

Enhancing Children's Learning in Family Childcare Homes

2011-12 Annual Report

ENHANCING CHILDREN’S LEARNING IN FAMILY CHILDCARE HOMES: 2011-12 ANNUAL REPORT¹

Early experiences are important, whether in formal or informal setting, in the home or outside the home. Moreover, as reported in 2000, approximately 60% to 70% of children younger than 6-years-old regularly attend some type of outside the home childcare or early childhood program.² The childcare settings families choose for their children vary greatly—i.e., with relatives, in childcare centers, in family childcare homes, and by nannies or babysitters providing childcare in the family’s home.³

The research is clear—irrespective of the childcare setting, the quality of early learning experiences greatly influences children’s future success in school and beyond. Children who attend high quality early childhood programs demonstrate better cognition including mathematics and language skills, better social skills including interpersonal relationships, and better behavioral self-regulation than do children attending lower-quality childcare programs.⁴

Over the past two decades federal, state, and local entities have focused attention on improving the quality of early care and learning services. Much of this attention concentrated on childcare centers and ignored other delivery systems including family childcare homes (FCCHs). While definitions of FCCHs vary state-to-state, FCCH generally refers to programs in which

¹ The development and implementation of the learning tools described in this paper were funded in part by the U.S. Department of Education, Office of Innovation and Improvement, Fund for the Improvement of Education as part of the Virtual School Readiness Incubator Project, the Florida Institute of Education at the University of North Florida, and the Early Learning Coalition of Duval, Inc. These materials are still in refinement phase and should be used with this caution in mind. The content of these units does not necessarily reflect the views or policies or imply endorsement by the U.S. Department of Education or the University of North Florida

² US Department of Labor (2000). *Women’s Bureau 20 Facts on Women Workers.*; Washington, DC: US Department of Labor.

³ Ehrle J., Adams, G., & Tout, K. (2001). *Who’s Caring for Our Youngest Children? Child Care Patterns of Infants and Toddlers.* Washington, DC: Urban Institute.

⁴ Campbell, F., Ramey, C., Pungello, E., Sparling, J., & Miller-Johnson, S. (2002). Early childhood education: young adult outcomes from the Abecedarian project. *Applied Development Science*, 6, 42–57.

childcare providers take care of children not related to them in their homes. FCCHs typically serve multi-aged groups, ranging from 2- through 4-years old but this range can extend upwards to 12-year-old. In 2007, the National Association of Education of Young Children reported the existence of approximately 20,000 FCCHs in the US.⁵ In Florida, the number in 2010 was 5,100 registered, licensed, or both registered and licensed FCCHs.⁶

FCCHs have special needs because these settings serve smaller numbers of children of multiple ages than do typical childcare centers. By far, most early learning curricular tools were developed for childcare center providers; thus, do not accommodate small numbers of children of multiple ages—the frequent FCCH environments. The unique needs of FCCH providers must be addressed to ensure that high quality early learning experiences are accessible to all children. To address this need, researchers at the Florida Institute of Education at the University of North Florida (FIE), working in collaboration with the Early Learning Coalition of Duval, Inc., and participating FCCH providers developed and piloted a literacy-focused curriculum designed especially for use in FCCH settings.

INSTRUCTIONAL UNITS

Beginning in fall 2010 and continuing through early summer 2012, FIE researchers and participating FCCH providers developed, prototyped, and pilot-tested a set of research- and standards-based instructional units along with the professional training needed for FCCH implementation. Prototype work, conducted during the 2010-11 school year, began with a review of Florida’s developmental standards for children aged two through five years. The literacy and language standards guided the development of the literacy-focused components of the instructional units. Important concepts identified in Florida’s standards relating to mathematics,

⁵ NAEYC Critical Facts about Programs for Young Children. Retrieved January 2012 from: <http://www.naeyc.org/policy/advocacy/ProgramFacts>

⁶ Florida Department of Children and Families (personal communication, January 10, 2012)

science, and social/emotional development were integrated into the literacy-focused instructional units and guided theme and concept selection. Focus books reflecting identified concepts provided opportunities for children to develop vocabulary and background knowledge. For each supplemental unit, researchers developed an instructional manual including directions for conducting read-alouds and learning activities, using props, and developing core and rich vocabulary.

During the 2011-12 school year, participating FCCH providers pilot-tested the set of 18 supplemental instructional units. The supplemental instructional units provides learning experiences for 10 months—the typical timeframe for FCCH providers. The pilot-testing included the FCCH providers participating in six professional training and information sessions throughout the year. The training and information sessions, delivered by the FIE researcher during her visits to the FCCHs and through group sessions, were designed to help providers acquire the necessary knowledge to implement the next cluster of units as well as strengthening their expertise in literacy content, children’s development, and concept knowledge relative to the instructional units.

Instructional Units Implementation

Each of the instructional units is anchored by two, age-appropriate children’s books, with focused vocabulary words for introducing and enhancing language. Teachers usually implement the 2-week instructional units in two sessions per day. The first of the sessions begins with the teacher reading aloud the unit’s focus book. Following the “read aloud” session, the teacher introduces and implements oral language enhancement activities and other activities such as print concepts, letter-sound, early writing, science, math, and social studies. The children respond in large- and small-group settings. Teachers frequently place the hands-on activities in learning centers where the children can independently practice.

TEACHER'S IMPLEMENTATION AND REACTIONS

Researchers used teacher's feedback during the prototype year to modify the set of instructional units concerning its usability in the FCCH settings and the delivery timeline for each unit. In the pilot-test year, work involved refining the developed set of instructional units. During this year, the researcher gained implementation information from the group sessions and when she used an implementation rubric to observe implementation of the supplementary units during her visits to the FCCHs. During the group sessions, teachers indicated that the curriculum was very good, age-appropriate, and aligned with the Florida standards. Concerning implementation, teachers indicated the units were easy to follow; they liked the content, books, and activities. Additional implementation activities noted were using the public library as a source for supplementary books and parents as a means to enhance instruction by providing them with the unit activities. Relative to the children, teachers indicated that they enjoyed the activities, developed self-confidence when using the materials, responded well to the questions posed during "read aloud" sessions, and loved the movements and songs. The teachers also offered comments about the mathematics included in the instructional units: They expressed the need for more mathematics units and, in response, they supplemented the mathematics units with other materials on hand and expressed that they used the units on numbers throughout the school year rather than as a stand-alone 2-week unit.

The researcher, on her visits to the individual FCCHs, observed that the supplemental curriculum was implemented on a regular basis in well-equipped instructional settings. The majority of the FCCHs designated space for instruction that included a child-sized table and chairs, an area for children's books and teacher resources, and designated display areas. The

teachers enthusiastically implemented the instructional units and provided the children with both small- group and individual daily instruction.

At the end of the 2011-12 pilot-test, teachers also responded to a 6-item survey. Teachers indicated that they dealt with multi-age implementation by teaching the same material to all children and by providing individual help to any child having difficulty. They also indicated that they asked older children to help the younger children with the activities. Ways teachers expanded the time spent on reading, language, alphabet, and writing included labeling items in the classroom; developing a writing center, a word wall, and a corner where children could read independently; using more songs and poems; increasing time for conversations among children; and talking about language during circle time, outdoor time, snack time, and lunch time. Most teachers reported that they did not change their schedule, rather integrated the supplemental units in their existing schedule. They also reported that when working with low-achieving or disabled children, they worked individually with the child, repeated activities, shared activities with parents, used more props, and modified activities to meet the needs of the individual children.

EVALUATING CHILD OUTCOMES

During the 2011-12 academic year, 19 FCCH providers participated in a study designed to assess the impact of the 18 supplemental instructional units implemented in the FCCH settings. The purpose of this evaluation is to provide the results of an evaluation of the achievement gains made by the FCCH 3- and 4-year-old children, specifically: To what extent do children enrolled in FCCHs demonstrate significant and meaningful gains in school readiness and early literacy achievement measured by the Bracken Basic Concept Scale—Third Edition: Receptive (BBCS-3:R) and the Test of Preschool Early Literacy (TOPEL)?

Method

Measurement

The evaluation team used several instruments to estimate improvement in the children's early learning. The BBCS-3:R served as the measure of children's school readiness and concept development. The TOPEL served as the measure of important components of children's early literacy. Assessors trained by the Florida Institute of Education (FIE) administered the BBCS-3:R and TOPEL in one-on-one settings using a pretest and posttest design. Responses to the two assessments were recorded on scannable forms and computer scored. Data were collected during the second and third week of October 2011 and during the last three weeks of May 2012.

*BBCS-3:R*⁷

The BBCS-3:R is a battery of 10 scales designed to measure understanding of concepts that traditionally have been thought relevant to the development of young children. The first five scales form the School Readiness Composite (SRC) and assess foundational concepts that frequently and intentionally are taught to children before and during formal schooling. These concepts include colors, letters, numbers, shapes, and size. The remaining scales (Direction/Position, Self-/Social Awareness, Texture/Material, Quantity, and Time/Sequence) measure basic concepts that are taught less frequently by families and, thus, are taught more often in school settings. These concepts are now incorporated in the Florida early childhood standards.

The Direction/Position scale measures relational terms that describe position and placement of objects including positional words (inside, outside, and above), directional words (near, far, right, and left), and properties of motions (backward and side-to-side).

⁷ Bracken, B. A. (2006). *Bracken Basic Concept Scale-Third Edition: Receptive*. San Antonio, TX: Harcourt Assessment, Inc.

The Self-/Social Awareness scale measures knowledge of concepts that describe emotional states and kinship including personal characteristics (gender and age) and roles of the family. The Texture/Material scale measures knowledge of concepts that describe attributes of objects including difference in textures (smooth and rough) and sorting objects by texture. The Quantity scale measures knowledge of concepts that describe quantity and how it can be manipulated including part/whole relationships (whole, half, and piece), language that compares quantity (more, several, less, greater than), and comparison of objects by capacity/volume (empty, full, and enough). The Time/Sequence scale measures concepts that describe occurrences on a continuum (such as calendar concepts) and the degree of speed and/or including the time of day (morning and night), vocabulary related to time (before and after), relative position sequence (ordinal numbers), and sequence of events (beginning, middle, and end).

*TOPEL*⁸

Children's early literacy ability was assessed using the individually administered TOPEL. The TOPEL measures abilities related to early literacy including print knowledge, definitional vocabulary, and phonological awareness—abilities correlated with decoding and reading comprehension. Print Knowledge is a 36-item scale measuring knowledge of the nature and purposes of printed words and alphabet knowledge. Children are asked to point to representations of the correct response to verbal stimuli and to produce letter sounds. Definitional Vocabulary is a 35-item scale simultaneously measuring surface and deep vocabulary knowledge. The child, upon being shown a picture, is asked to say what the picture represents and to describe an important attribute of what is pictured. Phonological Awareness is a 27-item scale designed to measure elision and blending abilities. For the first elision items, the child looks at a page of pictures as the examiner names each object.

⁸ Lonigan, C. J., Wagner, R. K., & Torgesen, J. K. (2007). *Test of Preschool Early Literacy*. Austin, TX: Pro-Ed.

The examiner then says a word and asks the child to point to the picture of what is left when a sound is dropped. For the beginning blending ability items, the examiner asks the children to combine sounds to form a word by pointing to the picture corresponding to the newly formed word. For both types of items, higher numbered, more difficult items are presented without pictures. The Early Literacy Index is a composite of the three scales and, according to the test developers, is the single best measure of children's emergent literacy.

Scale Scores

Children undergo rapid development over the age span covered by the assessments; therefore, raw scores are converted to standard scores relative to a normative group of children representative of the age range of the test. This process adjusts scores for natural maturation and allows detection of gains resulting from programs. A change or lack of change in standard scores is always relative to the normative populations and does not represent an absolute gain in knowledge. Standard BBCS-3:R scores have a mean of 10 and a standard deviation of 3. TOPEL standard scores have a mean of 100 and a standard deviation of 15.

Analysis Plan

Data used for this report were collected from 60 children, 27 three-year-olds and 33 four-year-olds, with parental informed consent enrolled in 18 FCCHs. The 4-year-old children were assessed using all BBCS-3:R and TOPEL scales. The 3-year-old children were assessed using only the BBCS-3:R School Readiness Composite scale and all TOPEL scales. The number of children assessed in each of the 18 FCCHs ranged from one to five. Therefore, we chose to use repeated measures Analysis of Variance (ANOVA) models, which ignore dependency among children's scores, to detect children's fall to spring gains in school readiness and early literacy achievement. Standard scores are available for the BBCS-3:R and the TOPEL which allows

analyses to combine the scores of the 3-year-old and 4-year-old children. The resulting analyses are more powerful because of the larger sample size.

Results

Attrition

Twelve of the 60 children (six 3-year-olds and six 4-year-olds) were no longer available at the time of the spring assessments. These 12 children represent 20% attrition. Part of the attrition results from the children from two of the FCCCHs who were available for fall assessments but not for the spring assessments. The fall scores of the 3- and 4-year-old children who were not assessed in the spring using the BBCS-3:R SRC and TOPEL scales (incomplete) were compared to fall scores of children assessed in the spring (complete). A determination of the importance of attrition involved investigating whether the attrition was random or systematic. Systematic attrition can result in a final sample of children that is different from the original sample relative to children's initial school readiness or demographic characteristics. Table 1 presents the fall mean scores of the children with complete and incomplete data and presents the analytic results using the BBCS-3:R SRC and TOPEL scales. The remaining BBCS-3:R scales were used to assess only the 4-year-old children; thus, the sample is too small for statistical analyses.

On average, the children with complete Early Literacy Index, Definitional Vocabulary, and Phonological Awareness scores had higher initial status than did the children with incomplete scores. Inspection of the Direction/Position, Self-/Social Awareness, Texture/Material, Quantity, and Time/Sequence mean scores suggest that the scores of the children with complete scores were higher than those of the children with incomplete scores.

Table 1

Fall Mean Scores of FCCH Children with Complete and Incomplete Scores

Scale	Complete		Incomplete		<i>p</i> -value
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
BRACKEN					
School Readiness Composite	11.13	3.07	10.33	2.50	.412
Direction/Position	9.44	2.58	8.83	2.14	
Self-/Social Awareness	9.93	2.59	9.93	3.50	
Texture/Material	9.04	2.24	9.00	2.28	
Quantity	9.56	2.82	9.00	2.28	
Time/Sequence	9.41	2.47	8.33	2.88	
TOPEL					
Early Literacy Index	102.19	14.50	94.00	9.95	.070*
Print Knowledge	109.10	16.77	106.42	15.10	.615
Definitional Vocabulary	100.15	13.52	92.75	12.20	.090*
Phonological Awareness	97.17	15.51	88.00	12.50	.063*

Note. *n* = 48 BBBS-3:R School Readiness Composite and TOPEL complete scores; *n* = 12 incomplete scores. *n* = 27 BBBS-3:R Direction/Position, Self-/Social Awareness, Texture/Material, Quantity, and Time/Sequence complete scores; *n* = 6 incomplete scores.

Demographic Characteristics of Sample

Ethnicity data were collected across four categories, *Black*, *Hispanic*, *Other*, and *White*.

Table 2 presents the demographic characteristics of the FCCH sample.

Table 2

Demographic Characteristics of the FCCH Sample

Demographic Characteristics		All Children		3-year-olds		4-year-olds	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender	Female	24	50.0	9	42.9	15	55.6
	Male	24	50.0	12	57.1	12	44.4
Ethnicity	Black	30	62.5	13	61.9	17	63.0
	Hispanic	2	4.2	1	4.8	1	3.7
	Other	6	13.5	3	14.3	3	11.1
	White	10	20.8	4	19.0	6	22.2

Note. *n* = 48 children.

Of the children with complete scores, the number of girls equaled the number of boys and the largest ethnicity represented was Black (63%). The average age of the 3-year-old children was between 42 and 43 months and the median age was 42 months. The sample also included five *school readiness* children (children from low-income families receiving subsidized childcare). The typical Florida prekindergarten child is between 48 and 60 months old on

September 1 of the school year. The average age of the FCCH 4-year-old children was between 53 and 54 months and the median age was 54 months. The ages of the children reflect the typical age distributions for 3-year-old and 4-year-old (prekindergarten) children in Florida.

BBCR-3:R Results

Table 3 reports the BBCS-3:R summary statistics and analyses results.

Table 3
BBCS-3:R Summary Statistics and ANOVA Results

Scale	Fall		Spring		<i>p</i>	Effect Size
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
School Readiness Composite	11.13	3.07	11.29	2.35	.597	.053
Direction/Position	9.44	2.57	10.44	2.91	.028**	.333
Self-/Social Awareness	9.93	2.58	10.41	3.23	.433	.160
Texture/Material	9.04	2.24	9.93	2.32	.020**	.297
Quantity	9.56	2.82	10.11	2.44	.238	.183
Time/Sequence	9.41	2.47	9.85	2.32	.333	.147

Note. Effect sizes are based on the BBCS-3:R normative population. Effect sizes of 20% to 49% of a standard deviation are small, between 50% and 79% of a standard deviation are medium, and 80% or more of a standard deviation are large.

n = 48 children for the BBCS-3:R School Readiness Scale and *n* = 27 for all other BBCS-3:R scales.

*** *p* < .01; ** *p* < .05; and * *p* < .10.

As can be seen, the children made statistically significant fall to spring gains on the BBCS-3:R Direction/Position and Texture/Material scales, *p* = .028 and .020, respectively. Table 3 also reports effect sizes, and effect sizes for the BBCS-3:R Direction/Position and Texture/Material gains are 33% and 30% of a standard deviation, respectively. It is noted, however, that the small sample size does not provide enough statistical power to detect the possible true gains suggested by the magnitude of the effect sizes on the Self-/Social Awareness, Quantity, and Time/Sequence scales.

Another way to look at the FCCH children's level of school readiness is to look at the fall to spring differences in the percentage of scores ranked in the BBCS-3:R SRC achievement categories. (Scores below 4 are classified *Very Delayed*, from 4 to 6 are classified *Delayed*, from

7 to 13 are classified *Average*, from 14 to 16 are classified *Advanced*, and above 16 are classified *Very Advanced*.) Figure 1 shows the percentage of SRC scores in the BBCS-3:R achievement categories in the fall and spring.

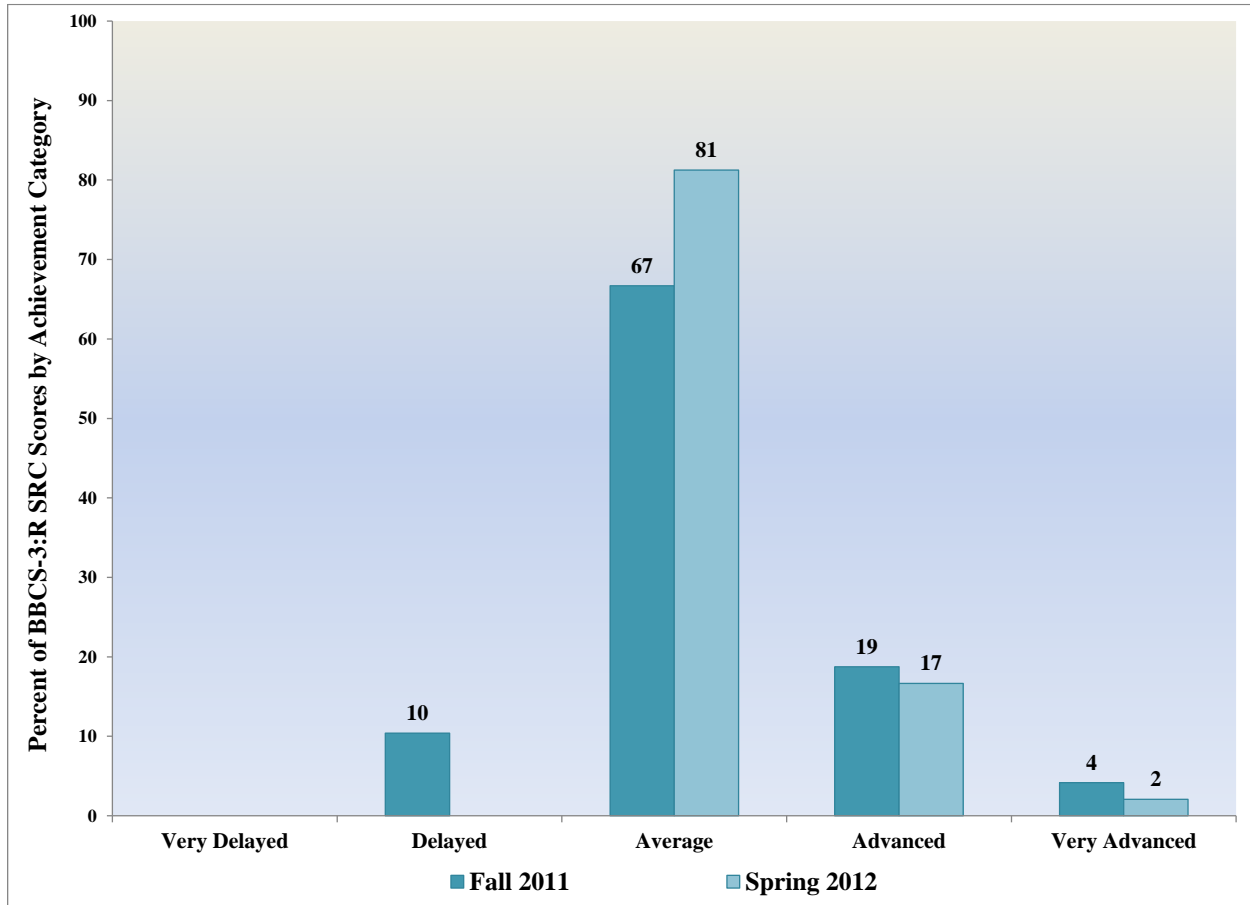


Figure 1. The percentage of children’s BBCS-3:R School Readiness Composite (SRC) scores categorized as *Very Delayed* to *Very Advanced* in the fall and spring of the school year ($n = 48$).

The children’s BBCS-3:R SRC mean scores indicate that they did not make statistically significant fall to spring gain; however, as can be seen in Figure 1, at the end of the school year, more spring than fall scores were categorized *Average* or higher. In the fall, the scores of 90% of the scores were classified *Average* or higher, and in the spring, 100% of the scores were classified *Average* or higher.

TOPEL Results

Children’s early literacy achievement was assessed using the TOPEL. Table 4 reports the TOPEL summary statistics and analyses results.

Table 4
TOPEL Summary Statistics and ANOVA Results: FCCH

Scale	Fall		Spring		<i>p</i>	Effect Size
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Early Literacy Index	102.19	14.50	108.90	13.93	<.001***	.447
Print Knowledge	109.10	16.77	113.48	13.16	.033**	.292
Definitional Vocabulary	100.15	13.52	104.90	10.07	.003***	.250
Phonological Awareness	97.17	15.51	104.06	17.32	<.001***	.495

Note. Effect sizes are based on the TOPEL normative population. Effect sizes of 20% to 49% of a standard deviation are small, between 50% and 79% of a standard deviation are medium, and 80% or more of a standard deviation are large.

n = 48.

****p* < .01; ***p* < .05; and **p* < .10.

The children made statistically significant fall to spring gains on all TOPEL scales.

TOPEL effect sizes ranged from a low of 25% of a standard deviation to a high of 50% of a standard deviation.

Another way to look at the early literacy achievement of the children enrolled in FCCHs is to look at the fall to spring differences in the percentage of Early Literacy Index scores ranked in the TOPEL achievement categories. (Scores below 70 are classified *Very Poor*, scores between 70 and 79 *Poor*, scores between 80-89 *Below Average*, scores between 90 and 110 *Average*, scores between 111-120 *Above Average*, scores between 121-130 *Superior*, and scores above 130 *Very Superior*. These categories reflect point-estimates of the children’s scores.)

Figure 2 shows these differences.

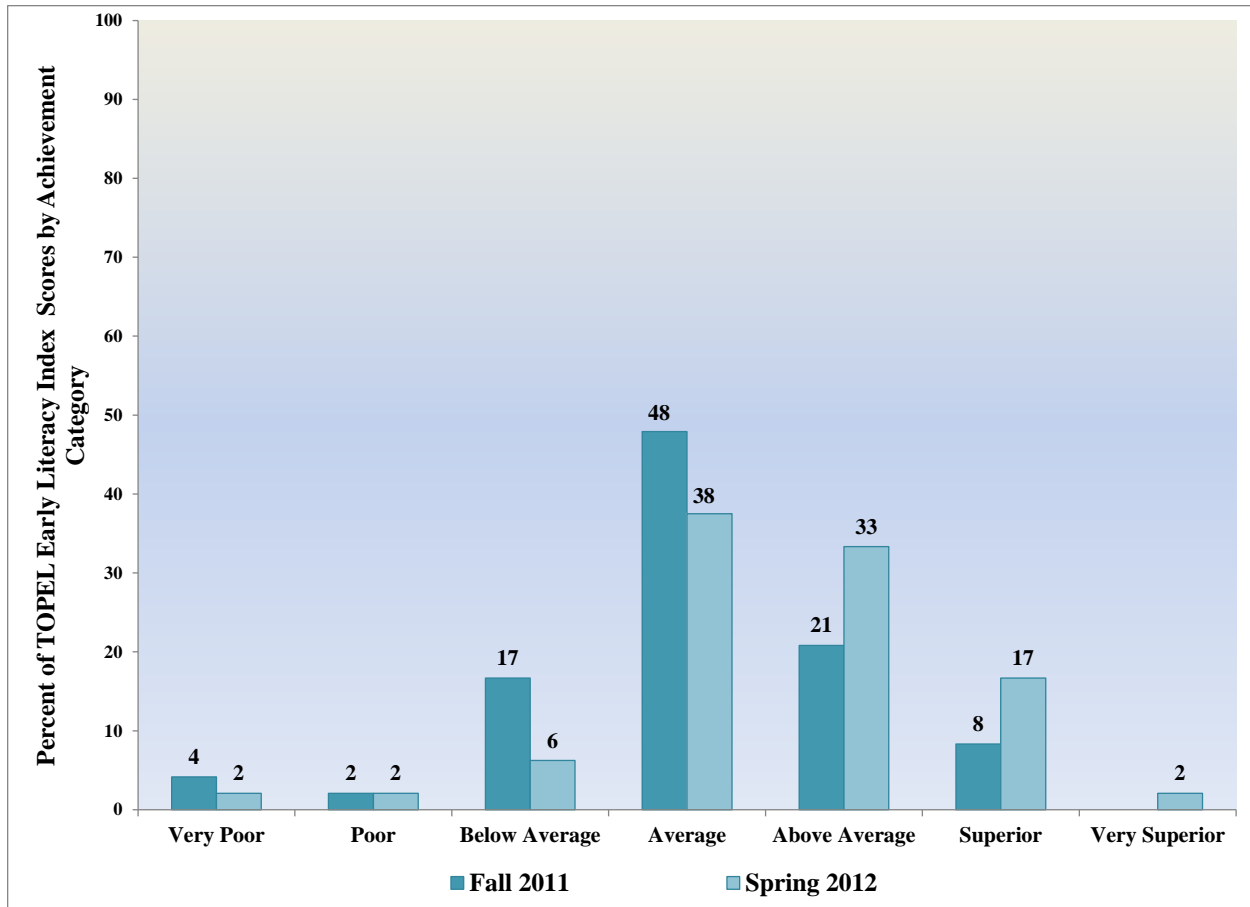


Figure 2. The distribution of TOPEL Early Literacy Index fall and spring scores ($n = 48$).

At the end of the academic year, 10% of the TOPEL Early Literacy Index scores ranked in the bottom quartile of national scores (*Very Poor* to *Below Average*), and 52% of the TOPEL Early Literacy Index scores ranked in the top quartile of national scores (*Above Average* to *Very Superior*). Additionally, at the end of the school year, 90% of the children’s scores were *Average* or higher.

Differences in the Mean Scores of 3- and 4-Year-Olds

Table 5 presents the children’s mean fall and spring scores by age as well as the percentile rankings of the mean scores. These scores were combined for the analyses with results presented in Table 3 for the BBCS-3:R scales and in Table 4 for the TOPEL scores. On average, the 3-year-olds had higher initial status on the BBCS-3:R SRC scale than did the 4-year-olds; however, the 4-year-olds gain (4 percentile points) placed them on equal footing with the 3-year-olds at the end of the school year. On average, at the end of the year, the percentile rankings of the 3- and 4-year-olds Print Knowledge and Definitional Vocabulary were the same. However, the 4-year-olds Early Literacy Index and Phonological Awareness mean scores ranked higher than those of the 3-year-olds.

Table 5
Mean Scores and Percentile Rankings of Mean Scores by FCCH Children’s Age

Scale	3-Year-Olds				4-Year-Olds			
	Fall		Spring		Fall		Spring	
	<i>M</i>	<i>Ranking</i>	<i>M</i>	<i>Ranking</i>	<i>M</i>	<i>Ranking</i>	<i>M</i>	<i>Ranking</i>
BBCS-3:R SRC	11.43	68	11.33	67	10.89	62	11.26	66
Early Literacy Index	101.29	53	107.62	69	102.89	58	109.89	75
Print Knowledge	113.38	81	113.67	82	105.78	65	113.33	81
Definitional Vocabulary	98.67	46	105.00	63	101.30	53	104.81	63
Phonological Awareness	92.29	30	100.81	52	100.96	53	106.59	67

Changes in Percentile Rankings

Another way to look at the school readiness and early literacy achievement of the children enrolled in FCCHs is to look at the fall to spring differences in the percentile rankings of the BBCS-3:R and TOPEL mean scores (Figure 3).

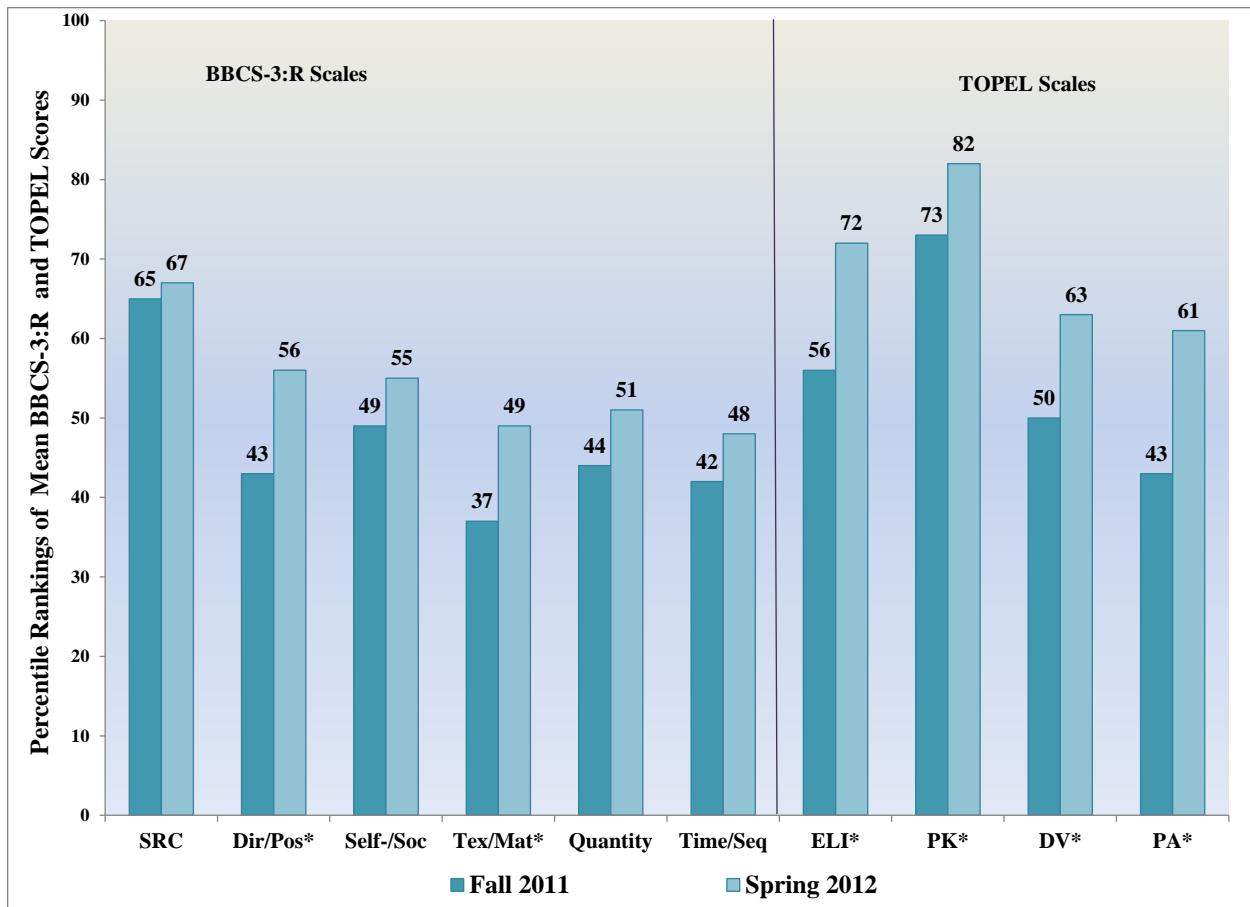


Figure 3. The percentile ranking of fall and spring mean scores. Asterisks indicate statistically significant growth from fall to spring. SRC is the School Readiness Composite, Dir/Pos is Direction/Position, Self-/Soc is Self-/Social Awareness, Tex/Mat is Texture/Material, Time/Seq is Time/Sequence, ELI is Early Literacy Index, PK is Print Knowledge, DV is Definitional Vocabulary, and PA is Phonological Awareness.

The largest gain in percentile ranking (18 percentile points) was for the TOPEL Phonological Awareness scale. The second largest gain in percentile rankings (16 percentile points) occurred on the Early Literacy Index. Among the BBCS-3:R scores, the largest gain in percentile rankings (13 percentile points) occurred on the BBCS-3:R Direction/Position mean scores of the 4-year-olds. The second largest gain in percentile rankings (12 percentile points) on the BBCS-3:R scales occurred on the Texture/Material scale. The fall and spring Print Knowledge mean scores ranked above the national normative population mean (scores ranked at the 50th percentile) with the spring score ranked at the 82nd percentile. All spring TOPEL mean

scores ranked at or above the 50th percentile. BBCS-3:R spring mean scores ranked from a low at the 48th percentile to a high at the 67th percentile. The spring means scores of the SRC, Direction/Position, Self/Social Awareness, and Quantity scales ranked at the 51st percentile or higher.

FCCH Summary

- The FCCH sample of children with complete BBCS-3:R and TOPEL scores included 48 children (21 three-year-olds and 27 four-year-olds) attending 16 FCCHs.
- The sample included mostly Black children and the same numbers of girls as boys.
- The 4-year-old children demonstrated statistically significant gains on the BBCS-3:R Direction/Position and Texture/Material scales representing effect sizes of 33% and 30% of a standard deviation, respectively.
- The BBCS-3:R spring Direction/Position and Texture/Material mean scores ranked at the 56th and 44th percentiles, respectively.
- In the spring, 100% of the children’s BBCS-3:R School Readiness Composite scores were categorized as *Average* or higher.
- The children demonstrated statistically significant gains on the TOPEL Early Literacy Index, Print Knowledge, Definitional Vocabulary, and Phonological Knowledge scales with effect sizes of 45%, 29%, 25%, and 50% of a standard deviation, respectively.
- The TOPEL spring mean Early Literacy Index, Print Knowledge, Definitional Vocabulary, and Phonological Knowledge scores ranked at the 72nd, 82nd, 63rd, and 61st percentiles, respectively.
- In the spring, 90% of the children’s TOPEL Early Literacy Index scores were categorized as *Average* or better.