

THE TRINIDAD AND TOBAGO EARLY CHILDHOOD PROJECT

In 1994–95, the government of Trinidad and Tobago, in cooperation with The World Bank, began the development of the Fourth Basic Education Project. At the beginning of this project, the High/Scope Educational Research Foundation was asked to conduct the Trinidad and Tobago Early Childhood Survey to provide detailed and precise empirical information about the early childhood services available at that time to young children in Trinidad and Tobago. The instruments and methodology used in the survey were adapted from those developed for a 15-nation study of early childhood services coordinated by the High/Scope Foundation (Olmsted & Montie, 2001; Weikart, Olmsted, & Montie, 2003). The Trinidad and Tobago Early Childhood Survey included children 4- to 5-years-old attending public and private early childhood settings. Following the conclusion of that 1994–95 study, The World Bank and the Ministry of Education in Trinidad and Tobago developed an intervention program for the Early Childhood Care and Education (ECCE) component of the Fourth Basic Education Project (FBEP). The progress of the ECCE component of the FBEP was assessed at the mid-point of the project in 1999–2000 and again, for the effectiveness study, in 2003–04. The three studies share common methodology and instrumentation, therefore allowing for comparisons over time.

Development of the ECCE Component of the FBEP

Based on the findings regarding equipment and materials in early childhood settings and on the direct observation findings relating to children’s experiences in settings from the 1994–95 Early Childhood Survey, World Bank personnel and Trinidad and Tobago Ministry of Education staff developed the ECCE component of the FBEP. **The 2 major elements of the ECCE component to be implemented included (1) additional teacher training for selected teachers in public centers, and (2) provision of additional equipment and materials to selected public centers.**

To implement the ECCE component, World Bank personnel and Ministry of Education staff divided the total group of public early childhood settings into the following 3 groups.

- Group A** Centers which would receive additional equipment and materials and at least 1 teacher would receive additional specialized Harmonized Curriculum training
- Group B** Centers which would receive additional equipment and materials
- Group C** Centers which would receive no intervention

Findings from the follow-up study (2003–04) address the following major question:

- **Is the provision of additional equipment and materials sufficient to modify experiences children have in classrooms, teachers’ behaviors and/or their management of children’s time**

- **Is teachers' participation in the Harmonized Curriculum training program sufficient to modify experiences children have in classrooms, teachers' behaviors and/or their management of children's time**
- **Is teachers' participation in the Harmonized Curriculum training program as well as the provision of additional equipment and materials sufficient to result in a decrease in the percentage of observations during which children are noted to be not engaged in an activity (1994–95 = 22%).**
- **Is teachers' participation in the Harmonized Curriculum training program as well as the provision of additional equipment and materials sufficient to result in an increase in the percentage of observations during which teachers are noted to be engaged in nurturance behaviors (1994–95 = 1%–2%).**

Selected Major Findings

Equipment and materials present in the early childhood centers

Findings from the 1994–95 study indicated that many of the early childhood centers in Trinidad and Tobago had little equipment/materials (e.g., large-muscle equipment, dramatic play items) available for the children's use. Thus, the ECCE intervention included the provision of 48 additional items of equipment/materials to each center in groups A and B. Findings from the effectiveness study document the presence of these additional items in centers in 2 groups. As Figure 1 shows, the findings indicate that group A centers had, on average, 43 of the 48 additional items, while the corresponding number for group B centers was 39.5 items. In contrast, group C centers had, on average, 30 items. **Statistical analyses indicated that group A centers had significantly more equipment/material items than group C centers ($p < .05$).** These findings provided evidence for the successful implementation of this part of the ECCE intervention, and indicated that children in group A and B centers had more items of equipment/materials in their learning environments than did the children in group C centers.

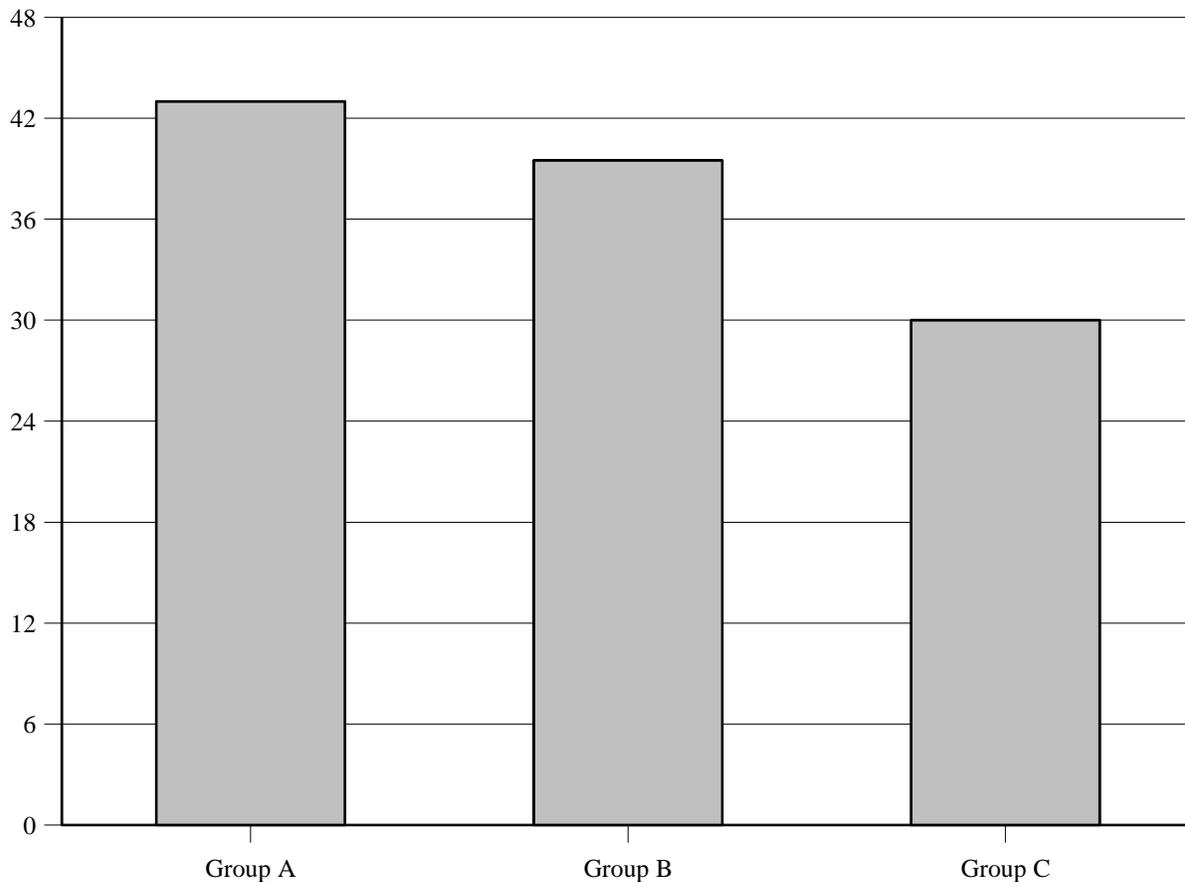


Figure 1 Median number of additional items of equipment and materials for each group of centers in Trinidad and Tobago in 2003-04

Equipment and materials related to classroom process

In order to better understand the effects equipment and materials have on classroom process the instructional pieces of equipment and materials specific to the intervention were examined as they relate to classroom process variables. The sample of 60 centers was divided into 3 groups, based on the number of pieces of instructional equipment and materials they identified as present in the setting: those having a large amount (16–18 pieces), those with a moderate amount (13–15 pieces), and those with a small amount of equipment and materials available (5–12 pieces). Means tests for the observation instrument categories were calculated for the two extremes.

Teachers in classrooms with more equipment and materials interacted less with children, but used more *nurturing* behaviors and *listened* more to children. They also appear to use less *adult-centered* teaching and more *child-centered* teaching. These findings suggest that in settings with more equipment and materials children may be more involved in

“working with” equipment and materials and require less adult direction. The teacher is freer to listen more to children and make positive and encouraging comments about the children’s activities. Thus provision of additional equipment and materials in classrooms was sufficient to modify teacher behavior.

Child-initiated activities in the early childhood centers

The findings from the 1994-95 study indicated that children were observed to be selecting the activities in which they participated during 29% of total observations. Child-initiated activities are desirable since they give young children the opportunity to 1) follow their interests and select the activities in which they wish to be engaged, and 2) assume responsibility for their own learning. **Figure 2 presents the findings for this variable for the 1994–95 study and for the effectiveness study, and shows that the percentage of observations of child-initiated activities increased from 29% in 1994–95 to 67% in 2003–04.**

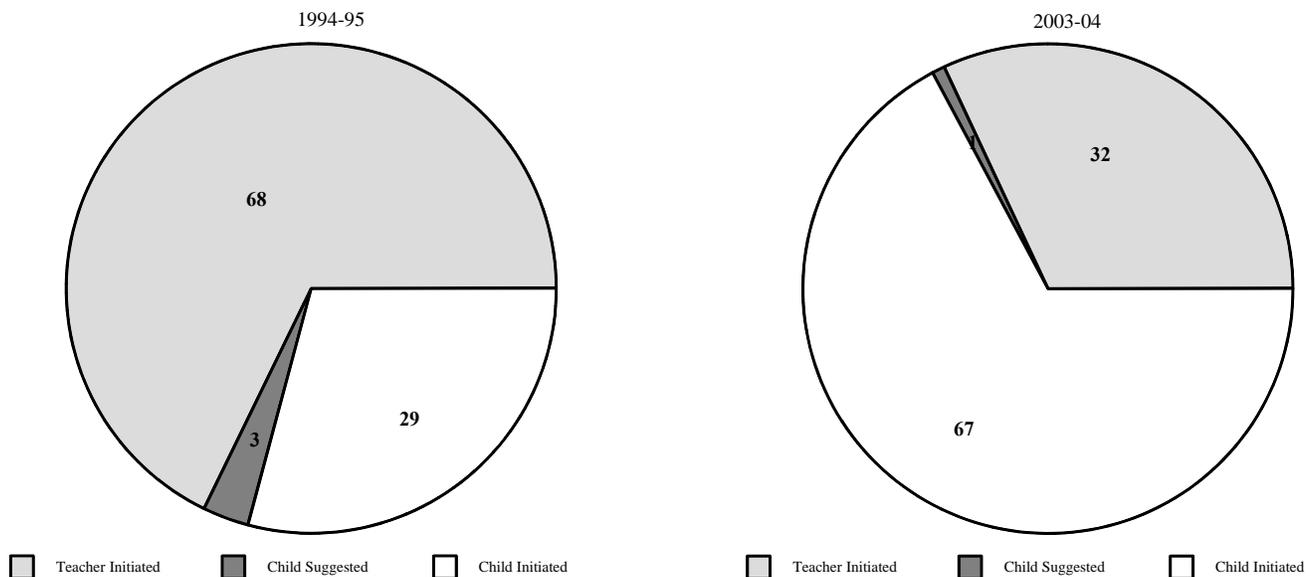


Figure 2 Percentages of observations by type of social origin (i.e., teacher, child) for the 1994–95 and 2003–04 studies

Teacher nurturing behaviors observed in centers

In the discussion of the 1994–95 study findings, the participants were surprised to note that teachers were observed to be using *nurturing* behaviors (e.g., engaging in affectionate behavior, giving reassurance/support) during only 1% of the total observations. They indicated that they would like to see an increase in the percentage by the end of the FBEP. **In the effectiveness study, the findings showed an increase in the percentage of *nurturing* behaviors from 1% to 3%.** For reference, the findings from the 15-nation study indicate that in 9 of the 15 countries, the percentages of teacher behaviors in the *nurturing* category range between 4% and 6%.

Harmonized Curriculum training related to classroom process

In order to better understand the effects of the Harmonized Curriculum training, classroom process variables were examined as they relate to teacher training. Centers were divided into 2 groups, those that had a trained teacher and those that did not. **Trained teachers used significantly more *nurturing* behaviors and less *child management* behaviors, specifically less *negative child management*.** This suggests there is a reduction in the need to control behaviors in classrooms with a HC trained teacher. The Harmonized Curriculum training appears to encourage solutions to child behavioral issues with the use of more positive or neutral direction from teachers. The Harmonized Curriculum training however, appears to have little effect on teachers' management of time and children's classroom behaviors.

Major characteristics of the families/households

Both the 1994–95 study and the effectiveness study utilized the Family Background Interview to gather information about the families and households of the children in the studies. **When compared to the findings from the 1994–95 study, the findings from the effectiveness study indicate that the families of preschool-aged children are experiencing improved life-conditions in employment, housing, and family characteristics.** These findings are reported here since the characteristics of the home environments are important components of the preschool-child’s world and affect his/her overall development.

The listing below provides a few of the key findings:

- **The percentage of fathers active in the labor force increased from 74% (1994–95) to 96% (2003–04).**
- **The percentages of parents in the occupational category of *semiskilled* increased from 40% and 15% (fathers and mothers, 1994–95) to 60% and 38% (fathers and mothers, 2003–04). Corresponding decreases were seen in the occupational category of *unskilled*.**
- **The percentages of families owning their own homes increased slightly from 61% (1994–95) to 63% (2003–04).**
- **The percentages of families having various types of household amenities and educational materials increased from 1994–95 to 2003–04:**
 - **Running water in the home — 68% to 80%**
 - **Owning auto/van/truck — 31% to 46%**
 - **Owning telephone — 44% to 66%**
 - **Having children’s books available — 88% to 98%**
- **The percentage of two-parent households increased from 64% (1994–95) to 78% (2003–04).**

It is likely that one of two things underlie the positive changes in family living conditions noted between 1994–95 and 2003–04. First, as in many countries, there may have been an improvement in the general economic conditions in Trinidad and Tobago. This improvement could result in increased employment (i.e., more fathers participating in the labor force), and more opportunities for employment in higher occupational categories (i.e., *semiskilled* versus *unskilled*), leading to the availability of more household amenities.

Second, it is possible that the population of families whose children attend early childhood centers in Trinidad and Tobago is different in 2003–04 than the population

attending in 1994–95. That is, the families whose children attended the centers in 2003–04 may have higher incomes, higher rates of employment, and so forth.

Areas where improvement was not apparent

Two findings, from the effectiveness study, waiting and no active engagement did not reflect the hoped-for “improvement.” In the 1994–95 study, it was found that during 22% of the total observations, children were “waiting/not actively engaged.” Further analyses indicated that during 9% of these observations, children were waiting (i.e., waiting for the teacher to distribute materials, waiting for the teacher to check his/her work, waiting in a line). For the remaining 13% of the observations, children were not actively engaged (i.e., staring around the room, playing with their fingers). (For reference, the percentages of *waiting/no active engagement* for the majority of countries in the 15-nation study ranged between 10% and 14%.) The findings from the effectiveness study showed little change in the percentages for *waiting* (10% in 2003–04), or *no active engagement* (13% in 2003–04).

A look at the raw data provides some examples of situations during which children were mainly *waiting*. In many centers, teachers organized a “news-time” activity in which one child would report his/her news followed by another child and so forth through the entire group. During the total amount of time spent in this activity, any single child participated for only a very small portion of the time and then *waited* while the other children participated. Sometimes a teacher would take attendance by calling children’s names one at a time (any single child *waited* during most of this activity), instead of taking attendance by looking around the room and seeing which children were present while the children were engaged in an activity. Also, when many children are grouped together, it takes longer for activities to be completed. For example, when the adult proposes that a *large group* of children wash their hands or get a drink of water, some children wash their hands or get a drink while many wait in a line.

Closing Comments

For additional information, the full report of the Early Childhood Care and Education (ECCE) component of the Fourth Basic Education Project (FBEP) in the Republic of Trinidad and Tobago (September 2004) is available for review. Also, the researchers at the High/Scope Educational Research Foundation are available to answer specific questions about the methodology or findings of this study. Please contact Jill Claxton: by email, jclaxton@highscope.org; by fax, (734) 485-5560; or by phone, (734) 485-2000, Ext. 297.