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EARLY START EVALUATION: SUMMER 2004

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ABSTRACT

Early Start, a pilot preschool program, offered three weeks of literacy and social skills preparation to pre-enrolled kindergarten students who have limited to no preschool experience. The percentage of participants mastering the six assessed concepts of print jumped from 5% to 52%. Entering students mastered an average of three out of six concepts of print and finished averaging five out of six. Student progress was also measured using 10 literacy and personal/social items from the Kindergarten Initial Assessment (KIA). Increases in overall proficiency were minimal due to a high number of students entering the program already proficient on the assessed items. Closer examination of these items using a four-part rubric did reveal improvements toward greater proficiency. However, participants scored similarly to demographically matched nonparticipants on the full KIA administered upon entry into kindergarten. Thus, overall results indicate growth for targeted skills. However, this growth was not sufficient to influence overall performance on the KIA.

BACKGROUND INFORMATION

The Wake County Public School System (WCPSS) provided a three-week summer program for students entering kindergarten in Fall 2004. The program was offered from July 12, 2004 to July 29, 2004, shortly before students started kindergarten. With its focus on early literacy and social skills development, Early Start was designed to ease the transition to kindergarten and build success for students with limited to no formal preschool experience. Early Start used the Second Step/Woven Word curriculum. An approach similar to Early Start was used successfully in Orange County during the summer of 2001. Their evaluation of a pre/post assessment showed students had gained approximately seven months on school readiness and general developmental measures.¹

Title I schools without an existing preschool program were invited to participate in the pilot. From these schools five were selected: Aversboro, Fox Road, Lockhart, Powell, and Rand Road. Each participating school had two classes with

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¹ EDSTAR. (January, 2002). *Success by Six Evaluation Report*

the exception of Powell, which had one class. Each class was staffed with a certified teacher and a teacher assistant and contained no more than 15 students. Students were selected based on residency in the base area for the school, completion of kindergarten registration, and little to no preschool experience. Students meeting the residency and registration requirements were identified as Priority I if they had no preschool experience and Priority II if they had little preschool experience. An initial invitation letter was mailed with a follow-up phone call in April 2004. Parents were asked to return a registration form by the end of April. Any available slots were offered to the remaining Priority I and II students with another mail and phone invitation, for which parents were to respond by the end of May.

Program staff was given four workdays—three prior to and one following the student days. During the three days prior to the program, staff engaged in professional development, planning, and provided an open house to parents. Each school was provided a clerical position to assist with program support. Transportation was available to participants. Bus monitors were provided to teach students bus-riding skills as part of their preparation for kindergarten. Student hours were from 9:00 a.m. to 2:00 p.m. with lunch and snack provided to students free of charge through the Child Nutrition Services Summer Feeding Program.²

¹Early Start program information provided by Judy Williams, Director Extended Learning Programs and Preschool Services.

EARLY START EVALUATION SUMMER 2004

Early Start provided pre-enrolled kindergarten students three weeks of literacy and personal/social skill building to aid students in their transition into kindergarten. The main goal of the Early Start program was to target students who have little to no preschool experience for service in order to improve their literacy and personal/social skills and increase their knowledge of basic print concepts.

METHODS

Since Early Start focused on print concepts, literacy, and personal/social skills, this evaluation examines the Kindergarten Initial Assessment (KIA) items that relate to these areas. The KIA assesses kindergarten students on 19 concepts of print, 18 literacy, and 10 personal/social skills. Early Start participants' scores are compared to a demographically similar group of nonparticipants to assess if students participating in Early Start were more prepared than matched students. Students were matched on grade, race, FRL, LEP, and SWD status.

The percentage of Early Start participants with preschool experience (32%) was lower than either matched nonparticipants (68%) or all WCPSS kindergarten students (76%). However, including preschool experience as a match variable did not prove fruitful. The number of students in each group dropped from 91 to 43 students with available data for analysis. Given that the results remain the same between students without preschool experience and all matched students (participants and nonparticipants) and the resulting drop in available data, the results presented in this report do not include preschool experience as a match criterion. One possible explanation as to why preschool experience did not significantly impact student performance for these students may be inconsistent reporting of this variable. Preschool experience is based on parent responses to a general question on the registration form. The preschool item is open to interpretation in the type, amount, and quality of pre-kindergarten or childcare that constitutes preschool experience.

The KIA is given countywide to incoming kindergarten students each fall during staggered entry to assess student skill level. The KIA was developed by a team of kindergarten teachers in WCPSS in the mid-1990s as a replacement for the Early Prevention of School Failure. Team members strived to include skills they believed were truly important for entering students to have, and that most entering kindergartners could demonstrate. Scoring guidelines were developed a year or so later to help standardize ratings across teachers. However, it is not known if these guidelines are used consistently and the subjective nature of the scale must be recognized.

Early Start participants were also assessed using a pre/post instrument developed by WCPSS. The Early Start assessment included six concepts of print, five literacy, and five personal/social items from the KIA. In order to measure subtle changes during the three-week program, each of the 10 literacy and personal/social items was broken out into a four-part rubric. The pre/post assessment evaluated students on the six print concepts, the 10 literacy and personal/social KIA items, and on 10 literacy and personal/social rubrics. The data was collected in July when they

entered the program and August 2004 when they began kindergarten. In most cases the summer school teacher was also the students’ kindergarten teacher in the fall, which helped consistency in pre/post rating standards but could introduce some bias as well. Figure 1 shows the number of items assessed by the Early Start assessment and the KIA for each skill Early Start addressed.

Figure 1
Number of Items Per Skill on the
Early Start Assessment and the KIA

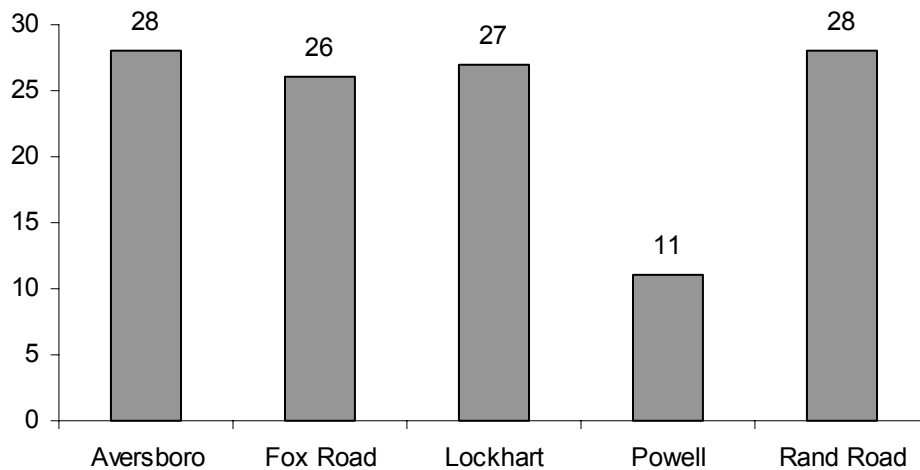
Skill Assessed	Early Start Assessment		Full KIA
	KIA Items (used on assessment)	Rubric (developed from KIA items)	
Print Concepts	6		19
Literacy	5	5	18
Personal/Social	5	5	10

STUDENT CHARACTERISTICS

PARTICIPATION

Early Start served 120 students in five schools—Aversboro, Fox Road, Lockhart, Powell, and Rand Road. Each school had two classes of no more than 15 students, with the exception of Powell, which only had one class. Figure 2 shows the total number of Early Start students by school.

Figure 2
Early Start Participation By School
Summer 2004

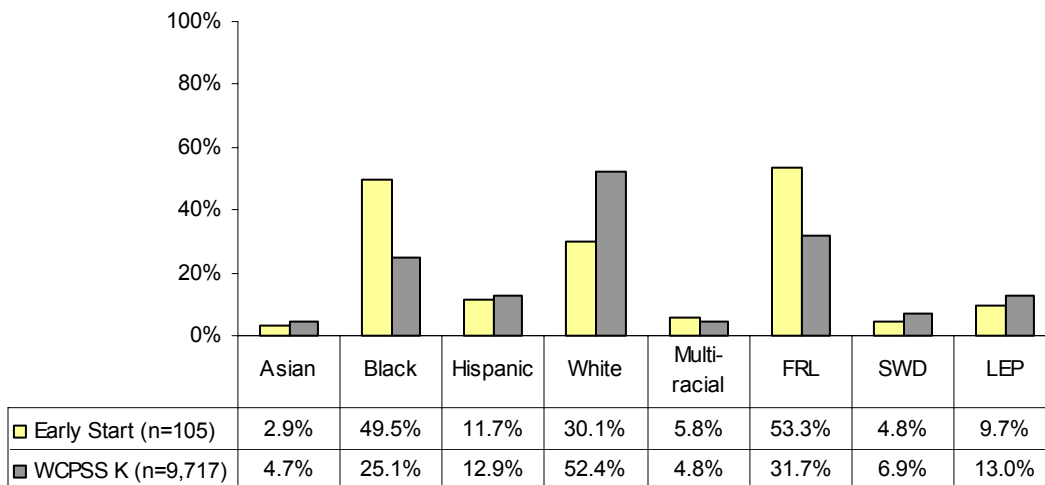


DEMOGRAPHICS

The demographics of Early Start students compared to WCPSS kindergarten students are displayed in Figure 3. Early Start had a higher percentage of Black and free or reduced-price lunch (FRL) students, but slightly fewer Limited English Proficiency (LEP) students and Students with Disabilities (SWD). WCPSS provides preschool to SWD students, which may have been why SWD students were not well represented in the Early Start program.

- 50% of Early Start students were Black, compared to 25% of WCPSS students
- 53% of Early Start students were on FRL, compared to 32% of WCPSS students
- 5% of Early Start students were SWD, compared to 7% of WCPSS students
- 10% of Early Start students were LEP, compared to 13% of WCPSS students

**Figure 3
Demographics of Early Start Participants vs. WCPSS Kindergarten Students
Fall 2004**

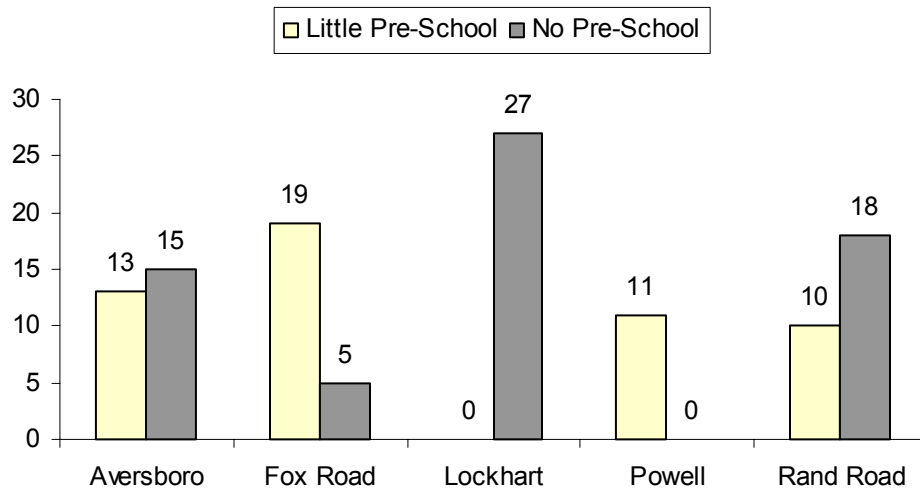


A primary criterion for choosing Early Start participants was that students should have limited to no preschool experience. Of the 118 participants with available data:

- 55% had no preschool experience
- 45% had limited preschool experience

The number of students with limited preschool experience versus those with no preschool experience varied by school. The changes from pretest to posttest did not differ significantly between these groups.

Figure 4
Prior Preschool Participation by Early Start Students
Summer 2004



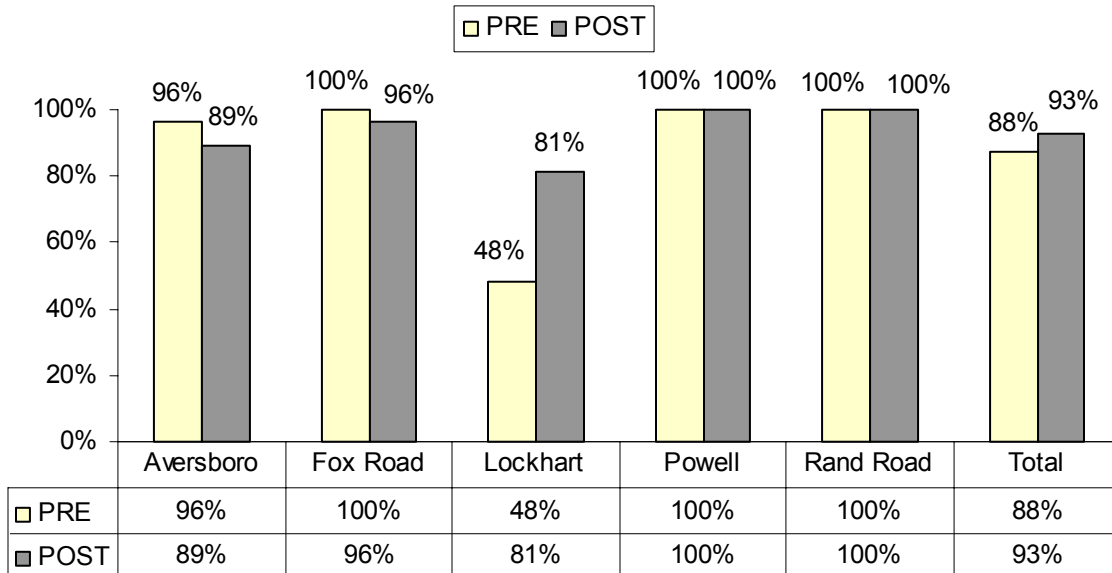
STUDENT ASSESSMENT RESULTS

PRE / POST ASSESSMENT

The Early Start assessment instrument evaluated students on concepts of print, literacy, and personal/social skills. The literacy and personal/social items from the KIA were further divided into rubrics designed to measure subtle changes during the brief three-week program.

The response rate or percentage of student assessments received by Evaluation and Research (E&R) varied by school from 48% to 100%. Only students with both pre- and post-assessments were included in the analysis.

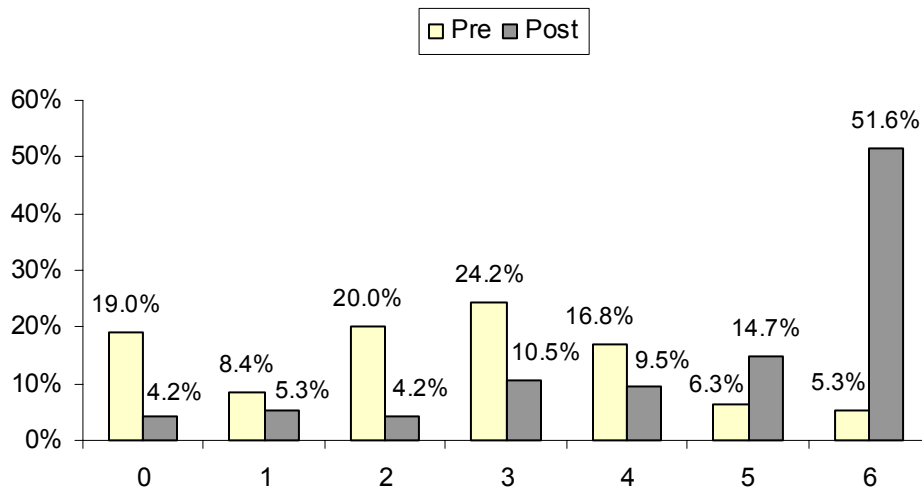
Figure 5
Early Start Assessments Response Rate
By School
Summer 2004



Concepts of Print

The percentage of students mastering all six of the concepts of print assessed increased between the pre- and post-assessment. The percentage of participants with six concepts of print jumped from 5% to 52%. Students entered the program with an average of three out of six concepts of print mastered and finished the program with an average of five out of six concepts of print mastered.

Figure 6
Kindergarten Initial Assessment First Six Print Concepts
Pre/Post 2004



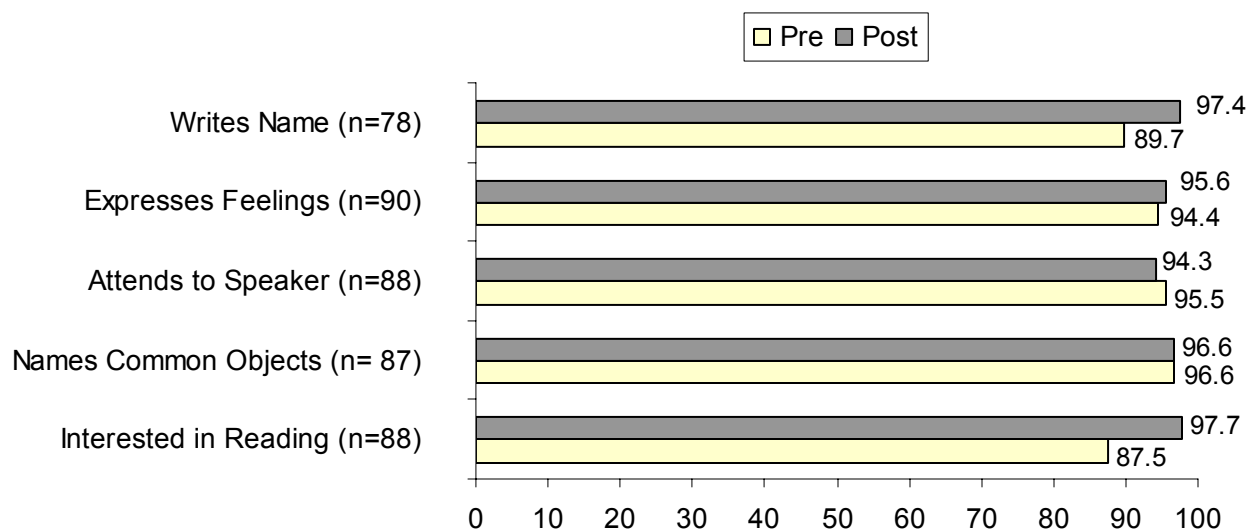
Literacy Items

Although the percentage of students proficient on the five literacy items assessed did increase, a high percentage of students entered the program already proficient on all five KIA literacy items.

- The proficiency rates on literacy pretest items ranged by item from 88% to 96%.
- The posttest showed a narrowing of the range to between 94% to 98% proficient.

With such a high percentage of students entering the program proficient, the gains in students' skill level were hard to detect. Figure 7 displays the pre/post results from the five literacy KIA items assessed.

Figure 7
Kindergarten Initial Assessment
Selected Literacy Items
2004



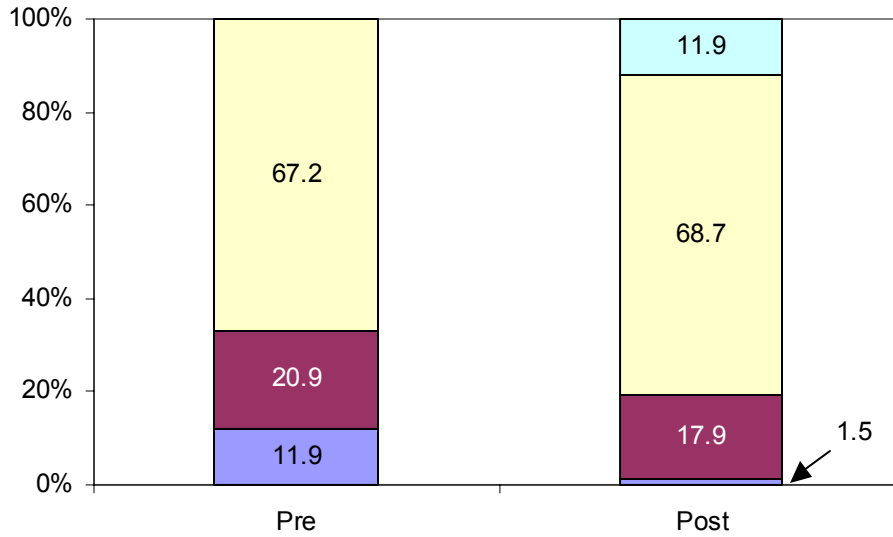
Early Intervention and Title I staff developed a four-part rubric for each of the KIA assessment items used on the Early Start instrument to measure subtle changes during this short three-week program. Figures 8 through 12 show the percentages of students receiving a 1-4 on each rubric.³ On each literacy rubric the percentage of students scoring 3 or 4 increased between the pre-assessment and the post-assessment:

- The percentage of students writing their name increased from 67% to 81%. Figure 8 shows:
 - The percentage of students not attempting to write decreased from 12% to less than 2%.
 - The percentage of students able to write their first and last name as well as other words increase from 0% to 12%.
- The percentage of students able to indicate or express ideas and/or feelings increased from 68% to 91%. Figure 9 shows:
 - The percent of students able to use language only to indicate basic needs decreased from 28% to 4%.
 - The percent of students able to use words to express ideas and feelings increased from 9% to 34%.
- The percentage of students usually or always attending to a speaker increased from 60% to 82%. Figure 10 shows:
 - A decrease in the percent of students only sometimes attending to the speaker from 37% to 16% of the students, and

³ Aversboro data is not included in figures 8-12 due to possible bias introduced by the late recording of assessment data.

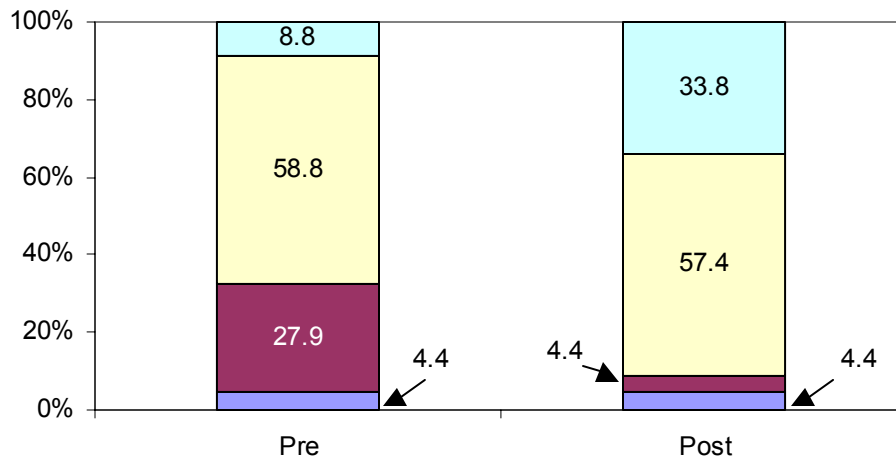
- an increase in the percent of students always attending to the speaker reading a book (from none of the students to 21%).
- The percentage of students naming two or more common objects increased from 94% to 96%. Figure 11 shows:
 - The percent of students identifying two objects decreased from 13% to less than 2%.
 - The percent of students identifying three or more common items increased from 81% to 94%.
- The percentage of students answering questions about the story increased from 24% to 41%. Figure 12 shows:
 - The percent of students with no interest in reading decreased from 15% to 3%.
 - The percentage of students able to answer and ask questions about the story went from none to 7% and the percent of students able to answer questions about the book increased from 24% to 34%.

Figure 8
Writing: Attempts to Write Name



- Student writes first and last name as well as other words.
- Student copies or writes identifiable letters and is able to write his/her name.
- Student writes using squiggles and marks as letters.
- Student does not yet attempt to write.

Figure 9
Uses Words to Express Feelings and Ideas



- Student uses words to express ideas and feelings.
- Student uses words to indicate feelings or idea.
- Student uses words to indicate basic needs.
- Student does not use words.

Figure 10
Attends to Speaker: Reading a Storybook

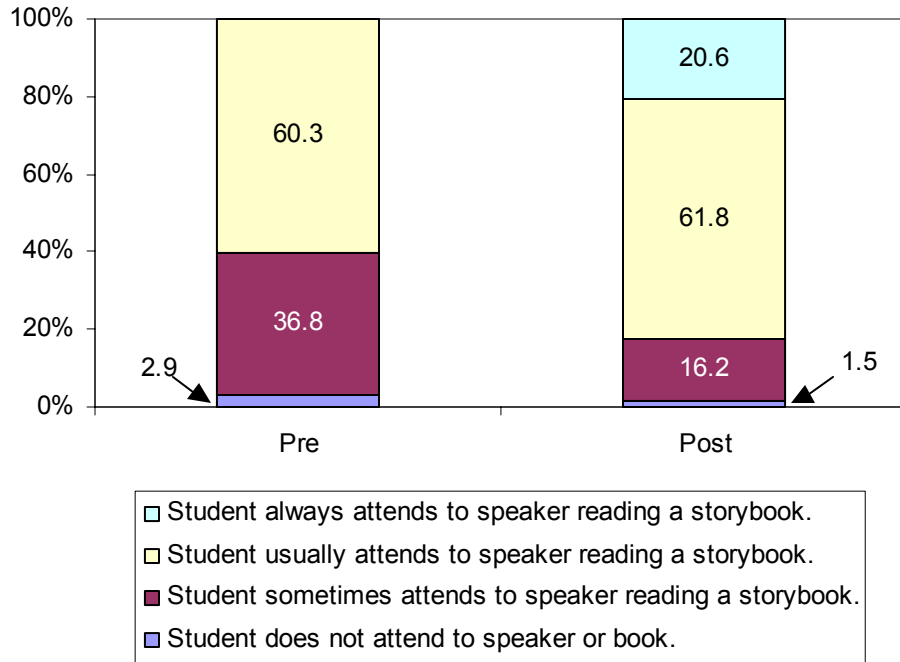


Figure 11
Names Common Objects: Scissors, Pencils, Crayons, Paper, and Books

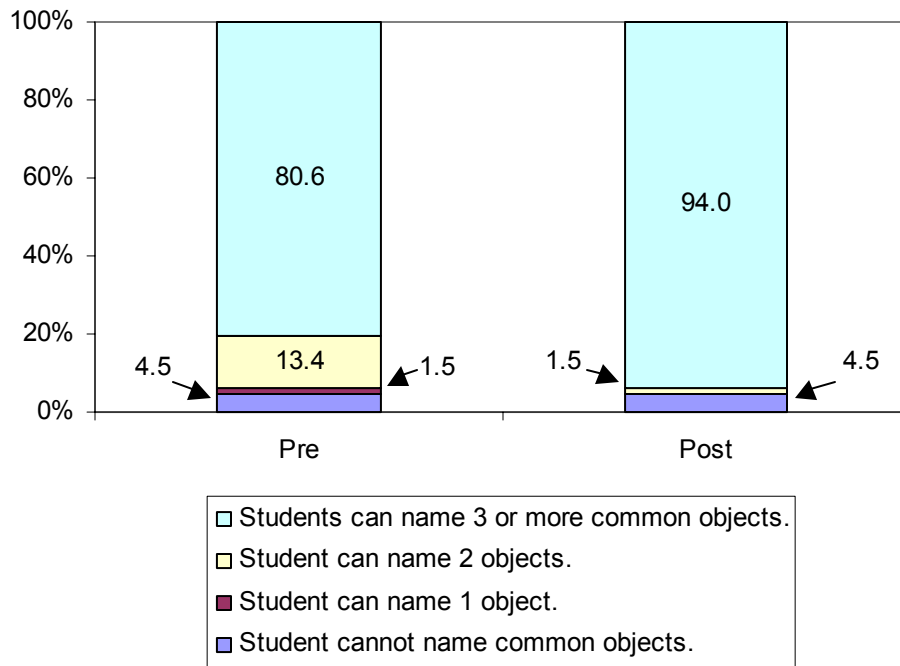
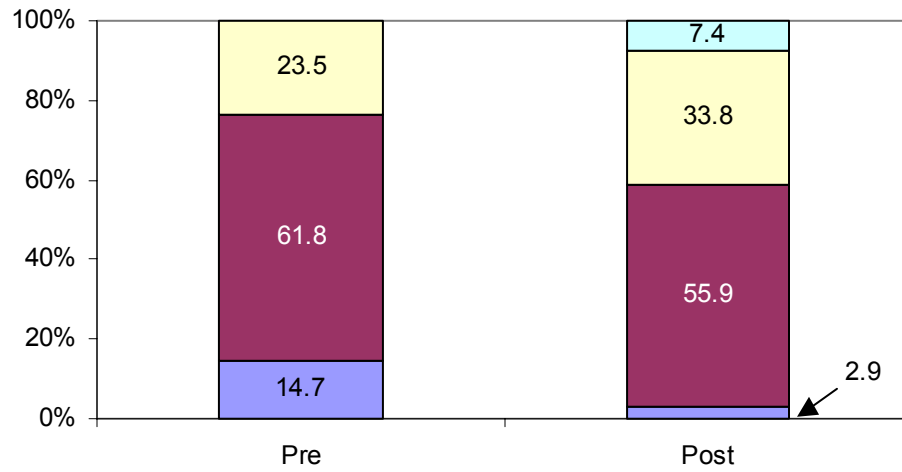


Figure 12
Student Shows Interest in Reading Activities



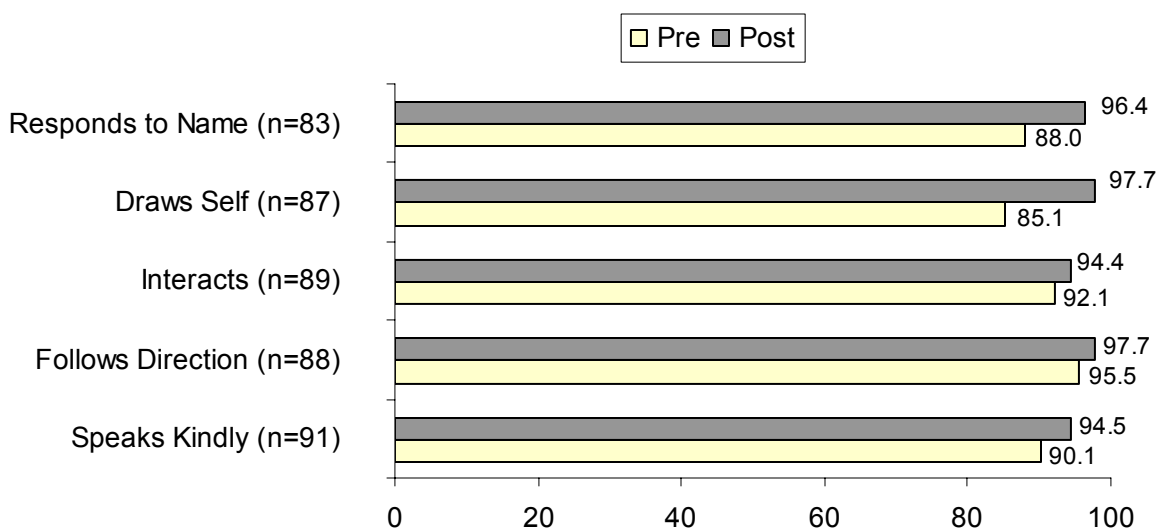
- Student answers and asks questions about story. Student often tells a story while turning the pages of a book.
- Student asks people to read stories and labels pictures in the book. Student answers questions about a story that has been read.
- Student shows interest when stories are read.
- Student does not yet show interest in reading activities.

Personal/Social Items

While the percentage of students proficient on the five personal/social items assessed did increase, a high percentage of students entered the program already proficient.

- Students entered the program with proficiency rates ranging from 85% to 96% proficient on the personal/social items.
- The percentage proficient on the post assessment ranged from 94% to 98% proficient.

Figure 13
Kindergarten Initial Assessment
Selected Personal and Social Development Items
2004



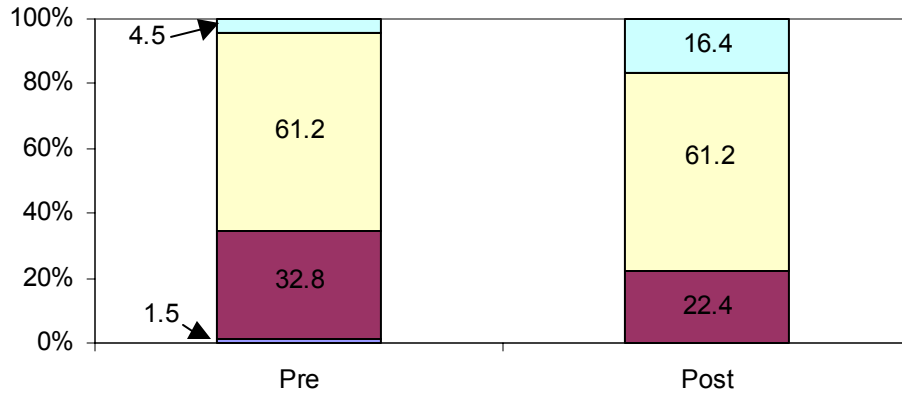
Figures 14 through 18 show the percentage of students receiving a 1-4 on the rubrics associated with the KIA personal/social items.⁴ On each personal/social rubric the percentage of students scoring 3 or 4 increased between the pre-assessment and the post-assessment:

- The percentage of students responding to his/her first and last name increased from 66% to 78%. Figure 14 shows:
 - An increase in the percent of students consistently responding to his/her name and telling his/her name in a complete sentence (from less than 5% to 16%).
 - The percent of students only responding to a nickname decreased from 33% to 22%.
- The percentage of students drawing a picture of themselves with three or more parts increased from 81% to 91%. Figure 15 shows:
 - The percent of students not able to draw a picture or only able to draw an incomplete picture decreased from 13% to 7%.

⁴ Aversboro data is not included in figures 14-18 due to possible bias introduced by the late recording of assessment data.

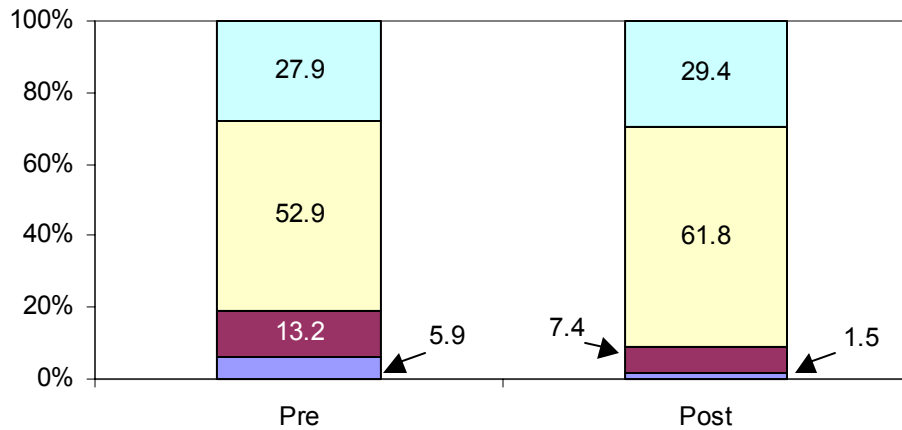
- The percent of students able to draw a picture of themselves with three to five parts increased from 53% to 62%.
- The percentage of students initiating or sustaining interaction increased from 49% to 87%. Figure 16 shows:
 - The percent of students only responding when others initiated interaction decreased from 51% to 11%.
 - The percent of students sustaining interactions for three or more exchanges increased from less than 2% to 33%.
- The percentage of students usually or fully following directions increased from 63% to 87%. Figure 17 shows:
 - The percent of students requiring repeated instructions before following directions decreased from 35% to 10%.
 - And the percent of students following directions fully the first time asked increased from 13% to 32%.
- The percentage of students showing awareness of the feelings of others and those responding appropriately to feelings of others increased from 72% to 88%. Figure 18 shows:
 - A decrease in the percent of students expressing or verbalizing feelings sometimes in unacceptable ways from 19% to 7%.
 - An increase in the percent of students responding appropriately to the feelings of others from 0% to 32%.

Figure 14
Identifies Self with First and Last Name



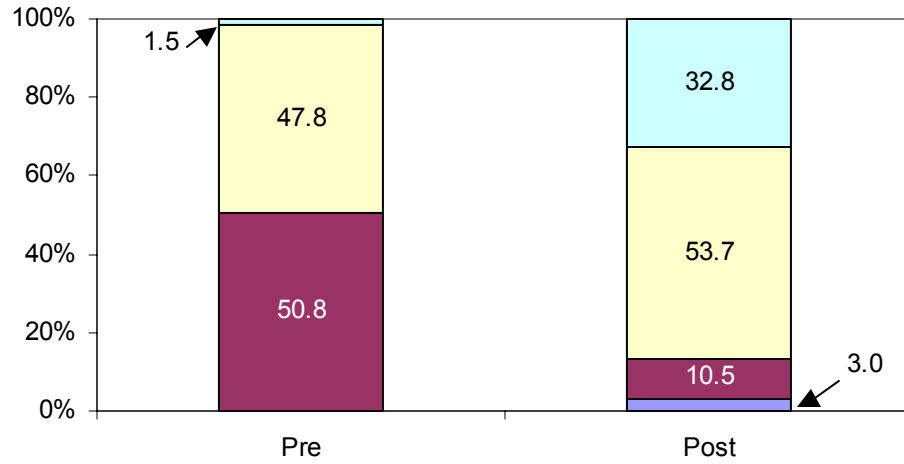
- Student consistently responds to his/her first and last name and tells his/her name to others using a complete sentence. ("My name is ____.")
- Student consistently responds to his/her first and last name and is able to tell his/her name to others.
- Student responds only to a nickname or first name.
- Student doesn't respond to his/her name.

Figure 15
Talks/Draws Picture of Self



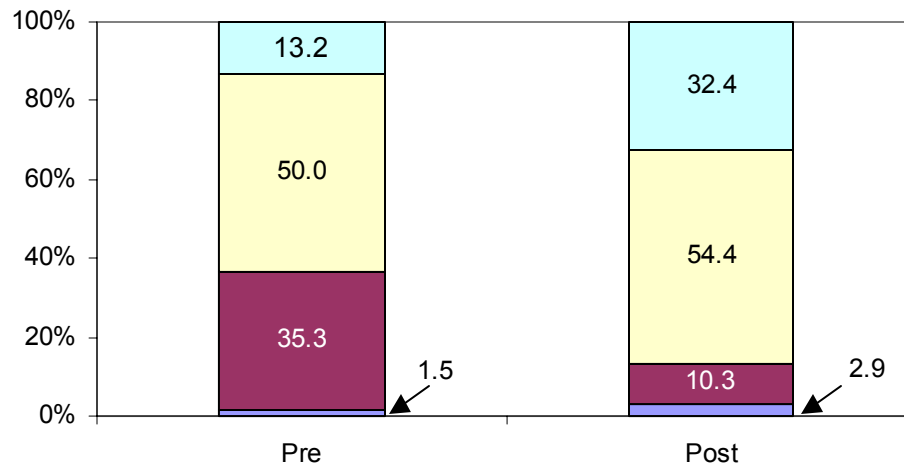
- Student draws a detailed picture of self with 6 or more parts.
- Student is able to draw a picture of self with 3-5 parts.
- Student explores drawing and writing materials. Draws no picture or incomplete picture (less than 3 parts).
- Student does not yet engage in drawing activities.

Figure 16
Interacts Easily with Adults and Peers



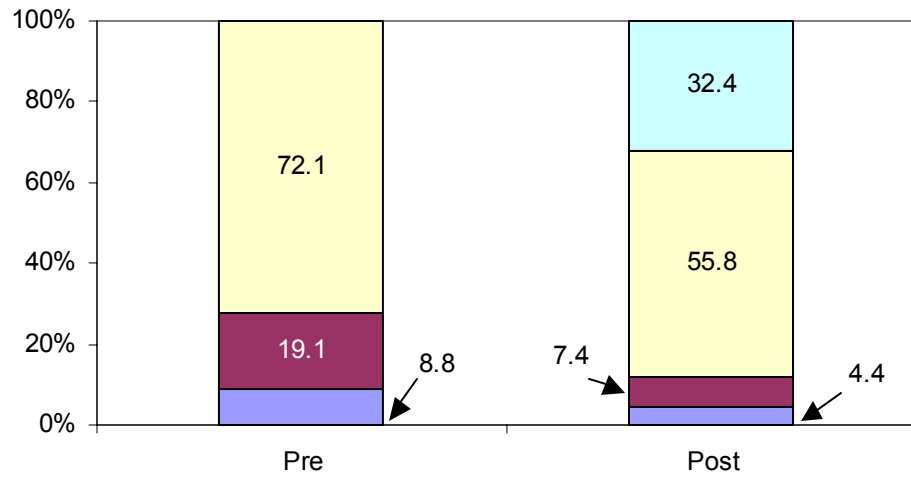
- Student sustains interactions (for 3 or more exchanges) with adults and peers.
- Student initiates interactions with both adults and peers.
- Student responds when adults or peers initiate interactions.
- Student does not yet interact with adults and peers in the classroom.

Figure 17
Responds to Adult Direction



- Follows directions fully the first time given.
- Follows directions usually without repetition.
- Follows directions with repetition.
- Does not follow directions.

Figure 18
Speaks Kindly to Classmates



- Student responds appropriately to the feelings of others.
- Student shows awareness of the feelings of others and speaks kindly to classmates.
- Student expresses or verbalizes feelings, but sometimes in unacceptable ways.
- Student does not yet express or verbalize feelings.

KIA RESULTS

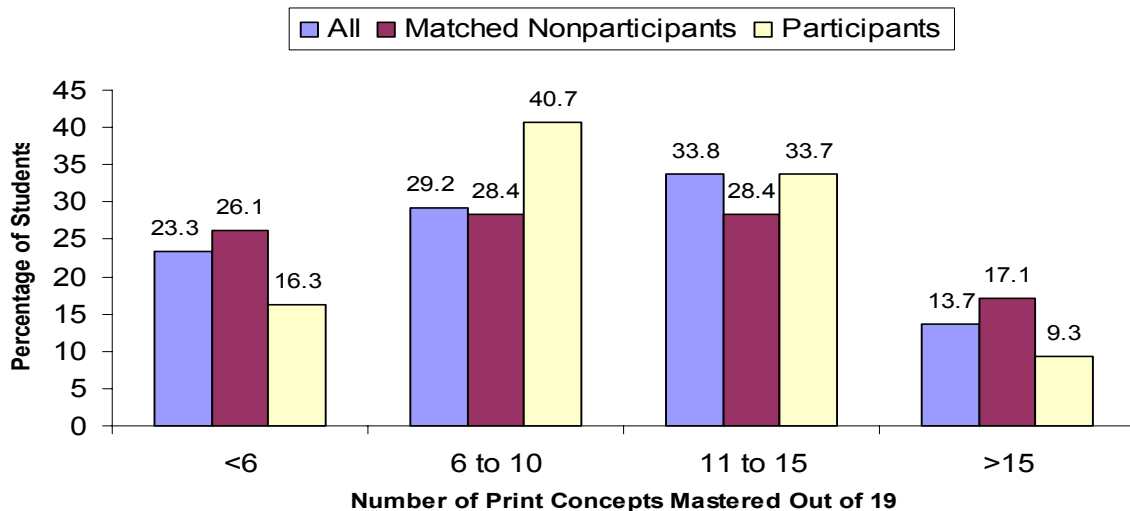
The strength of Early Start was also evaluated by comparing program participants to academically and demographically similar students. While no pretest score was available for the comparison group, students were matched on demographic characteristics. Since the primary focus of Early Start was on preparing students with little to no preschool experience for kindergarten, demographically similar students were matched to assess if students participating in Early Start were more prepared than matched students. Students were matched on grade, race, FRL, LEP, and SWD status. (See methods section for more details).

Print Concepts

The KIA assesses kindergarten students on 19 concepts of print. There was no significant difference between the overall mean number of print concepts mastered for Early Start participants (9.9 with a standard deviation of 4.3) and matched nonparticipants (9.6 with a standard deviation of 5.2). However, when results were collapsed into ranges, some interesting although not statistically significant patterns were evident (see Figure 18).

- A lower percentage of students participating in the Early Start preschool experience demonstrated less than six print concepts (16%) than either the matched nonparticipants (26%) or the overall group of students tested (23%). This suggests some benefit to exposure to the preschool and testing experience.
- More preschool participants scored in the range of 6-10 print concepts than the other two groups.
- Percentages in the range of 11 to 15 print concepts mastered were slightly higher for participants than nonparticipants (34% compared to 28%).
- The percentage of preschool participants demonstrating more than 15 print concepts was lower for the preschool participants than the other two groups. This may reflect the short, nature of the experience provided and the fact only certain skills were emphasized.

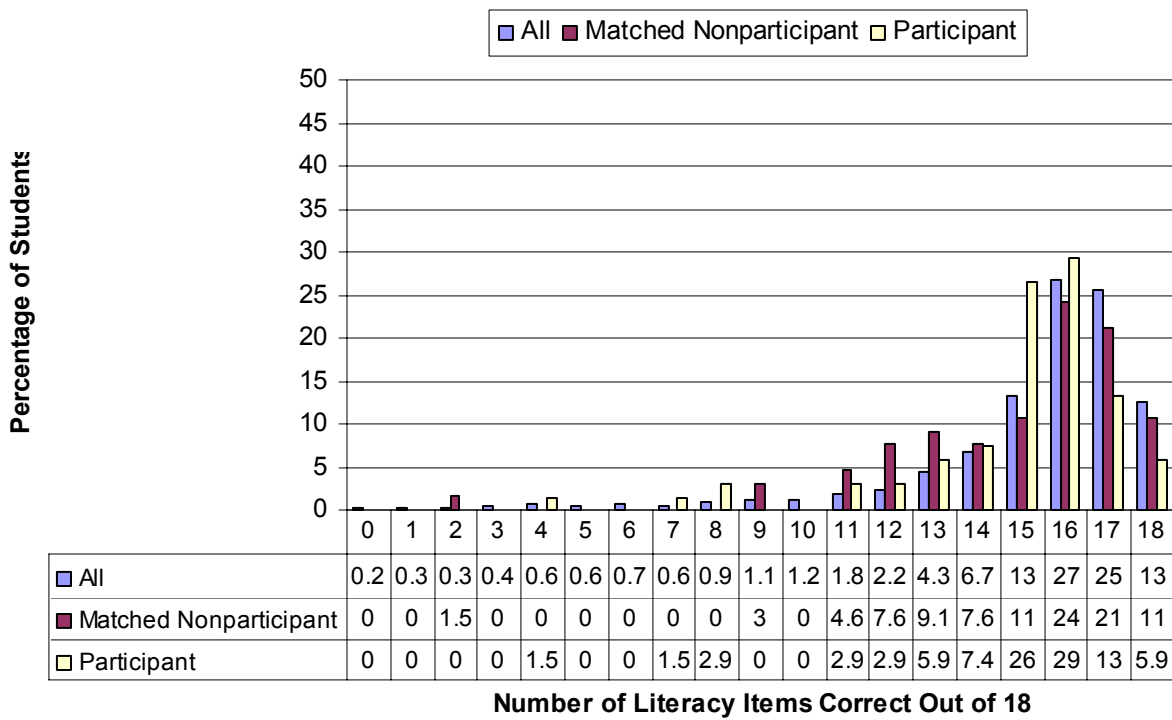
Figure 19
Print Concepts on Fall 2004 KIA
WCPSS, Matched Nonparticipants and Early Start Participants



Literacy Items

Results for all groups on the personal/social and literacy KIA assessment items are clustered toward the high end of the results continuum. While Figure 20 shows that a higher percentage of Early Start participants (75%) mastered 15 or greater of the 18 literacy items on the KIA than did matched nonparticipants (67%), these results are not significant. A significantly higher percentage of Early Start participants mastered 15 or 16 out of 18 items than nonparticipants, but significantly fewer participants were able to master 17 or 18 items.

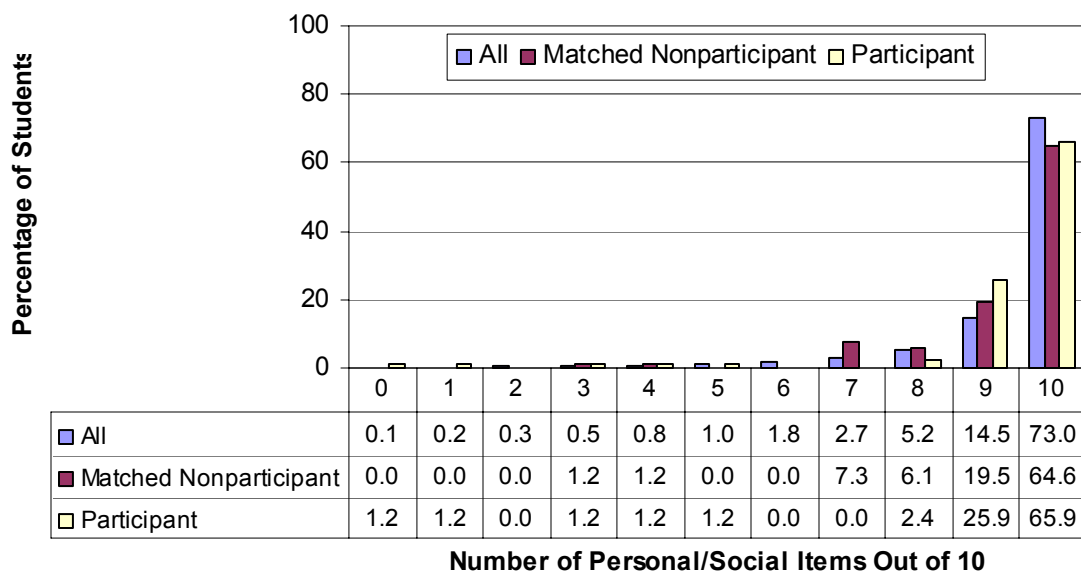
Figure 20
Literacy Items on Fall 2004 KIA
WCPSS, Matched Nonparticipants and Early Start Participants



Personal/Social Items

While Figure 21 shows a higher percentage of Early Start participants (92%) mastered 9 or 10 of the 10 personal/social items on the KIA than did matched nonparticipants (84%) these difference were not significant.

Figure 21
 Personal/Social Items on Fall 2004 KIA
 WCPSS, Matched Nonparticipants and Early Start Participants



STAFF SURVEY

Following the Early Start Program the staff was surveyed as another method of evaluating the strength of the program. Staff identified the major strengths as:

- Providing students with little to no previous preschool experience with some experience with school routine
- The well laid out curriculum and materials
- The Woven Word program
- Small class size
- Parental involvement

Staff also had suggestions for improving the Early Start Program, including:

- Lengthening the program from three to four weeks. Forty-seven percent of staff responded they would have preferred a 4-week program (29% responded no changes in the Early Start calendar were necessary).
- Improving communication with prospective families about the program.

- Making sure payroll has accurate information so staff can be paid correctly.
- Including shorter books that will hold students’ attention.

The vast majority of staff found the program’s focus on literacy skills, social skills, and Second Step to be effective or highly effective. Figure 22 shows the results of the staff survey.

Figure 22
Early Start Staff Survey 2004

	<i>Neutral</i>	<i>Somewhat Useful</i>	<i>Useful</i>
Parent Involvement	0%	31%	69%
Program Curriculum	8%	15%	77%
Selecting Students	8%	31%	62%
Student Assessment	8%	23%	69%
	<i>Neutral</i>	<i>Effective</i>	<i>Highly Effective</i>
Consumable materials	0%	27%	73%
Daily Schedule	0%	25%	75%
Focus on Literacy	8%	25%	67%
Focus on Social Skills	0%	17%	83%
Instructional Activities	8%	17%	75%
Second Step Materials	0%	33%	67%
Target Skills and Objectives	8%	25%	67%
Woven Word Materials	17%	17%	67%

Note: Somewhat Unuseful, Unuseful, Ineffective, and Highly Ineffective were choices on the survey, but received 0% of the responses to the above items and are therefore not shown.

CONCLUSIONS/RECOMMENDATIONS

We did detect improvements in the six concepts of print focused on by Early Start, as well as the literacy and social skills addressed. However, the brief three-week program did not cover all skills assessed on the KIA, and students' overall performance was not significantly different than similar students not served. Staff viewed the program's focus on literacy skills, social skills, and Second Step to be effective or highly effective.

The fact that most students scored proficient before preschool participation on the 10 KIA literacy and personal/social items selected as the focus of the program suggests that:

- 1) Students had more skills upon program entry than expected, and expectations were therefore lower than needed for the curriculum.
- 2) Teachers were more generous in their ratings of proficiency than perhaps students' skills merited, or
- 3) A combination of the two.

One suggestion for the Early Start program next summer is that expectations be broadened in terms of the number of skills teachers are prepared to explicitly address, increasing the chances for differentiation of instruction and to influence overall KIA ratings. It is not clear to us whether teachers' adjusted their instruction based on high pretest mastery, or whether their materials allowed them to do so. It would be helpful to consider what differentiation possibilities could be included in the program curriculum. Pre-screening potential participants with other factors such as migrant or special education status would facilitate differentiation.

Staff suggested including shorter books to hold students' attention, better communication with prospective families, and an increase from a three-week to a four-week program. The lack of difference on the KIA between students served and similar students not served supports a potential advantage to a longer program. It may be beneficial to extend the program to a four-week program with an added week of curriculum.

Finally, request volunteers who are willing to use carryover funds to fund the program.