Family Success Alliance/UNC Partnership:
Evaluation Findings

In response to large disparities in opportunities for children and families in Orange County, the Family Success Alliance (FSA) was formed as a new place-based initiative to build a pipeline of evidence-based programs and policies from cradle-to-college/career. FSA uses a "collective impact" approach to bring together community members, local government agencies, non-profits, and other community leaders who are committed to ensuring that all children in Orange County have the opportunity to thrive in school, jobs, and community. The work is facilitated by a core group of staff located at the Orange County Health Department, and overseen by the Family Success Alliance Advisory Council and the communities that make up each zone. The initiative is designed to reduce the effects of poverty on development and academic achievement by implementing evidence-based practices that are responsive to the priorities and needs of children and their families and by affecting larger systems and policy change. The work is modeled on the Harlem Children's Zone.

As a place-based initiative, FSA is currently working in two zones within the county. The zones were selected through a data- and community-driven process, which included the creation of a county-wide poverty index that identified six zones where families were struggling to make ends meet. After an intensive community engagement process, all six zones identified champions and applied to be a part of the FSA. In December 2014, the Advisory Council, created by the county commissioners, selected two zones to pilot the work. A gap analysis done in partnership with the two zones identified community priorities, including affordable, high quality childcare, school readiness, and meeting basic family needs. In 2015, FSA began a strategic planning process and launched initial programming to meet those needs. FSA is well-positioned to become a model for improving outcomes for children and families in areas of concentrated poverty.

In June 2016, UNC-CH partnered with FSA to provide a formative evaluation to assist FSA in program improvement. FSA places a high value on measuring the quality of its programs, including the impact of FSA on outcomes for individuals and at population-level. In addition, funding agencies increasingly expect local service groups to demonstrate the impact of the services and programs they implement. Accordingly, the FSA/UNC partnership was designed to allow FSA to use data to continuously evaluate, adapt, and improve its services.

In less than 1 year, the FSA/UNC partnership has achieved its initial goals. These include: forming a productive partnership, designing and conducting a formative evaluation, and seeking additional funding for the program and partnership. With these accomplishments as a strong foundation, the partnership hopes to continue after this year to improve services through a data-

driven approach, deepening and extending the impact of the FSA on the large social inequities in Orange County.

Formative Evaluation Efforts

FSA includes several services. The formative evaluation examined three aspects of the FSA: 1) Summer Kindergarten Readiness Program available through zone schools in both the Orange County and Chapel Hill-Carrboro City School Systems ; 2) the Navigator Program, a peer support program in which successful community members (navigators) support families in reaching their goals, in connecting with schools and community services and programming, and in bringing family perspectives to help improve services and break down systemic barriers to success, and 3) children's health and access to health services. In this report we focus on the analyses of the data collected in the schools regarding academic and social development of the children.

Evaluation of the Summer Kindergarten Readiness Program.

The two school systems in Orange County provide a four-week readiness camp. The Kindergarten readiness camp is for children from low-income families who live in the two zones of Orange County where FSA is being piloted, which includes four elementary schools, and prioritizes those children who did not attend public preschool programs. At the beginning and end of the program, the evaluation team conducted individual assessments and classroom observations and collected teacher ratings of children who attended in Summer 2016 (n=66, 42 of whom did not speak English at home). Individual assessments and teacher ratings were again conducted at the end of the program. Results indicated (for more details see Appendix 1) that <u>all children gained in attentional and basic reading skills</u>, and that the <u>Spanish-speaking children showed reliable gains in vocabulary and recognizing letters in Spanish</u>. Further, it appears that <u>the children making the largest gains were those who entered with the lower skill levels</u> – suggesting the program was most successful with the children for whom it was intended. On the other hand, lack of improvement of the literacy and math tasks suggest that there are opportunities to improve the strength of the program in these academic areas. The Kindergarten Readiness Camp this year attended carefully to the evaluation results and have made changes in their curriculum and suggested changes in the evaluation protocol to more closely reflect their academic and social skill instruction. We believe this illustrates the power of the partnership to improve services for these children.

Follow-up Evaluation of the Summer Program

The evaluation followed the children who attended the FSA summer program as they entered kindergarten and compared them to comparison children from similar backgrounds who had not been part of the summer program. In the fall and spring, the children's academic and social skills are measured through individual assessments and teacher ratings. The Fall 2016 data (for more details see Appendix 2) indicate that compared to the comparison group, the <u>FSA children were healthier according to their teachers, and had higher levels of attention, math, and social skills</u>. These benefits were larger for the children who used a language other than English at home. The FSA children who speak Spanish at home had similar levels of attention and social skills as both the FSA and comparison children who only spoke English at home, but children who speak Spanish at home and did not participate in FSA lagged behind. Thus, these findings

provide further evidence that the summer program may have improved school readiness skills, especially for those children from Spanish-speaking families and those who were least prepared to begin with, although they suggest the intensity of literacy instruction may need improvement.

Children's academic and social skills were assessed again in spring 2017, and we tested whether the FSA group shows greater increases in learning and social adjustment in kindergarten than the comparison groups. The Fall 2016 to Spring 2017 data (for more details see Appendix 3) indicate that the FSA and comparison children showed comparable gains during kindergarten. Marginally larger gains in reading and math were reported by teachers for FSA than for comparison children, but the two groups did not differ on individual assessments of reading and math skills. These findings indicate that gains made during the summer program were not lost during the school year. Follow-up analysis did not suggest that children with and without a Navigator differed.

Appendix 1 – 2016 Summer School Evaluation Report

FSA offers a 4-week summer readiness program at both Carrboro (Zone 6) and New Hope (Zone 4). As a transition program, children learn what kindergarten is like, and spend an hour a day on literacy and an hour a day on math instruction. The evaluation measured skills on which the readiness program focused. We administered individual assessments of early reading and math skills and a game that examined attention and asked teachers to rate the children behavior. In addition, we observed each classroom. Data were collected in the first and last week. Data were collected on 41 children at Carrboro (27 Spanish-speaking) and 25 children at New Hope (15 Spanish-speaking). Data included

<u>Direct Child Assessments (~ 20m)</u>

- Early literacy skills –MCLASS/DIBELS Print Concepts, Letter Naming Fluency, Word Use Fluency
- Early math skills (Counting Bears, informal assessment to see how far they can count)
- An attention/executive functioning game: Head-toes- knees, shoulders

We collected assessments in both languages if the child speaks both languages. Assessments were individually administered in the first and last week.

<u>Teacher Ratings (~5m per child)</u>

- Early academic skills (shortened Academic Rating Scale for the Early Childhood Longitudinal Survey-1999 Kindergarten cohort)
- Social and attention skills (shortened Teacher-Child Rating Scale by Hightower).

Teachers were emailed and asked to fill out surveys on children online in the first and last week.

<u>Child Engagement and Classroom Activities</u>

- SnapShot by Sharon Ritchie & Adam Holland

In addition, we asked for copies of

- Kindergarten Entry Assessments (completed by teacher as part of program and shared with evaluators if the parents consented).

First, we computed descriptive statistics overall and by school. Results are shown in Tables and 2, describing the children's performance in the first and last week of the program.

Next, we analyzed the direct assessments and teacher ratings to ask whether children showed reliable gains in early literacy and math skills and attention and social skills. Change scores were computed as post-test scores minus pre-test scores and those change scores were

a. Tested to see if they were significantly different from zero in analyses that took nesting of children in classrooms into account and accounted for missing pre-test scores.
b. Negatively related to pre-test scores to see if children with lower skills showed the largest gains.

Results:

1. There were reliable gains in attention/EF and print concepts in both English and Spanish. Spanish-speaking children also showed reliable gains in identifying letters and word use (vocabulary) in Spanish.
2. Children who entered with the lowest skills showed the largest gains in almost everything: English and Spanish Attention, print concepts, and word use and teacher ratings of frustration tolerance, social skills, achievement and conduct problems (higher levels initially related to larger reductions). The only areas in which gains were not larger when initial skills were lower were in the counting assessment, teacher ratings of task orientation, and letter naming in English.

Conclusions:

- These results suggest that the Kindergarten Readiness Camp had a positive effect on attention and very basic literacy skills for all children in English, and on language and literacy skills in Spanish.
- The lack of reliable change in English literacy skills and English basic math skills could be related to the measures that were used to measure those skills, but might suggest that the kindergarten teachers had more difficulty teaching these skills in the short camp in which the children varied considerably in their skills.

Table 1: Describing Children's Academic and Social Skills in the First and Last Week of the Program and testing whether there are gains in these skills between the first and last week.

		Assessments					Change over time				Cor w/ week 1[2]
		N	**Mean**	**SD**	**Min**	**Max**	**N**	**Mean**	**SD**	**P[1]**	
HTKS attention: total – English	**Week 1**	61	24.13	16.60	0.00	52.00	59	9.20	13.96	**	-.45***
	Week 4	62	32.94	15.78	0.00	51.00					
Counting: Highest number counted in sequence - English	**Week 1**	62	18.44	17.47	0.00	100.0	60	2.30	11.67		-.10
	Week 4	62	21.42	21.36	0.00	100.0					
Print Concepts: total - English	**Week 1**	60	5.53	3.08	0.00	12.00	58	1.86	2.46	**	-.28*
	Week 4	62	7.23	3.48	0.00	14.00					
Letter Naming Fluency: total correct - English	**Week 1**	62	11.18	13.12	0.00	62.00	60	1.48	6.02		-.25*
	Week 4	62	12.95	13.17	0.00	60.00					
Word Use Fluency: total - English	**Week 1**	62	9.72	20.22	0.00	137.5	60	2.55	11.46		-.36**
	Week 4	62	13.35	22.15	0.00	114.5					
HTKS attention: total - Spanish	**Week 1**	40	24.58	15.82	0.00	49.00	40	11.33	11.39	**	-.43**
	Week 4	42	36.38	14.75	0.00	52.00					
Counting: Highest number counted in sequence - Spanish	**Week 1**	40	24.58	15.82	0.00	49.00	40	1.35	5.24		-.18
	Week 4	42	14.90	16.94	1.00	100.0					
Print Concepts: total - Spanish	**Week 1**	39	4.44	3.09	0.00	12.00	39	2.38	3.27	**	-.48**
	Week 4	42	6.81	3.28	0.00	13.00					
Letter Naming Fluency: total correct - Spanish	**Week 1**	40	4.98	8.71	0.00	34.00	40	1.95	3.05	**	.04
	Week 4	42	6.74	9.15	0.00	33.00					
Word Use Fluency: total - Spanish	**Week 1**	40	1.15	3.20	0.00	12.00	40	5.70	8.93	**	-.36**
	Week 4	42	6.90	8.13	0.00	33.00					
Teacher rating: Conduct Problems	**Week 1**	55	1.61	0.83	1.00	4.25	55	-0.12	0.50		-.38**
	Week 4	64	1.56	0.80	1.00	4.75					
Teacher rating: Frustration	**Week 1**	54	3.47	0.88	1.00	5.00	54	-0.13	0.68		-.28*
	Week 4	64	3.35	0.88	1.00	5.00					
Teacher rating: Social Skills	**Week 1**	54	3.80	0.83	2.00	5.00	54	0.11	0.64		-.31*
	Week 4	64	3.85	0.86	1.60	5.00					

		Assessments					Change over time				Cor w/ week 1[2]
		N	**Mean**	**SD**	**Min**	**Max**	**N**	**Mean**	**SD**	**P[1]**	
Teacher rating: Task Orientation	**Week 1**	54	3.33	1.00	1.20	5.00	54	-0.01	0.69		-.13
	Week 4	64	3.29	1.12	1.20	5.00					
Teacher rating: Student Achievement	**Week 1**	55	3.43	1.15	1.00	5.11	55	0.13	0.92		-.35**
	Week 4	64	3.55	1.12	1.00	5.33					

Note: [1]column labeled p indicates the statistical significance of testing whether the gains over time are statistically significant. * p<.05; ** p<.01; *** p<.001

[2]The column labeled cor w/ week1 lists the correlation between the gain score and the week 1 score. The stars indicate whether the correlations are statistically significant. * p<.05; ** p<.01; *** p<.001

Table 2: Describing Children's Academic and Social Skills in the First and Last Week of the Program by School

		school									
		Carrboro					New Hope				
		N	Mean	SD	Min	Max	N	Mean	SD	Min	Max
HTKS attention: total – English	**Week**										
	1	38	24.79	16.78	0.00	52.00	23	23.04	16.61	0.00	52.00
	4	38	34.39	15.57	2.00	51.00	24	30.63	16.17	0.00	50.00
Counting: Highest number counted in sequence - English	**Week**										
	1	39	19.26	18.20	0.00	100.0	23	17.04	16.45	0.00	66.00
	4	38	23.68	24.63	4.00	100.0	24	17.83	14.57	0.00	64.00
Print Concepts: total – English	**Week**										
	1	39	6.03	3.06	0.00	12.00	21	4.62	2.96	0.00	11.00
	4	38	8.45	3.02	1.00	14.00	24	5.29	3.32	0.00	10.00
Letter Naming Fluency: total correct - English	**Week**										
	1	39	14.03	14.44	0.00	62.00	23	6.35	8.87	0.00	31.00
	4	38	15.53	14.60	0.00	60.00	24	8.88	9.42	0.00	31.00
Reading Behavior: total – English	**Week**										
	1	3	4.00	2.65	1.00	6.00	1	1.00	.	1.00	1.00
	4	10	3.40	2.37	0.00	6.00	0	.	.	.	.
Word Use Fluency: total – English	**Week**										
	1	39	10.73	23.42	0.00	137.5	23	8.00	13.47	0.00	43.50
	4	38	16.71	25.57	0.00	114.5	24	8.04	14.21	0.00	53.50
Counting: Highest number counted in sequence - Spanish	**Week**										
	1	26	13.35	11.86	0.00	49.00	14	10.21	11.21	0.00	40.00
	4	27	15.59	11.56	5.00	49.00	15	13.67	24.29	1.00	100.0
HTKS attention: total – Spanish	**Week**										
	1	26	25.38	15.93	0.00	49.00	14	23.07	16.11	0.00	46.00
	4	27	36.85	15.87	0.00	52.00	15	35.53	12.99	13.00	50.00
Print Concepts: total – Spanish	**Week**										
	1	26	4.77	2.82	0.00	11.00	13	3.77	3.61	0.00	12.00
	4	27	6.67	3.29	0.00	13.00	15	7.07	3.35	2.00	12.00
Letter Naming Fluency: total correct - Spanish	**Week**										
	1	26	7.12	10.14	0.00	34.00	14	1.00	1.84	0.00	7.00
	4	27	8.78	10.65	0.00	33.00	15	3.07	3.53	0.00	14.00
Reading Behavior: total – Spanish	**Week**										
	1	1	3.00	.	3.00	3.00	1	2.00	.	2.00	2.00
	4	3	5.00	0.00	5.00	5.00	3	2.67	1.53	1.00	4.00

		school									
		Carrboro					New Hope				
		N	Mean	SD	Min	Max	N	Mean	SD	Min	Max
Word Use Fluency: total – Spanish	**Week**										
	1	26	0.54	1.98	0.00	9.00	14	2.29	4.58	0.00	12.00
	4	27	6.04	9.17	0.00	33.00	15	8.47	5.76	0.00	18.00
Teacher rating: Conduct Problems	**Week**										
	1	39	1.53	0.76	1.00	4.25	16	1.83	0.98	1.00	4.00
	4	39	1.39	0.72	1.00	4.75	25	1.83	0.87	1.00	4.00
Teacher rating: Frustration	**Week**										
	1	39	3.67	0.86	1.00	5.00	15	2.97	0.74	2.00	4.20
	4	39	3.39	1.06	1.00	5.00	25	3.28	0.52	2.20	4.20
Teacher rating: Social Skills	**Week**										
	1	39	4.01	0.73	2.00	5.00	15	3.27	0.84	2.00	4.80
	4	39	4.05	0.81	2.20	5.00	25	3.55	0.85	1.60	5.00
Teacher rating: Task Orientation	**Week**										
	1	39	3.52	0.92	1.40	5.00	15	2.81	1.04	1.20	4.40
	4	39	3.44	1.07	1.40	5.00	25	3.07	1.17	1.20	5.00
ECLS-K Student Achievement	**Week**										
	1	39	3.75	0.99	1.00	5.11	16	2.65	1.16	1.00	4.11
	4	39	4.03	0.97	1.00	5.33	25	2.79	0.91	1.00	4.00

Appendix 2 – Findings from Formative Evaluation of Fall Data

In the fall of 2016, the FSA evaluation team followed the children who attended the FSA kindergarten school readiness program in August 2016. Two separate types of data were collected

1. Direct child assessments in English for all children and Spanish for DLL children and teacher ratings for all children, including the
    a. Direct assessments by trained data collectors on
        i. Woodcock-Johnson III Picture Vocabulary, Letter-Word Identification, and Applied Problems to assess language, literacy, and math skills in English
        ii. Woodcock-Munoz III Picture Vocabulary, Letter-Word Identification, and Applied Problems to assess language, literacy, and math skills in Spanish
        iii. Pencil tap to measure attention (executive functioning)
    b. Teacher ratings of
        i. social-emotional functioning on the Teacher Child Rating Scale (Hightower) measuring assertive social skills, acting out problems, learning problems, anxiety problems, peer problems, and task orientation
        ii. quality of teacher child relationships on the Student Teacher Relationship Scale (Pianta), measuring closeness and conflict
        iii. approaches to learning on the Preschool Learning Behavior Scale (McDermott) measuring competence and attitudes toward learning
        iv. Health
        v. Academic skills in reading and math
2. Home visits in which parenting was assessed and parents were administered a battery of questionnaires
    a. Rating of their depressive symptoms (CESD) and level of support (instrumental and emotional – SSQ)
    b. Ratings of the quality of their relationship with their child (CPRS) in terms of conflict, closeness, and dependency
    c. Observations of the parenting (HOME) in terms of learning materials, responsiveness, academic stimulation, and modeling.
    d. Report on the academic activities provided by family
3. Analyses were conducted to test whether there were differences in the fall between the FSA children and comparison children, and whether those differences were larger (or smaller) for children who speak Spanish at home. Analyses accounted for the nesting of children in schools (including the two children in Carrboro who were going to Carrboro and then were found at Seawell and Glenwood), and included as covariates the zone, parent education, gender, and whether the child attended Head Start or NC Pre-K.

    This memo reports on the results from the first set of assessments. Results are presented below – looking first at whether there were differences in the fall of K between the FSA and comparison children and whether those differences varied depending on home language.

- FSA children had higher levels of attention, math, and social skills, and their mothers reported fewer depressive symptoms
- The FSA children who spoke Spanish at home and both the FSA and comparison children who only spoke English at home had similar levels of attention, social skills, and overall health and their parents reported having more literacy activities in the home. Among the Spanish-speaking group, the FSA children had higher levels of attention, social skills, and overall health and their mothers had fewer depressive symptoms and offered more literacy activities in the home than did the comparison group.

	Descriptive Statistics - covariates											
	English						Spanish					
	Comparison			FSA			Comparison			FSA		
	N	Mean	Sd	N	Mean	Sd	N	Mean	Sd	N	Mean	Sd
Zone (zone 6=1)	19	0.84	0.37	23	0.57	0.51	10	0.40	0.52	42	0.64	0.48
Guardian Education Level	19	3.89	1.76	21	4.00	1.34	8	2.25	1.28	36	2.19	1.12
Child gender (1=Male)	19	0.63	0.50	23	0.48	0.51	10	0.70	0.48	42	0.48	0.51
Attended Head Start or PK	19	0.63	0.50	23	0.30	0.47	10	0.60	0.52	42	0.48	0.51

	Child Outcome												Treatment statistical tests	
	English						Spanish							
	Comparison			FSA			Comparison			FSA			FSA v Comp	Treat x home language
	N	M	Sd	N	M	Sd	N	M	Sd	N	M	Sd	P	p
Pencil Tap: Total score	16	13.00	4.07	21	12.33	4.21	9	6.56	5.57	41	12.15	3.78	***	**
WM: Applied Problems	0	.	.	0	.	.	10	88.70	16.06	42	96.86	11.67	+	
WM: Letter-Word ID	0	.	.	0	.	.	10	93.80	18.25	42	91.74	14.16		
WM: Picture Vocab	0	.	.	0	.	.	10	72.60	12.47	42	70.69	19.37		
WJ: Applied Problems	17	100.8	11.75	21	103.1	10.71	9	89.22	14.63	42	97.76	9.96	*	
WJ: Letter-Word ID	17	100.2	13.66	21	103.2	13.34	9	89.44	22.72	42	92.05	12.18		
WJ: Picture Vocab	17	101.8	10.67	21	98.10	9.53	9	79.00	27.27	42	84.10	12.21		
TCRS & STRS social skills & closeness	16	4.18	0.45	21	4.08	0.54	10	3.48	0.89	42	3.93	0.51	*	+
TCRS & STRS behavior problems & conflict	16	1.90	0.74	21	1.74	0.75	10	1.94	0.71	42	1.52	0.45		
TCRS/PLBS social skills, task or, learn problems	16	2.25	0.91	21	2.39	1.12	10	2.98	0.90	42	2.29	0.73		
ECLS-K Acad Skills - Language/Literacy	16	2.98	1.18	21	3.01	1.08	10	2.46	1.00	42	2.88	0.97		
PLBS: Neg Attitude Toward Learning	16	10.44	2.90	21	9.43	2.77	10	9.50	1.90	42	8.74	1.45		
ECLS-K Acad Skills - Math Thinking	16	3.63	1.06	21	3.56	1.02	10	2.35	1.18	42	3.23	1.07	+	*
Health	16	4.25	0.77	21	3.48	0.75	10	3.10	0.88	42	3.62	0.88		**

Note + .1 < p < .05; * p<.05; ** p<.01; *** p<.001

	Orange County (New Hope)						Chapel Hill-Carrboro (FPG, Carrboro, Northside)					
	Treatment						Treatment					
	Comparison			FSA			Comparison			FSA		
	N	Mean	Std	N	Mean	Std	N	Mean	Std	N	Mean	Std
Pencil Tap: Total score	16	7.00	4.38	46	11.35	3.62	33	12.36	5.19	77	12.69	3.98
WM: Applied Problems standard score	12	83.50	13.44	30	96.00	10.46	8	96.50	16.22	53	97.40	12.36
WM: Letter-Word ID standard score	12	86.00	14.57	30	82.20	9.46	8	105.5	16.19	53	97.42	13.29
WM: Picture Vocab standard score	12	65.83	10.21	30	64.80	15.75	8	82.75	6.34	53	74.92	19.27
WJ: Applied Problems standard score	16	88.88	14.67	48	101.8	10.74	35	100.3	11.81	77	98.18	10.08
WJ: Letter-Word ID standard score	16	88.13	12.97	48	94.50	9.14	35	100.3	18.33	77	96.36	15.60
WJ: Picture Vocab standard score	16	82.00	24.70	48	89.88	14.61	35	99.51	16.38	77	87.94	12.08
TCRS & STRS social skills & closeness	18	3.61	0.75	48	4.06	0.50	37	4.21	0.57	77	3.99	0.63
TCRS & STRS behavior problems & conflict	18	2.11	0.77	48	1.52	0.47	37	1.70	0.61	77	1.65	0.74
TCRS/PLBS social skills, task orient, learn problems	18	2.89	0.77	48	2.35	0.78	37	2.25	1.04	77	2.29	0.97
PLBS: Negative Attitude Toward Learning	18	9.94	2.39	48	8.65	1.25	37	10.51	2.82	77	9.44	2.33
ECLS-K Acad Skills - Language/Literacy	18	3.05	1.23	48	3.83	1.11	37	3.56	1.17	77	3.34	1.14
ECLS-K Acad Skills - Math Thinking	18	3.03	1.28	48	4.05	1.00	37	3.95	1.05	76	3.73	1.14
SC Health	18	3.11	0.76	48	3.46	0.68	37	4.05	1.03	77	3.75	0.95

Appendix 3 Findings from Analyses of Fall-to-Spring gains in Kindergarten

In the fall of 2016 and spring of 2017, the FSA evaluation team followed the children who attended the FSA kindergarten school readiness program in August 2016. Two separate types of data were collected

1. Direct child assessments in English for all children and Spanish for DLL children and teacher ratings for all children, including the
    a. Direct assessments by trained data collectors on
        i. Woodcock-Johnson III Picture Vocabulary, Letter-Word Identification, and Applied Problems to assess language, literacy, and math skills in English
        ii. Woodcock-Munoz III Picture Vocabulary, Letter-Word Identification, and Applied Problems to assess language, literacy, and math skills in Spanish
        iii. Pencil tap to measure attention (executive functioning)
    b. Teacher ratings of
        i. social-emotional functioning on the Teacher Child Rating Scale (TCRS; Hightower) measuring assertive social skills, acting out problems, learning problems, anxiety problems, peer problems, and task orientation
        ii. quality of teacher child relationships on the Student Teacher Relationship Scale (STRS; Pianta), measuring closeness and conflict
        iii. approaches to learning on the Preschool Learning Behavior Scale (PLBS; McDermott) measuring competence and attitudes toward learning
        iv. Health

Findings:

Analyses: We compared the spring scores of the FSA and comparison children, and asked whether Spanish-speaking children differentially benefited from FSA. Analyses accounted for nesting of children in schools and adjusted for Zone (4 – New Hope or 6-FPG, Carrborro, Northside), parent education, gender, and the child's fall score on that measure.

Results: All children showed gains on most skills during Kindergarten. Compared to the comparison children, the FSA children were rated as having marginally larger gains in language/literacy and math skills by their teachers. No differences emerged suggesting that Spanish-speaking children differentially gained from FSA during their Kindergarten year.

		English Only						**Spanish-English DLL**						**Statistical Comparisons**	
		Comparison			**FSA**			**Comparison**			**FSA**				
		N	**Mean**	**SD**	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**	**FSA**	**FSA x Lang**
Direct Assessments															
Attention: Pencil Tap: Total score	**F**	16	13.00	4.07	21	12.90	3.82	9	6.56	5.57	40	12.05	3.78		
	S	19	14.53	1.61	22	13.59	2.77	9	11.33	3.61	41	13.56	3.01		
Math (Span) WM: Applied Problems	**F**	0	.	.	0	.	.	9	91.44	14.33	41	96.39	11.41		
	S	0	.	.	0	.	.	9	91.67	11.24	41	97.66	12.41		

		English Only						Spanish-English DLL						Statistical Comparisons	
		Comparison			FSA			Comparison			FSA				
		N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	FSA	FSA x Lang
Reading (Span WM: Letter-Word ID	**F**	0	.	.	0	.	.	9	93.44	19.32	41	91.63	14.32		
	S	0	.	.	0	.	.	9	91.67	21.04	41	98.46	22.85		
Math (English) WJ: Applied Problems	**F**	17	100.8	11.75	22	103.3	10.47	8	93.50	7.50	41	97.56	10.00		
	S	19	101.1	11.84	22	102.5	10.36	9	97.44	8.23	41	102.0	10.74		
Reading (Eng) WM: Letter-Word ID	**F**	17	100.2	13.66	22	103.2	13.02	9	89.44	22.72	41	91.78	12.21		
	S	19	111.9	15.93	22	107.8	12.18	9	101.8	20.26	41	105.3	16.64		
Language (En) WJ: Pict Voc	**F**	17	101.8	10.67	22	97.18	10.24	9	79.00	27.27	41	84.24	12.32		
	S	19	97.00	9.75	22	95.50	9.53	8	83.25	29.31	41	84.34	9.97		
Teacher Ratings															
Social skills & closeness-TCBS/TCRS	**F**	17	4.12	0.51	22	4.10	0.53	9	3.53	0.93	41	3.92	0.51		
	S	20	4.25	0.59	22	4.18	0.66	9	3.75	0.69	40	3.98	0.62		
Beh Problems Conflict TCBS/TCRS	**F**	17	1.96	0.76	22	1.72	0.74	9	1.83	0.66	41	1.53	0.45		
	S	20	1.78	0.72	22	1.69	0.86	9	1.74	0.57	40	1.55	0.65		
Social sk, task orient., learn TCBS/TCRS	**F**	17	2.32	0.92	22	2.34	1.12	9	2.94	0.94	41	2.31	0.72		
	S	20	2.17	0.99	22	2.32	1.18	9	2.91	1.01	40	2.29	0.77		
ECLS-K ASR Language/ Literacy	**F**	17	2.99	1.14	22	3.08	1.11	9	2.37	1.02	41	2.83	0.94	+	
	S	20	4.21	0.83	22	4.50	0.72	9	3.36	1.15	40	3.96	0.99		
ECLS-K ASR Skills - Math	**F**	17	3.54	1.09	22	3.59	1.01	9	2.38	1.25	41	3.21	1.07		
	S	20	4.36	0.75	22	4.63	0.67	9	3.53	1.15	39	4.25	0.93	+	
Attitude Learning-(neg) PLBS	**F**	17	10.29	2.87	22	9.36	2.72	9	9.67	1.94	41	8.76	1.46		
	S	20	10.95	3.02	22	9.41	1.99	9	9.67	2.18	40	9.25	2.08		
Health	**F**	17	4.12	0.93	22	3.50	0.74	9	3.22	0.83	41	3.61	0.89		
	S	20	3.90	1.12	22	3.95	0.84	9	3.22	0.97	40	3.58	0.90		

Note + .1 < p < .05; * p<.05; ** p<.01; *** p<.001

		Orange County (New Hope)						Chapel Hill-Carrboro (FPG, Carrboro, Northside)					
		Treatment						Treatment					
		Comparison			FSA			Comparison			FSA		
		N	Mean	Std	N	Mean	Std	N	Mean	Std	N	Mean	Std
Pencil Tap: Total score													
	F	8	7.00	4.54	23	11.35	3.66	17	12.41	5.20	38	12.95	3.77
	S	9	11.89	3.66	24	13.21	2.83	19	14.26	2.00	39	13.79	2.97
WM: Applied Problems standard score	**F**	5	87.40	11.59	14	94.57	9.44	4	96.50	17.52	27	97.33	12.37
	S	5	87.80	7.69	14	94.00	16.87	4	96.50	14.20	27	99.56	9.15
WM: Letter-Word ID standard score	**F**	5	83.80	15.99	14	81.21	9.17	4	105.5	17.48	27	97.04	13.58
	S	5	79.80	13.31	14	82.79	9.42	4	106.5	20.40	27	106.6	23.62
WM: Picture Vocab standard score	**F**	5	69.00	8.25	14	63.43	15.69	4	82.75	6.85	27	73.78	20.95
	S	5	64.00	8.72	14	54.43	23.79	4	76.50	13.03	27	74.89	21.59
WJ: Applied Problems standard score	**F**	7	93.71	7.11	24	101.8	10.85	18	100.3	11.81	39	98.18	10.08
	S	9	96.22	12.17	24	101.4	10.47	19	101.6	9.95	39	102.6	10.67
WJ: Letter-Word ID standard score	**F**	8	88.13	13.42	24	94.50	9.24	18	100.2	18.36	39	96.56	15.70
	S	9	105.1	16.56	24	107.2	7.09	19	110.4	18.44	39	105.6	18.55
WJ: Picture Vocab standard score	**F**	8	82.00	25.57	24	89.88	14.77	18	99.22	16.48	39	88.08	12.14
	S	8	82.75	26.53	24	89.38	8.90	19	97.21	12.21	39	87.54	12.34
TCRS & STRS social skills & closeness	**F**	9	3.40	0.86	24	3.91	0.50	17	4.18	0.47	39	4.03	0.54
	S	9	3.81	0.59	24	4.21	0.47	19	4.20	0.66	38	3.95	0.71
TCRS & STRS behavior problems & conflict	**F**	9	2.32	0.81	24	1.60	0.50	17	1.70	0.58	39	1.59	0.61
	S	9	1.91	0.72	24	1.44	0.43	19	1.74	0.66	38	1.70	0.86
TCRS/PLBS social skills, task or, learn problems	**F**	9	3.10	0.84	24	2.46	0.85	17	2.23	0.90	39	2.24	0.88
	S	9	2.68	0.68	24	2.24	0.69	19	2.32	1.18	38	2.34	1.06

		Orange County (New Hope)						Chapel Hill-Carrboro (FPG, Carrboro, Northside)					
		Treatment						Treatment					
		Comparison			FSA			Comparison			FSA		
		N	Mean	Std	N	Mean	Std	N	Mean	Std	N	Mean	Std
ECLS-K Acad Skills - Language/Literacy													
	F	9	2.37	0.79	24	3.13	1.04	17	2.99	1.23	39	2.80	0.97
	S	9	3.73	1.23	24	4.54	0.61	19	4.01	0.91	38	3.91	1.03
PLBS: Neg Attitude Toward Learning (MOD)													
	F	9	10.33	2.60	24	8.38	0.82	17	9.94	2.61	39	9.33	2.39
	S	9	9.56	2.24	24	8.92	1.53	19	11.16	2.97	38	9.55	2.29
ECLS-K Acad Skills - Math Thinking													
	F	9	2.28	0.88	24	3.45	1.00	17	3.59	1.20	39	3.28	1.09
	S	9	3.78	1.19	24	4.66	0.51	19	4.21	0.84	37	4.21	0.99
SC Health													
	F	9	3.00	0.71	24	3.29	0.55	17	4.24	0.83	39	3.74	0.94
	S	9	3.22	0.83	24	3.63	0.77	19	4.00	1.11	38	3.76	0.97