (a) 3 to 5-year-old children who are blind, deaf, and severely physically handicapped, served in state-operated and state-supported schools;
   (b) infants who are deaf and less than 3 years of age, served in approved educational facilities; and
   (c) children with handicaps below the age of 5 whose parents have successfully petitioned the Family Court for transportation, tuition and maintenance costs.

In New York State infants and preschool special education youngsters have been provided the following:
   (a) state-funded services for children who are blind, deaf, and physically handicapped;
   (b) deaf education centers, for babies who are deaf from birth to age three;
   (c) federally-allocated State Implementations Grants, through Part C of the Education for the Handicapped Act;
   (d) projects funded through HCELP;
(c) Title VI-funded preschool programs;
(f) Headstart; and
(g) state-funded Early Childhood Directional Centers.

2) In June 1987, New York State elected to participate in Title I of P.L. 99-457 federal discretionary legislation designed to assist the states in developing a comprehensive system of early intervention services for infants and toddlers and their families who have, or are at risk of having, permanent disabilities. This program provides an opportunity for New York State to expand and improve existing services for the children from 0-3. To date New York State has not yet included infants and toddlers under their Comprehensive System for Personnel Development.

The role of the preschool/infant educator is both complex and multifaceted (Gilkerson, 1981). The emerging specialization required that the educator possess skills and knowledge related not only to special education but to other disciplines as well. The special educator must be able to accurately assess the young child's developmental level, plan intervention strategies, measure child progress, and work as team members with other service providers. Finally, the special educator must be able to communicate well with adults, listen actively, demonstrate sensitivity to families' problems, identify needs and at times instruct parents.
DESCRIPTION OF THE PROGRAM

The Infant/Preschool Specialization program trains educators to serve both infants and preschool children and their families. The required courses forming the specialization were written and implemented through a three-year grant from the U.S. Department of Education.

Funding was provided for the development of an interdisciplinary program that offered courses across three separate departments: Exceptional Education, Psychology and Speech, Language, Pathology and Audiology. The project goals were to prepare educators to assimilate and use knowledge from many disciplines to assess at-risk infants and preschoolers, plan intervention methods and work effectively with family members. These goals were in concern with the recent Public Law 99-457 that requires an interdisciplinary focus in early intervention programs. This requirement is derived from the awareness that no one discipline can provide all the services needed by a family with an infant or preschooler who is delayed or handicapped.

a. Program Content
This training program is interdisciplinary. The required courses forming the specialization portion are offered through three separate departments, Exceptional Education, Psychology, and Speech Language Pathology and Audiology. Students are required to take courses focusing on infant specialization from each department. To further insure the interdisciplinary focus, courses within the Infant Specialization are co-taught by faculty who call upon professionals from other departments to share their skills and knowledge with students. For example, SUCC has no programs in the areas of physical and occupational therapy, therefore the specialization relies heavily upon experiences rather than formal courses in the development of skill areas. These experiences may include readings, guided observations, videotaped interventions, field work and presentations or demonstrations by physical and/or occupational therapists who are invited as guest lecturers.

General Special Education Courses Required for Training
The core courses from the general education specialization are offered by the Exceptional Education Department. The following core courses are required of all students enrolled in the Infant Specialization:

Curriculum for Individuals with Moderate and Severe Handicaps. Focuses on general curricular issues, physical management, and self-care/domestic living skills.

Contingency Management. An overview of applied behavior analysis principles including selection and implementation of reinforcement, stimulus control, and procedures for decreasing behaviors.
Etiology and Management of Individuals with Physically Disabling Conditions. Course provides explanation of medical, educational, and psychological implications of physical disabilities.

Exceptional Education Seminar. Required in the general core but adapted specifically to infant training. Students explore issues, problems, research, and theory as related to field of infancy.

Master's Project. Students design and implement a research project in the area of infancy education.

Required Infant Special Education Courses

The skills and content areas developed for special educators of infants within the Infancy Specialization are described here. These basic elements are the focus of our specialization which is composed of courses from Psychology, Exceptional Education and Speech Language Pathology and Audiology Department. Each focus has been formally incorporated into the specialized program. The entry level course is offered by the Psychology Department.

Normal and Atypical Infant Development. Two courses, Competent and Atypical Infant, are required. These psychology courses address both theory and practice in applying principles of infant development. Students perform structured infant observation, analyze case studies, interview families and visit infant programs. Language development is addressed in courses from the Speech Language Pathology and Audiology Department.

Assessment and Evaluation. This course includes a survey of neonatal screening tests, curriculum referenced assessments, parent-infant interactions scales and developmental norm-referenced assessments which are described and demonstrated by a variety of professionals providing an interdisciplinary focus. Students practice giving the assessments and are critiqued using videotaped segments.

Intervention/Curriculum Method. Assessment and intervention techniques are linked through a project-designed infant intervention course which introduces intervention theory, techniques, and curriculum methods. Laboratory time is allocated for student practice with various published curricula. Assessment data are used to determine long and short term curriculum objectives for both the child and the family and for writing individual education plans.

Family Focused Intervention. The focus of the course is on the interactive dyad of child and family. The
family course content focuses on family systems, stress and coping styles related to the handicapping condition. Students participate in simulation, role plays and videotaped analyses. Actual parents of individuals with handicaps are also included in the course to provide their real-life experience and expertise.

Field Experience Practicum. Preparing teachers in early childhood special education must embody a strong experiential component (Odom, 1987). The Infant Specialization requires two supervised practices designed to promote an interdisciplinary view of service provision. Agencies are selected which reflect an interdisciplinary philosophy and who provide high quality services for infants and their families. One practicum experience allows students to work with infants with moderate to severe handicaps and their families in home-based or center-based programs. The second has been designed to provide students with experience in center-based programs. Therefore, the students are able to work with infants exhibiting a range of disabilities and their families. The internship requires that the intern function effectively as a member of a transdisciplinary team and develop positive relationships with families and caregivers.

b. Tasks Associated With the Role of Infant/Preschool Educator

The role of the infant/preschool special educator involves a variety of tasks. Below are listed the tasks addressed in the Infancy/Preschool Training Specialization:
- Evaluation of the infant/preschooler's developmental status.
- Assessment of parent-child interaction.
- Determination of family needs.
- Designing and implementing appropriate child and family interventions.
- Empowering parents through use of interventions.
- Providing family support.

c. Major Competencies Acquired by Students

Intervention Competencies
- Apply basic research findings related to learning in neonates and infants to targeted behaviors in delayed infants, toddlers, and preschoolers.
- Identify major effects of the birth of an infant on parents and family structure.
- Analyze theoretical and empirical viewpoints relating to neonate and infant development as well as effects of infant on mother/father/caregiver; apply to relevant targeted behaviors in delayed infants and toddlers.
Demonstrate familiarity with key models in programming for handicapped infants and their families, including their data-supported impact.

Make decisions regarding individual infant objectives across instructional domains.

Teach appropriate tasks that elicit optimal development of the infant and toddler.

Coordinate salient information from other professionals to plan and evaluate the child's educational needs.

Coordinate professionals' and paraprofessionals' child-and-parent directed intervention efforts.

Family Support Competencies

Analyze parent/professional interaction practices, including sensitivity to cultural diversity, citing implications for the actions of the professional.

Analyze relevant research literature on attachment, bonding, and early parent/child interaction as it relates to infants and toddlers at risk for developmental disabilities.

Provide parent instruction in using appropriate teaching techniques and methods.

Counsel parents with regard to the needs of the child and the parent-infant interaction.

d. Practicum Facilities;

An important aspect of the program is the use of practicum sites for student participation. Fifteen infant/preschool intervention programs serve as practicum sites. The sites include the following: training with mild to severe handicapping conditions, student opportunities to work under close supervision of program teachers, opportunities to work closely with family members at centers or at home.

e. Program Courses

Infancy/Preschool Special Education Specialization

Year 1

Fall Semester

EXE/PSY 590 Competent Infant/Atypical Infant
EXE 525 Contingency Management in the Classroom
EXE 604 Etiology and Management of Physical Disabilities
EXE 500 Parent and Family Involvement in Special Education Programs

Spring Semester

EXE 615 Assessment of Infants and Preschoolers with Handicapping Conditions
EXE 500 Laboratory/Field Experience with Exceptional Students (3 hours)
EXE 520 Curriculum Practices I: Severe Handicaps
Fall Semester
LAU 040 Intervention for Infants and Preschoolers with Handicapping Conditions
EAL 500 Laboratory/Field Experience with Exceptional Students (3 hours)
SLA 541 Developing Early Communication: A Team Approach

Spring Semester
EAE 690 Master's Project
EAE 605 Seminar in Issues Concerning Handicapped Individuals

e. Program Staffing
The project co-directors are from the departments of Exceptional Education and Psychology. Program faculty are drawn from the Exceptional Education, Psychology and Speech Language Pathology and Audiology Departments at the State College at Buffalo. A program advisory group with representatives from each department meets regularly to review the program's progress.

f. Students in the Program
Students are recruited to the program from various disciplines. Each student is interviewed and academic credentials are reviewed. Students are assigned an advisor who meets with them to discuss the course sequence and their academic progress. Currently, 30 students are enrolled in the program. Ten students have graduated from the program.

g. Program Evaluation
There are two components in the evaluation plan. The first is an internal evaluation plan that asks: Are project tasks occurring as proposed and on time? The second element of the evaluation plan focuses on student progress on objectives and the project's progress relative to its purpose and objectives. It asks: Are students acquiring the expected competencies? and Is this project fulfilling its purpose and realizing its objectives. Appendix A contains the questionnaires used to obtain this data.
RESULTS

The major findings from the infancy/preschool personnel preparation program were threefold. The first was a project task control/monitoring system which addressed the internal evaluation question: Did project tasks occur as proposed on time? The second focused on student progress on objectives and the project's progress of its objectives. This component asked: Are students acquiring the expected competencies and is this project fulfilling its purpose and realizing its objectives? This portion of the evaluation plan used a documentation, satisfaction, and change design. The third element was a validation study which dealt with accepting a number of students into the program and then graduating them.

Our program is ongoing as we continue to expand the following baseline data. The primary data are official college records of the number of program applicants, number of program acceptances, and the number of names of program graduates. A 30-credit hour graduate, permanent certification sequence was developed for teachers of infants/preschoolers with special needs. Three new courses were written during the first year of the project. Each course was field-tested as "workshop courses" during Project Year One. The courses were revised based on instructor and student evaluation of the course design and content. Other courses in the infancy/preschool sequence were taken from Exceptional Education, Speech Language Pathology and Audiology, and Psychology Departments. These courses were already in existence but were revised to include more content relevant to the infancy/preschool program. All of these courses are now being offered on a regular basis. A standard course evaluation form has been developed and is being used for all of the core courses. A total of 54 students have entered the program of which 14 have graduated. Currently, we have 30 students in the infancy/preschool special education graduate program. Ten students have withdrawn from the specialization for a variety of reasons, e.g., moved, career change, etc. Enrollment in the core courses averages at ten students per course.

Our program results are being measured through pre- and posttest of students' knowledge in the infancy/preschool area are given at the beginning and the end of the sequence. Ten students have been given this pretest to date. These ten students have not graduated at this time so no data are available for posttest.

A Graduate Exit Evaluation to assess the program’s effectiveness from the student graduate's view is being administered at the beginning of the student's program and after graduation. (See Table 1.) Since the program is new, data are only available on a small group of students. A comparison between groups has been made since only a few students have graduated. Although these data are not as powerful as a within group comparison, a T-test between entry and exit groups on total score yielded an obtained t(df+17) -4.11 (p<.001) indicating that the two groups
are statistically different on this measure. Twenty-seven items of the 40-item questionnaire were statistically significant. Students reported a lack of knowledge in all major areas of infant-preschool special education at the beginning of their specialization as opposed to feeling competent at the end of the coursework in the specialization.

Primary data for employment of graduates consist of follow-up information about graduate's employment status and responsibilities. Ten of the 14 graduates have been employed in an infant or preschool special education setting. Satisfaction of employers of our graduates is still in the process of being evaluated since graduated students have not been employed long enough to assess on-the-job competencies. The immediate supervisors will be asked to complete a brief questionnaire regarding the graduate's competence and how they compare to other non-project trained teachers.

Both an inside and outside evaluator were employed to monitor the above-described program development and to evaluate program effectiveness.
CONCLUSIONS AND RECOMMENDATIONS

An interdisciplinary graduate program for preparation of teachers of infants and preschoolers who are at-risk or have special needs can be developed using a generic special education program as the base. Courses in infant/preschool development and assessment as well as intervention of child and family must be added to the basic requirements. Since New York State has no separate certification for teachers of infants and preschoolers with special needs, this graduate program is able to meet the requirements for certification and provide training in the area of early childhood. It is recommended that New York State establish a separate certificate for infants and preschoolers based on programs such as this and input from employers and teachers of infants and preschoolers with special needs.

In order to develop a truly interdisciplinary program, it is recommended that an advisory group representing the departments be organized. The formation of this interdisciplinary advisory group was a key factor in its success because it directed and monitored the development and implementation of this program. Cooperation of the members of this group and the three departments represented provided for a truly interdisciplinary approach to family focused infant/preschool personnel preparation.

It is equally recommended that the advisory group continue to provide direction as program data on student and employer satisfaction are collected and analyzed. Personnel preparation programs should include these data to insure that students are generally satisfied with the skills acquired from the training program and that graduates demonstrate to employers that the program is meeting community needs.
REFERENCES


INFANT/PRESCHOOL SPECIALIZATION QUESTIONNAIRE

Please answer each of the following questions. Fill out the correct answer on an IBM sheet. Use a #2 pencil.

PLEASE NOTE - a on the IBM sheet = True and b = False

True or False

_____ 1. The Bayley Scales of Infant Development is a criteria-referenced assessment tool used to measure infant development.

_____ 2. When an infant's behavior is monitored in terms of the proportion of correct or incorrect responses, the data collection procedure is described as time sampling.

_____ 3. Young infants/children with developmental delay resulting from prenatal or perinatal insult are less likely to overcome the deficits if they come from low income families.

_____ 4. The Early Learning Accomplishment Profile for Infants measures only cognitive and language content areas.

_____ 5. Understanding the nature and severity of an infant's developmental disability with a prescription for treatment is probably of greater value to the educator than determining the cause of the disability.

_____ 6. The sequential process of infant evaluation is (1) screening, (2) case finding, (3) diagnosis, (4) educational assessment, (5) performance monitoring, (6) program evaluation.

_____ 7. Receptive language precedes language production.

_____ 8. Tjossem (1976) considered children with Down's Syndrome to be at environmental risk.

_____ 9. At eight weeks, the developing human organism is referred to as a fetus.

_____ 10. Down's Syndrome is caused by a pair of defective recessive genes resulting when both parents are carriers.
11. A low-birthweight baby weighs less than 2,500 grams and has a shortened gestational age, less than 37 weeks.

12. Infants with low APGAR scores, i.e., 3-4 or less, will be developmentally delayed.

13. The most prevalent type of cerebral palsy is spastic.

14. Excessive involuntary, purposeless limb movement with uncontrolled writhing and irregular movements is known as ataxia cerebral palsy.

15. A child, developing normally, usually can sit alone for several minutes by four months.

16. A child, developing normally, usually can crawl by eight months of age.

17. Young children frequently show problems with eating.

18. The interactional model proposed by Sameroff and Chandler has been useful in assessing development in handicapped children.

19. The Rubella virus is an example of a teratogen.

20. Norm-referenced assessments were designed to assess individual's proficiency of a chosen domain of behavioral items.

21. Most infant assessment measures have been designed for the purpose of planning educational intervention.

22. Early caregiver-infant interactions have been shown to be linked to child developmental outcomes.

23. Studies of interactions between parents of mentally retarded preschool children and parents of normally developing preschoolers show essentially no differences in the types of interactions.

24. A baby should be able to engage in a game of playing like peek-a-boo with his/her parents by five months of age.

25. The average vocabulary of a 24-month child is 250 words.

26. An infant should be able to roll over by three months of age.
27. Blind infants develop attachments with their primary caregivers in the same order and at the same approximate age as infants without visual problems.

28. Studies show that parents of Down's Syndrome infants are more active in engaging their infant's in interaction.

29. The classical conditioning learning paradigm is the most common procedure for examining an infant's information processing ability.

30. Habituation has been used in identifying high-risk infants.

31. The Oliver Assessment is a widely used screening inventory.

32. The Uzgiris-Hunt Assessment is based on Piaget's theory of sensorimotor development.

33. According to Bates, infant communication becomes intentional at four months.

34. An infant of three months who displays an asymmetrical tonic neck reflex (ATNR) when his/her head is turned to a 90 degree angle is considered abnormal.


36. According to the national review of research reported on the Consortium on Developmental Continuity in regard to the effectiveness of early intervention programs, early education programs significantly reduce the number of children assigned to special education programs.

37. There are certain critical periods in early development when children are most receptive and more efficient learners of certain skills.

38. The stage of fetal development during which the danger of disease, damage from drugs or other toxic agents, and congenital defects is greatest in the third to fifth months of prenatal development.

39. The brain is fully developed at birth—both in terms of weight and number of brain cells present.
40. Hypertonia is a condition characterized by a lack of muscle tone that produces a kind of floppiness that makes it difficult for the child to hold up his/her head, to sit, or to stand. Reflex actions are likely missing.

41. Frequency data is a percentage of correct to incorrect responses.

42. Latency data is a record of the time that passes before a response is made by the child.

43. Early childhood special education programs have evolved in very different ways from site to site and from state to state.

44. Least restrictive environment means that children with handicaps should have opportunities, patterns of life, and everyday living conditions granted to them that are as close as possible to the regular way of life experienced by nonhandicapped persons.

45. There is no single best intervention strategy for serving young children and their families that everyone should follow.

46. While divorce and separation rates are high, children are still largely being reared in homes with a father and mother figure; single-parent families are slowly decreasing.

47. The Individualized Education Plan as required by P.L. 94-142 is a series of individualized lesson plans to be followed by all teachers or support staff who work with a particular child.

48. The team approach in which one team member acts as the single agent for carrying out services to the designated child or parent is called the unidisciplinary approach.

49. The daily schedule should be developed through a logical grouping of children that could be arranged for activities based upon similarities or groupable features of their individual learning objectives.

50. Activities which will promote the transfer and generalization of skills should occur at a time and place similar to the setting where the skill would be used naturally.

51. Least prompts is a more intrusive method of providing assistance than graduated guidance.
52. Graduated guidance is a method of insuring performance by using a system of most to least intrusive prompting.

53. In order to facilitate teaching a child the task of shoe removal, the interventionist should develop a skill sequence.

54. The event which launched the new field of early childhood education for children with handicaps is P.L. 99-457.

55. All curriculum guides developed for young children with disabilities are equally useful; no one guide is better than another.

56. Behaviorists believe there is a reciprocal relationship between behavior and the environment?

57. If your baseline data are showing an ascending direction and your objective is to increase the behavior, it is appropriate for the beginning of an intervention.

58. Prompts should focus students' attention on the Sd.

59. With the Premack principle the individual is allowed access to a low-frequency behavior contingent upon performance of a high-frequency behavior.

60. A verbal prompt is generally more intrusive than a physical prompt.

61. Response cost is an aversive procedure, and as such it may evoke counter-control behaviors among clients.

62. Timeout should be limited to use in serious situations in which alternative reductive techniques would not do the job expediently.

63. Negative reinforcement always maintains or increases a behavior.

64. A variable-interval schedule does not usually produce a consistent response schedule.

65. Prompting and fading should proceed from least intrusive to most intrusive.

66. All parents can be expected to respond to the birth of a child with disabilities in more or less the same way, beginning with anger or denial, and ending in complete acceptance.
67. Parents took a major role in the passage of PL 94-142.

68. Parent participation in the development of a student's Individual Educational Plan is optional.

69. Divorce, marital disharmony, and husband's desertion have been disproportionately high in marriages where there is a child with disabilities.

70. Siblings of individuals with disabilities often report that it is helpful to discuss their experiences with other siblings who have disabled family members.

71. Thomas Powell has been a leader in work with siblings of the handicapped, in starting the Sibling Information Network at the University of Connecticut, and conducting original research.

72. One of the major difficulties for families with a child with disabilities is shown in the family life cycle model: the child with disabilities often remains the "youngest" child, often preventing parents from addressing issues related to aging.

73. Barriers to effective family-professional interaction can be grouped into four general categories: (a) psychological, (b) attitudinal, (c) cultural/ideological and (d) logistical.

75. The Buckley-Pell Amendment assures the confidentiality of any personally identifiable data, information and records collected or maintained by state agencies, schools, and all other educational agencies.
<table>
<thead>
<tr>
<th>Training Skill</th>
<th>Entry X</th>
<th>Exit X</th>
<th>t value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental assessment (0-3 yrs.)</td>
<td>2.2</td>
<td>4.3</td>
<td>4.41</td>
<td>.000</td>
</tr>
<tr>
<td>Assess motor movements and skills</td>
<td>2.3</td>
<td>4.0</td>
<td>2.18</td>
<td>.044</td>
</tr>
<tr>
<td>Assess cognitive skills</td>
<td>3.0</td>
<td>4.3</td>
<td>2.68</td>
<td>.016</td>
</tr>
<tr>
<td>Assess behavioral and social abilities</td>
<td>3.1</td>
<td>4.3</td>
<td>2.78</td>
<td>.013</td>
</tr>
<tr>
<td>Communicate assessment to parents</td>
<td>3.2</td>
<td>4.7</td>
<td>3.31</td>
<td>.001</td>
</tr>
<tr>
<td>Administer norm-referenced assessments</td>
<td>2.6</td>
<td>4.2</td>
<td>2.60</td>
<td>.010</td>
</tr>
<tr>
<td>Administer criterion-referenced assessments</td>
<td>2.6</td>
<td>4.5</td>
<td>3.37</td>
<td>.001</td>
</tr>
<tr>
<td>Conduct task analytic/skill sequence</td>
<td>2.5</td>
<td>4.5</td>
<td>4.10</td>
<td>.001</td>
</tr>
<tr>
<td>Training Skill</td>
<td>entry</td>
<td>exit</td>
<td>t value</td>
<td>p value</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>-------</td>
<td>------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Identify precursors to communication</td>
<td>3.1</td>
<td>4.2</td>
<td>2.29</td>
<td>.035</td>
</tr>
<tr>
<td>Identify/translate idiosyncratic communication</td>
<td>2.5</td>
<td>4.0</td>
<td>2.94</td>
<td>.009</td>
</tr>
<tr>
<td>Link assessment to IEP</td>
<td>3.3</td>
<td>4.5</td>
<td>2.11</td>
<td>.050</td>
</tr>
<tr>
<td>Prepare family-focused interventions</td>
<td>2.3</td>
<td>4.5</td>
<td>5.72</td>
<td>.000</td>
</tr>
<tr>
<td>Determine current and future functional targets</td>
<td>2.3</td>
<td>4.3</td>
<td>4.80</td>
<td>.000</td>
</tr>
<tr>
<td>Implement systematic training</td>
<td>2.5</td>
<td>4.0</td>
<td>2.00</td>
<td>.013</td>
</tr>
<tr>
<td>Plan behavioral interventions for children with severe birth defects</td>
<td>2.5</td>
<td>4.0</td>
<td>3.53</td>
<td>.003</td>
</tr>
<tr>
<td>Set goals and program for motor competencies</td>
<td>2.5</td>
<td>4.2</td>
<td>2.24</td>
<td>.039</td>
</tr>
<tr>
<td>Collect/analyze data for program decisions</td>
<td>2.3</td>
<td>4.0</td>
<td>2.43</td>
<td>.020</td>
</tr>
<tr>
<td>Select appropriate curricula</td>
<td>3.2</td>
<td>4.3</td>
<td>2.54</td>
<td>.021</td>
</tr>
<tr>
<td>Recognize strengths/limitations of commercial programs</td>
<td>3.2</td>
<td>4.5</td>
<td>2.51</td>
<td>.022</td>
</tr>
<tr>
<td>Training Skill</td>
<td>Entry</td>
<td>Exit</td>
<td>t value</td>
<td>p value</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>-------</td>
<td>------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Conduct ABC analyses</td>
<td>3.2</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote positive parent-infant interactions</td>
<td>3.0</td>
<td>4.7</td>
<td>3.03</td>
<td>.006</td>
</tr>
<tr>
<td>Understand family system dynamics</td>
<td>3.0</td>
<td>4.5</td>
<td>2.38</td>
<td>.019</td>
</tr>
<tr>
<td>Help parents facilitate child's development</td>
<td>3.9</td>
<td>4.7</td>
<td>2.16</td>
<td>.045</td>
</tr>
<tr>
<td>Involve parents in total program</td>
<td>3.8</td>
<td>4.7</td>
<td>2.28</td>
<td>.036</td>
</tr>
<tr>
<td>Communicate effectively with parents</td>
<td>4.0</td>
<td>4.8</td>
<td>2.34</td>
<td>.032</td>
</tr>
<tr>
<td>Plan/design research</td>
<td>2.5</td>
<td>3.5</td>
<td>2.12</td>
<td>.049</td>
</tr>
<tr>
<td>Implement instructional programs</td>
<td>3.5</td>
<td>4.7</td>
<td>2.64</td>
<td>.017</td>
</tr>
</tbody>
</table>

T-test between entry and exit programs on total score yielded an obtained $t(df=17) = -4.11$ ($p=.001$) indicating that the two groups are statistically different on this measure.