This experimental study examined the Early Childhood Inclusion Support Program (ECIS). The program uses empirically-based procedures to support effective strategies of inclusion in preschool, including training for program collaboration and implementation through direct services to students and through support for teachers, and through curriculum-based inclusion practices using the Early Learning Program. During the 2001-2002 school year, ECIS was initiated in three preschool classrooms in a large urban school district. Three teachers were identified as experimental program teachers, and one matched classroom was identified as the control. In the experimental classes, teachers received 3 days of training prior to starting the program and on-site support during weekly collaborative meetings with project staff. Children received direct support twice weekly from ECIS trainers and once weekly from a speech-language specialist. Data indicated that ECIS was successful in assisting teachers to implement best practices in their classrooms. Students remained focused on specific learning objectives that were targeted to their individual learning needs. Preschoolers posted academic achievement gains from Fall to Spring, with those students receiving the program doubling their performance ability on the Early Learning Program classification/communication Subtest, while the matched control class remained at preprogram levels. Students diagnosed with developmental delays in cognitive and speech-language domains made significant gains in both speech-language and classification/communication skills. Students receiving speech-language services within the classroom made gains in all 10 classification/communication areas and received scores similar to their non-delayed peers at posttest. Significant improvement was made on the Preschool Language Scale-3. The ECIS Program provided great benefits to young children who were typically developing as well as to those who were developmentally delayed. (Contains 12 references.) (KB)
The Early Childhood Inclusion Support Program: 
Incorporating Discrete Skills into Comprehensive Units for Learning

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Purpose:

The Early Childhood Inclusion Support Program (ECIS) was implemented in 3 urban community-based preschool classrooms during the 2001-2002 school year. The project's aim has been to implement empirically based procedures that support effective strategies of inclusion in preschool.

Activities of the ECIS Program included:

- identification of program sites and key individuals including speech-language pathologists, early childhood specialists, and graduate assistants
- provision of training for program collaboration and implementation both in direct services to students during class time and with teachers at weekly planning meetings and formal in-service training workshops
- evaluation of students to identify special needs and monitor academic achievement gains
provision of curriculum-based inclusion practices using the research-based Early Learning Program (Wang, Klein, & Bloom, 2002).

There are 5 goals of the ECIS Program. They are as follows:

1. To identify individualized academic skill levels in the areas of classification/communication (language development), early reading and writing, and quantification (early math) through curriculum standards-based assessment

2. To improve academic achievement working on individual levels for readiness in kindergarten and first grade

3. To identify special needs of students who display delays in the areas of gross motor, fine motor, prewriting, cognitive, language, self-help, and/or personal-social skills

4. To provide speech-language services in collaboration with teachers for those students who display language-learning delays

5. To continually monitor progress and make program modifications as needed

The ECIS Program features 'teaching as a system' for educating all children at their individual levels in three primary areas: language development, early reading/writing, and early math. This individualized program incorporates learning centers and a rotational scheduling format. Ongoing, weekly professional development among specialists, teachers, and program staff is a hallmark of the program. During this time, activities are planned and specific student needs are addressed. The ongoing curriculum-based assessment provides direct monitoring to measure student achievement and make individual program modifications.

Perspectives:

Policy makers, educators, and parents have debated inclusion, by definition and function. Basically, inclusion has been established as a practice to provide educational programming to children with special needs in early childhood programs with the expectation that children with developmental delays and disabilities will learn from their
interactions and relationships with typically developing peers as well as having typically developing peers benefiting from such relationships (Leiber, Hanson, Beckman & Odom, 2000).

Research conducted about inclusion practices at preschool programs across the country (Early Childhood Research Institute on Inclusion) identified several important barriers to preschool inclusion. McGregor and Vogelsberg (1998) surveyed inclusive schools to inform best practices. Findings indicate that lack of adequate training for general and special early education, philosophical differences between general and special education, the lack of availability of related services, the lack of a working monitoring system, and negative attitudes among parents and staff tend to make implementation of effective inclusion practices difficult.

The Early Childhood Inclusion Support (ECIS) Program has established forces to combat these barriers, providing young special needs children with trained teachers and support personnel working together toward a common goal to assist all young children to become effective learners. The Early Childhood Inclusion Support (ECIS) Program has targeted high poverty communities in Philadelphia's poorest neighborhoods.

There are generally seven empirical factors that tend to foster successful inclusion practices. They are: (1) visionary leadership; (2) collective collaboration; (3) funding; (4) monitoring; (5) refocusing on assessment; (6) support for staff and students; and (7) classroom practices. In addition, we add parental involvement as the eighth factor. The Early Childhood Inclusion Support (ECIS) Program incorporates all eight factors.
Methods:

During the 2001-2002 school year, ECIS was initiated in 3 preschool classroom in a large urban school district. Three teachers were identified as experimental program teachers and one matched classroom was identified as the control. Demographic data is found in the table below:

<table>
<thead>
<tr>
<th>Name of Teacher</th>
<th>School</th>
<th>Number Students in Class</th>
<th>Gender</th>
<th>Race</th>
<th>Age in 11/2001</th>
<th># Years Daycare</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-1</td>
<td>B</td>
<td>16</td>
<td>4 males 12 females</td>
<td>15 African Am. 1 Hispanic</td>
<td>49 mos. (sd=3.4)</td>
<td>1.8 yrs. (sd=1.6)</td>
</tr>
<tr>
<td>C-2</td>
<td>L</td>
<td>18</td>
<td>11 males 7 females</td>
<td>1 African Am. 16 Hispanic 1 Other</td>
<td>47 mos. (sd=5.9)</td>
<td>.72 yrs. (sd=1.0)</td>
</tr>
<tr>
<td>H-3</td>
<td>B</td>
<td>11</td>
<td>4 males 7 females</td>
<td>10 African Am. 1 Hispanic</td>
<td>46 mos. (sd=4.2)</td>
<td>1.3 yrs. (sd=1.1)</td>
</tr>
<tr>
<td>J-4</td>
<td>L</td>
<td>12</td>
<td>7 males 5 females</td>
<td>12 Hispanic</td>
<td>51 mos. (sd=4.6)</td>
<td>.70 yrs. (sd=.95)</td>
</tr>
<tr>
<td>Control Class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>57</td>
<td>26 males 31 females</td>
<td>26 African Am. 30 Hispanic 1 Other</td>
<td>48 mos. (sd=4.5)</td>
<td>1.1 yrs. (sd=1.1)</td>
</tr>
</tbody>
</table>

Table 1: Sample population

All teachers in the experimental classes received 3 days of training prior to the start of the program. In addition, on-site support from project staff was provided during weekly collaborative meetings. Direct support to the preschool children took place in the classroom on a two day per week basis by ECIS trainers and a certified speech-language specialist who provided in-class collaborative sessions with students one day per week.

All students in each classroom were initially tested with the Learning Accomplishment Profile – Revised (Sanford & Zeiman, 1995) to determine if any of 7 developmental areas was below age levels (indicating a possible developmental delay). These areas included: gross motor skills, fine motor skills, pre-writing skills, cognitive skills, language skills, self-help skills, and personal-social skills. Those students below
Age level in pre-writing, cognitive, language, self-help, or personal-social skills were evaluated with the Preschool Language Scale-3 (Psychological Corporation, 1992). For children in the program classes, 11 were identified as needing speech-language support services (25% of students). One of the 11 children received therapy services for a speech articulation problem. The other 10 were treated for speech-language-learning related delays.

During program implementation, student program objectives were targeted to meet the individual needs of each child based upon testing with the Early Learning Program assessment measures (Wang, Klein, & Bloom, 2000) for classification/communication, early reading and writing, and quantification.

The Early Learning Program curriculum is based on research from the National Research Council Report on Preventing Reading Difficulties in Young Children (1998), Developmentally Appropriate Practices in Early Childhood Programs (Bredekamp & Copple, 1997), and the research from Schickendanz (1999) and her association with the National Association for the Education of Young Children. The curriculum program uses a constructivist model of readiness with language development and early literacy based on the work of Rice & Wilcox (1995) and Farber & Klein (1999). In addition, the U.S. Department of Education (1999) document, Early Childhood: Where Learning Begins Mathematics, was instrumental in supporting practical applications within the quantification units.

The study set out to provide answers to the following questions under investigation:

1. What changes were evidenced regarding degree of implementation of best practices in classrooms from fall (baseline) to spring (6 months follow-up)?

2. (a) What levels of academic achievement were noted in preschool students from fall to spring and (b) was there a significant difference for matched
(3) What outcomes were obtained for developmentally delayed students who received speech-language support services?

Results:

Data indicated that the Early Childhood Inclusion Support Program has been successful at assisting teachers in implementing best practices in their classrooms. Teachers made exceptional gains in their abilities to: arrange their rooms into effective learning environments using centers; create and maintain appropriate instructional materials; help communicate rules and procedures to their students; keep logs and records of objectives with student progress; administer and interpret diagnostic-prescriptive tests; prescribe appropriate objectives for student learning; monitor growth; and motivate students to learn. Students remained focused on specific learning objectives that were targeted to their individual learning needs. Overall, degree of implementation increased at an average rate of 50%.

Academic achievement gains were noted in preschool students from fall to spring. On average, students receiving the program (n=45) doubled their performance ability (20+ points gained) on the Early Learning Program Classification/Communication Subtest (ELP/CC) from November 2001 to May-June 2002. The matched control class (n=12) remained at pre-program levels (mean=23.8/sd=7.0) which was significantly below the experimental class (n=12 with mean=43.0/sd =5.2). This further supports the positive effects obtained by students who were in the program.

In June 2002, classroom J-4 (control class) was comparable to the pretest levels of the other 3 classrooms from November 2001. Classroom J-4 was essentially 7 months behind the other classes. Of the 10 preschool academic areas below, the control
classroom (J-4) was significantly lower (p<.05) than its same school, peer-matched classroom (C-2) in knowledge of: colors, size, categories, functions of objects, parts/whole, order/sequence, attributes, and opposites. The only two areas for which there was no significant difference between matched experimental and control classes were matching skills and knowledge of basic shapes. Table 2 below depicts differences among the classrooms.

<table>
<thead>
<tr>
<th>Classroom and School</th>
<th>Number of Students Pre</th>
<th>Classification/ Communication Pretest Total Mean and SD</th>
<th>Number of Students Post</th>
<th>Classification/ Communication Posttest Total Mean and SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-1 Brown</td>
<td>16</td>
<td>25.6 (13.1)</td>
<td>10</td>
<td>44.0 (5.7)</td>
</tr>
<tr>
<td>C-2 LightH</td>
<td>18</td>
<td>21.4 (13.2)</td>
<td>12</td>
<td>43.0 (5.2)</td>
</tr>
<tr>
<td>H-3 Brown</td>
<td>10</td>
<td>22.6 (6.1)</td>
<td>7</td>
<td>43.7 (8.1)</td>
</tr>
<tr>
<td>J-4 LightH Matched Control with C-2</td>
<td>12</td>
<td>Matched on Learning Accomplishment Profile Screening Test with Classroom C-2</td>
<td>12</td>
<td>23.8 (7.0) (significantly below experimental classes p&lt;.01)</td>
</tr>
</tbody>
</table>

Table 2. Pre-Post Test Means for Early Learning Program Diagnostic Prescriptive Testing of Classification/Communication Subtest

Pretest means as well as post-test means were non-significant among D-1, C-2, and H-3. Post-test means were significantly lower for J-4 when compared to each of the other three classrooms.

For students diagnosed with developmental delays in cognitive and speech-language domains, significant gains were made in both speech-language as well as classification/communication (CC) skills. Students receiving speech-language services within the classroom made gains in all 10 classification/communication areas as measured on the ELP/CC and received scores similar to their non-speech-language delayed peers at posttest time. In addition, significant improvement was made on the total Preschool Language Scale–3 with auditory comprehension levels showing the most gains for English and Spanish speaking preschoolers. Receptive skills and direction following
improved form a standard score of 73.2 to 88.5 whereas expressive skills increased from a standard score of 76.6 to 79.5 for children whose primary language was Spanish. Pretest to post-test gains in receptive language growth were significantly improved from fall to spring (p=.03). Overall, all children receiving speech-language services improved from a mean of 79.7 (sd=9.5) to 85.3 (sd=10.3).

Educational Importance of Study:

Learning should be both academically relevant as well as enjoyable for students. Students enjoyed the ECIS Program activities and teachers appreciated the readily available materials, conveniently prepared for hands-on manipulation by children using the learning activity boxes. The standards-based curriculum helped students learn what they did not previously know. Students rarely experienced boredom or misbehavior as they worked at their own pace with guidance from a teacher or participated with peers in a group activity. Teachers were able to observe students, teach each child directly, and provide an opportunity to manipulate educationally relevant materials. All preschool children received individualized attention geared to their own learning levels. This model provided great benefits to young children who were both typically developing as well as developmentally delayed.
References:


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April, 2003

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