



# Evaluation Findings from Georgia's 2013 Rising Kindergarten and Rising Pre-Kindergarten Summer Transition Programs May 2014

Diane M. Early
FPG Child Development

Institute, UNC-CH

Yi Pan

FPG Child Development Institute, UNC-CH

Kelly L. Maxwell

**Child Trends** 

**Syndee Kraus** 

FPG Child Development Institute, UNC-CH

Doré R. LaForett

FPG Child Development Institute, UNC-CH

Kathleen M. Hume

FPG Child Development Institute, UNC-CH



Evaluation Findings from Georgia's 2013 Rising Kindergarten and Rising Pre-Kindergarten Summer Transition Programs © 2014 by D. M. Early, K. L. Maxwell, D. R. LaForett, Y. Pan, S. Kraus, & K. Hume.

Design & Layout: Gina Harrison, FPG Child Development Institute

Photos courtesy of FPG Child Development Institute

Suggested citation: Early, D. M., Maxwell, K. L., LaForett, D. R., Pan, Y., Kraus, S., & Hume, K. (2014). *Evaluation findings from Georgia's 2013 Rising Kindergarten and Rising Pre-Kindergarten Summer Transition Programs.* Chapel Hill: The University of North Carolina, FPG Child Development Institute.

This study was funded by Bright from the Start: Georgia Department of Early Care and Learning. The opinions in this report do not necessarily reflect those of the funding agency.

We are very grateful to the Georgia's Pre-K Field Consultants and the research assistants in Georgia who worked so hard to collect these data. We appreciate the cooperation and support received from DECAL's Pre-K Management and Research, especially Susan Adams, Bentley Ponder, and Rob O'Callaghan. Special thanks to Bobby Cagle, Commissioner of Bright from the Start: Georgia Department of Early Care and Learning, for his support of this work. Most importantly, we are very appreciative of the teachers, transition coaches, and administrators who welcomed us into their programs and classrooms so that we could better understand Georgia's Summer Transition Programs.

The report is available at www.decal.ga.gov

# Table of Contents

Highlights
Introduction
Rising Kindergarten (RK) Program Description
Rising Pre-Kindergarten (RPre-K) Program Description
Organization of this Report
Evaluation of the Rising Kindergarten Summer Transition Program 3
Purposes
Rising Kindergarten Skills Study
<i>Sample</i>
Information Collected
Findings
Rising Kindergarten Classroom Quality Study
Sample
Findings
Conclusions and Recommendations From the Rising Kindergarten Program
Evaluation of the Rising Pre-Kindergarten Summer Transition Program
Purposes
Sample
Information Collected
Findings
Classroom Quality as Measured by the CLASS
Teacher and Transition Coach Spanish Knowledge and Use22
English and Spanish Use in the Classroom
Purposes of English and Spanish in the Classroom
Group Sizes and Ratios
Lead Teachers   24     Assistant Teachers   25
Transition Coaches
Services for Families
Attendance
Pride in Rising Pre-K Programs
Conclusions and Recommendations From the Rising Pre-K Program
<b>Overall Conclusions</b>
References
Endnotes



# Highlights from the

Evaluation of Georgia's 2013 Rising Kindergarten and Rising Pre-Kindergarten Summer Transition

# Programs

### **Background**

Building on the success of Georgia's Pre-K, in 2010 the Georgia Department of Early Care and Learning began offering a program for children from low-income families during the summer before kindergarten. In the summer of 2013, this Rising Kindergarten (RK) Program was offered in 122 classrooms and served 1,948 children. In the summer of 2013, services were expanded to offer a Rising Pre-Kindergarten (RPre-K) Program for children who would be attending Georgia's Pre-K at the end of the summer and whose families were lowincome and spoke Spanish at home. The decision to create the RPre-K Program resulted from of an evaluation that indicated more supports may be needed for dual-language learners. In 2013, there were 19 RPre-K classrooms, serving 244 children. The overall goal of both the RK and the RPre-K summer programs is to support children's transitions and development, particularly their early literacy skills, through the last few months prior to kindergarten or pre-kindergarten entry.

### **Evaluation Design**

To evaluate the RK Program, 126 RK children's skills were assessed at the start and end of the summer program. Additionally, observations of teacherchild interactions were made in 60 RK classrooms, using the Classroom Assessment Scoring System (CLASS). To evaluate the RPre-K Program, CLASS observations were made in all 19 classrooms, along with observations of English and Spanish use. In both programs, teachers and transition coaches completed questionnaires.

# **Key Findings and Implications**

Children's skills improved during the RK Program. The pre-literacy and school readiness skills of children participating in the RK Program improved. Gains in children's skills had also been seen in three previous evaluations, and in 2013 some of the gains were moderate in size. For a six-week program to demonstrate moderate gains is somewhat unexpected and implies a successful implementation. These findings must be interpreted with caution, how-

ever, because there was no comparison group, so we cannot be certain that the gains resulted from participation in the RK Program.

# In both RK and RPre-K, classroom quality was similar to other pro-

grams. Scores for CLASS Emotional Support and CLASS Classroom Organization were high, but scores for CLASS Instructional Support were low. This pattern is similar to that seen in other early childhood studies, both in Georgia and in other states.

# Both Spanish and English were used regularly in RPre-K Classrooms.

Learning opportunities for duallanguage learners are maximized when both languages are used in the classroom. Both English and Spanish were used commonly for explicit instruction and behavior management in RPre-K classrooms. The majority of the rooms had books in both English and Spanish, but one in three rooms had no Spanish books. Fewer rooms had labels in both English and Spanish. RPre-K teachers might benefit from professional development regarding how young children acquire language and literacy skills.

### Introduction

eorgia is known nationally for its universal pre-kindergarten program (Georgia's Pre-K), available to all four-year-old children in the state from all income levels. Since the program's inception in 1993, over 1.2 million children have been served. In 2012–2013, Georgia's Pre-K served 81,683 children, approximately 59% of all four year olds in the state. Approximately 54% of classrooms are offered in private child care facilities and 45% through local school systems. Additional classes are found in Head Start centers, military bases, technical colleges, and charter schools. All Georgia's Pre-K classrooms operate for 6.5 hours a day, five days a week during the traditional "school year" 9-month calendar. All programs are required to use a pre-approved curriculum and are monitored on site at least once each year. A recent evaluation indicated that participation in Georgia's Pre-K had significant positive effects on children's language, literacy, math, and general knowledge skills (Peisner-Feinberg et al., 2014).

Due to the success of Georgia's Pre-K, the Georgia Department of Early Care and Learning (DECAL) has expanded its pre-k services by offering Summer Transition Programs. Beginning in the summer of 2010, the program has been available each summer to rising kindergartners—that is, children starting kindergarten the following fall—and it has enrolled both children who did and did not attend Georgia's Pre-K during the preceding year. Starting in 2013, services were expanded once more to offer a summer program for rising pre-kindergartners, that is, children who would be attending Georgia's Pre-K at the end of the summer. The overall goal of both summer programs is to support children's transitions and development, particularly their early literacy skills, through the last few months before kindergarten or pre-kindergarten entry.

The purpose of this report is to summarize the evaluation findings from these two summer programs. This evaluation was conducted through a partnership between DECAL and researchers at the Frank Porter Graham Child Development Institute (FPG) at the University of North Carolina at Chapel Hill and Child Trends. The study design, measures, and procedures were developed jointly.

### Rising Kindergarten (RK) Program Description

In 2013, as in the past three years, the Rising Kindergarten (RK) Program met for six weeks in June and July. All children who attended were from low-income families who met certain family income requirements and the services were free to participating families. As in past years, several specific components were put into place to meet the program's overall goal of preparing children for success in kindergarten. First, each RK class was small—with a maximum of 16 students—and each class had both a lead and an assistant teacher. Second, the RK classrooms were required to use a specific curriculum, Opening the World of Learning (OWL), to support lan-

guage development and kindergarten readiness. Third, a half-time transition coach was hired for every class to help families meet transition needs and to offer specific parent educational activities. Finally, DECAL partnered with the Woodruff Arts Center to offer art activities in every RK classroom and provide professional development to teachers regarding arts integration.

The RK Program expanded greatly from 2012 to 2013. In 2012 it was offered in 59 classrooms in 47 sites in 18 counties across the state. In 2013, the RK Program was offered in 122 classrooms in 107 sites in 41 counties. A total of 945 children participated in the RK Program in 2012, and 1,948 participated in 2013. In 2013, 75% of the classrooms were housed in private child care facilities, and 25% were located in public schools.

Each summer since its inception, there has been an evaluation of the RK Program. Participating children in 2010, 2011, and 2012 significantly improved their skills during the six-week program (Maxwell et al., 2011, 2012, 2013). The current evaluation seeks to see if the 2013 program was equally successful, and also to expand the evaluation questions by including measures of classroom quality and information about services and supports for parents, recruitment, and attendance.

### Rising Pre-Kindergarten (RPre-K) Program Description

The 2013 Rising Pre-Kindergarten (RPre-K) Program was modeled after the RK Program, and the two programs shared several core features. Like the RK Program, the RPre-K Program met for six weeks in June and July. All children were from low-income families, and the program was free to families. Maximum class size was even smaller in RPre-K than RK, with a maximum of 14 children per class. Like RK, each RPre-K classroom had a lead and an assistant teacher. In RPre-K, one of the teachers had to speak Spanish. As with the RK Program, a half-time transition coach was hired for every class to help families meet transition needs and to offer specific parent educational activities and support services. Each program was required to select and use an appropriate curriculum, although no specific curriculum was prescribed for the RPre-K classrooms.

The RPre-K Program had the additional requirement that all children be dual language learners from homes where Spanish was the predominant language. A recent evaluation of Georgia's Pre-K program suggested that additional supports were needed for Georgia's growing population of children from homes where English is not the predominant language. Although Spanish-speaking dual language learners made significant gains during the pre-k year, they entered and left pre-k significantly behind their mono-lingual English-speaking peers on all language, literacy, math, and social outcomes (Peisner-Feinberg, Schaaf, & LaForett, 2013). Based on those findings, DECAL decided to provide a summer program to support children from homes where Spanish is the predominant language as they make the transition to pre-k.

During this first summer, Georgia funded 19 RPre-K classrooms at 11 sites in 8 counties. Thirty-seven percent (37%) were housed in private child care facilities, and 63% were located in public schools. A total of 244 children participated in RPre-K in 2013.

### **Organization of This Report**

The remainder of this report is broken into two sections. The first section describes the evaluation of the Rising Kindergarten Program, including both a study of children's academic growth and a study of classroom quality and program services. The second section describes the evaluation of the Rising Pre-Kindergarten Program.

# Evaluation of the Rising Kindergarten Summer Transition Program

### **Purposes**

In 2013, the Evaluation of the Rising Kindergarten Summer Transition Program had several goals: (1) estimate the amount of academic growth children experienced during their participation in the RK Program, (2) describe the quality of the RK classrooms, (3) describe the services provided to participating children and their families, (4) characterize the RK Program's efforts to recruit children into the programs and challenges they experienced in recruiting children, especially children who had not participated in Georgia's Pre-K, and (5) understand reasons that attendance in the RK Program may be lower than during the school year.

To meet these five goals, two separate studies of the RK Program were conducted. The Rising Kindergarten Skills Study addressed the first goal and was a replication of the Summer Transition Program Evaluations from 2010, 2011, and 2012. As in past summers, pre- and post-test measures were collected on a representative sample of children who participated in the program. The measures assessed children's pre-literacy skills, color knowledge, and counting. To address the additional goals of the 2013 evaluation, the Rising Kindergarten Classroom Quality Study collected RK classroom observation data, as well as questionnaire data from RK lead teachers, assistant teachers, and transition coaches.

Separate samples were drawn for the two studies. Power analyses revealed that it would not be possible to link child academic growth to classroom quality with the proposed sample size and resources, so non-overlapping samples were drawn (i.e., the children in the first sample never came from classrooms in the second sample). This minimized the burden on programs and classrooms. The two samples were drawn from a list of all programs (i.e., centers or schools) provided by DECAL. The list included 110 programs, housing 127 classrooms. To create non-overlapping samples, a random number was assigned to each program. Those with the highest values were assigned to the Skills Study; those with the lowest values were assigned to the Classroom Quality Study.

### Rising Kindergarten Skills Study

### Sample

The Rising Kindergarten Skills Study sample included 160 children participating in 40 RK class-rooms at 40 sites. If a program with more than one RK classroom was selected, the data collector randomly selected one of the classrooms for participation upon arrival at the program. This happened in three programs. In each selected classroom, four children were selected at random from all those with parent permission slips on file.

Pre-test data were collected from all 160 children during the first week of the program. Post-test data were collected during the last two weeks of the program from 126 children who had

participated in the pre-test. Those who did not participate in the post-test had left the program (n = 8), were absent on the day of assessment (n = 25), or did not want to take part (n = 1).

### **Information Collected**

A team of 18 Georgia's Pre-K Field Consultants were trained to conduct child assessments. Before being allowed to collect data, each consultant demonstrated his/her competency conducting the assessment with a young child. Georgia's Pre-K Field Consultants collected these data as a means of minimizing costs; however they collected data only in programs for which they were not the regular consultant.

Eight different child assessment measures were used in this study.

- **Letter Naming:** In this activity, children are asked to identify as many letters of the alphabet as they can. Letters are printed in random order on an 8 ½ by 11 sheet.
- Picture Naming (part of the Individual Growth and Development Indicators (IGDI) from the Early Childhood Research Institute on Measuring Growth and Development, 1998): In this one-minute timed activity, children are presented with photographs or line drawings of common objects (e.g., apple, chair, fish) and asked to name them as fast as possible. Categories of objects used in the subtest included animals, food, people, household things, games and sports materials, vehicles, tools, and clothing.
- **Rhyming** (part of the Individual Growth and Development Indicators (IGDI) from the Early Childhood Research Institute on Measuring Growth and Development, 1998): In this two-minute timed activity, children are shown cards with an image (e.g., mouse) at the top and a set of three images at the bottom (e.g., house, apple, cheese) and asked to point to a picture at the bottom that rhymes with the picture at the top.
- Alliteration (part of the Individual Growth and Development Indicators (IGDI) from the Early Childhood Research Institute on Measuring Growth and Development, 1998): In this two-minute timed activity, children are shown cards with an image (e.g., teeth) at the top and a set of three images at the bottom (e.g., phone, tire, fish) and asked to point to a picture at the bottom that starts with the same sound as the picture at the top.
- **Story and Print Concepts** (Zill & Resnick, 1998): This activity measures children's early literacy skills using the book *Where's My Teddy*? Children are asked to respond to 14 questions that measure book knowledge, comprehension, and print awareness.
- **Counting Bears:** This activity measures children's ability to count with one-to-one correspondence. Children are asked to point and count using pictures of 40 teddy bears (using two sets of cards with 20 bears on each card).
- **Number Naming:** In this activity, children are asked to identify numbers 1–10, printed in random order on an 8½ by 11 sheet.
- **Color Bears** (Zill & Resnick, 1998): This activity measures children's ability to identify 10 basic colors.

### **Findings**

The pre-literacy and school readiness skills of children participating in the RK Program improved during the program (see Table 1). Gains on all of the measures were statistically significant (p < .05). An effect size of .20 is considered "small," an effect size of .50 is considered "moderate," and an effect size of .80 is considered "large" (Cohen, 1992). As seen in Table 1, the effect sizes in the current study are generally in the small to moderate range.<sup>2,3</sup>

Table 1. Child Assessment Pre- and Post-Test Means in Rising Kindergarten Programs

	Pre-Test Mean	Post-Test Mean	р	Effect Size
Letter Naming				
Total letters named correctly (max = 26)	14.77	16.71	<.001	0.18
IGDI				
Picture Naming Score	18.80	21.10	<.001	0.28
Rhyming Score	4.59	6.99	<.001	0.49
Alliteration Score	2.33	3.75	<.001	0.42
Story & Print Concepts				
Total proportion correct	0.40	0.51	<.001	0.56
Book knowledge sum (max = 5)	2.79	3.41	<.001	0.45
Book comprehension sum (max = 2)	0.88	1.25	<.001	0.50
Print awareness sum (max = 7)	1.09	1.53	<.001	0.37
Counting Bears	·			
Highest number counted (max = 40)	21.49	24.46	<.001	0.26
Number Naming	·			
Total numbers named correctly (max = 10)	6.04	6.78	<.001	0.21
Color Bears				
Number colors named (max = 10)	8.64	8.92	<.05	0.13

These 2013 RK evaluation findings replicate some of the findings from the earlier evaluations. Specifically, children's skills improved on all outcome measures in 2013 and each improvement was statistically significant. The same had been true for all measures in past years, except in 2012 the pre-/post- difference on the Counting Bears task was not statistically significant. Table 2 compares the effect sizes across years. As seen in Table 2, most of the gains were small in size for all years, but a few were moderate. For a six-week program to demonstrate moderate gains is somewhat unexpected and implies a successful implementation. Furthermore, replication of the findings from the first three years strengthens the evidence of the effectiveness of the RK Summer Transition Program.

It is important to note, however, that the study was not designed to determine causality. Thus, we cannot conclude that children's skills improved because they participated in Georgia's RK Summer Transition Program. Random assignment of children to intervention and control groups would be needed to determine causality. No data were gathered on children who did not participate in the RK Summer Transition Program, so it is not possible to determine whether

children's gains were greater than they would have been if they had not participated in the summer program.

Table 2. Child Assessment Effect Sizes in Rising Kindergarten Programs, 2010–2013

	2010	2011	2012	2013
	Effect Size	Effect Size	Effect Size	Effect Size
Letter Naming				
Total letters named correctly	.18	.16	.22	.18
IGDI				
Picture Naming Score	.41	.28	.36	.28
Rhyming Score	.27	.38	.41	.49
Alliteration Score	.25	.46	.34	.42
Story & Print Concepts				
Total proportion correct	.44	.47	.42	.56
Book knowledge sum	.49	.43	.36	.45
Book comprehension sum	.22	.29	.47	.50
Print awareness sum	.27	.35	.24	.37
Counting Bears				
Highest number counted	.11	.22	.08	.26
Number Naming				
Total numbers named correctly	.05	.14	.13	.21
Color Bears				
Number colors named	.27	.24	.20	.13

Note: All effects were statistically significant (p < .05) for all years, except 'highest number counted' in 2012.

### Rising Kindergarten Classroom Quality Study

### Sample

Sixty randomly selected RK classrooms in 60 sites participated in the Classroom Quality Study.<sup>4</sup> As noted above, there was no overlap between the classrooms in the RK Classroom Quality Study and the classrooms in which the children in the RK Skills Study were enrolled.

### **Information Collected**

Classroom Assessment Scoring System (CLASS) (Pianta, La Paro, & Hamre, 2008). The CLASS provides an assessment of the quality of teacher-child interactions. Its ten dimensions are organized into three domains. The Emotional Support domain includes positive climate, negative climate, teacher sensitivity, and regard for student perspectives. The Classroom Organization domain includes behavior management, productivity, and instructional learning formats. The Instructional Support domain includes concept development, quality of feedback, and language modeling. Each dimension is rated from 1 to 7 with 1 or 2 indicating the classroom is "low" on that dimension; 3, 4, or 5 indicating that the classroom is in the "mid-range"; and 6 or 7 indicating the classroom is "high" on that dimension. Each classroom in the study received a single CLASS visit from one of three observers. The observer rated the RK classroom and teacher on

the 10 dimensions roughly every 30 minutes throughout the observation morning. Six 30-minute observation cycles were completed in each room. At the start of each of the six CLASS cycles, data collectors noted the number of children and teachers present. FPG employed the observers and trained them on proper data collection procedures. All observers were certified as reliable on the CLASS observation tool by Teachstone.

- **Lead and Assistant Teacher Questionnaires**. In each participating classroom, the lead and assistant teacher were asked to complete a questionnaire. The questionnaire included items about experience, education, and professional development. Of the 60 leads and assistants asked to complete the questionnaire, 59 leads and 59 assistants did so, for a response rate of 98% in each group. Each lead and assistant teacher was given \$50 as a 'thank you' for her or his participation.
- Transition Coach Questionnaire. The transition coach for each participating classroom was also asked to complete a questionnaire. In addition to the items asked of teachers (experience, education, and professional development), the transition coaches were asked about workshops they had held or were planning to hold for families, opportunities for families to participate in the program, services they provide to families, how they helped children and families with the transition to kindergarten, how they recruited children for the program, barriers they saw to recruitment, and barriers they saw to higher attendance. All 60 of the transition coaches returned the completed questionnaire. Each transition coach was given \$50 as a 'thank you' for her or his participation.

### **Findings**

### CLASSROOM QUALITY AS MEASURED BY THE CLASS

As seen in Table 3, the mean score was 6.0 for the Emotional Support domain, 5.9 for the Classroom Organization domain, and 2.6 for the Instructional Support domain. Figures 1, 2, and 3 illustrate the distribution of scores on the three domains. On Emotional Support over half (53%) of the classrooms were rated as 6.0 or above and no classroom was rated below a 4.0. Likewise, over one-third of rooms (38%) were rated at 6.0 or above on Classroom Organization, and only one classroom (2%) scored below 4.0. Scores on Instructional Support were considerably lower, as seen in most studies using this tool. Almost three-quarters (74%) scored below 3.0 and only two classrooms (3%) were rated above 4.5.

In comparison to a recent evaluation of Georgia's Pre-K program during the 2011-12 school year (Peisner-Feinberg et al., 2013), the CLASS scores from the RK Program classrooms were slightly higher on Emotional Support and Classroom Organization and roughly comparable on Instructional Support (see Table 3).

Table 3. CLASS Means in Rising Kindergarten Programs and Georgia's Pre-K

	RK ( <i>n</i> = 60)	GA's Pre-K ( <i>n</i> = 100)
Emotional Support	6.0	5.5
Classroom Organization	5.9	5.2
Instructional Support	2.6	2.8

100% Percentage of Classrooms 80% 60% 35% 35% 40% 18% 20% 5% 5% 2% 0% 0% 0% 0% 0% 0% 0% 5.00 to 5.40 5.50 to 5.90 6.00 to 6.40 7.00 to 1.40 7.50 to 7.90 \*.50<sub>0</sub> ¥,000 to \$1,40

Figure 1. CLASS Emotional Support in Rising Kindergarten Programs

**CLASS Emotional Support Score** 

Figure 2. CLASS Classroom Organization in Rising Kindergarten Programs

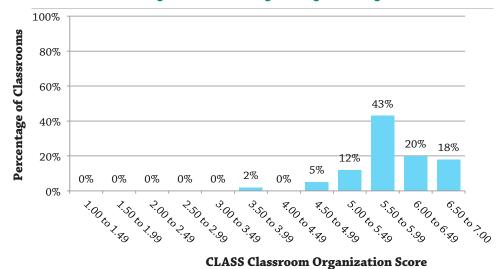


Figure 3. CLASS Instructional Support in Rising Kindergarten Programs

100% Percentage of Classrooms 80% 60% 40% 28% 27% 20% 12% 13% 7% 3% 3% 0% 0% 0% 0% 0% 7.50 to 7.99 2.00 to 2.40 7.50 to 7.99 3.00 103.40 3,50 to 3,99 \*.00 to \*.40 6.00 to 6.40 5.00 to 5.40 5.50 to 5.99

**CLASS Instructional Support Score** 

### **GROUP SIZES AND RATIOS**

Data collectors counted children and adults present in each classroom six times, at the start of each CLASS observation cycle. Table 4 provides observed mean group sizes and ratios for RK Program classes. The total number of children in a classroom (i.e., group size) and the number of children per adult (i.e., ratio) are important aspects of quality. It is easier for adults to meet the health and developmental needs of each child if there are fewer children and more adults in a group. Small group sizes and low child-to-teacher ratios may be thought of as necessary, but not sufficient, for high quality care and education.

In all classes, the average group sizes and ratios were at or below the maximum allowable by DECAL (Bright from the Start: Georgia Department of Early Care and Learning, 2013). These small group sizes may reflect low attendance and difficulty with recruitment in some programs. These mean

group sizes were smaller than those seen in a recent study of the traditional school-year Georgia's Pre-K (group size *mean* = 21.4; Peisner-Feinberg et al., 2013), which is not surprising as that program has a larger maximum group size of 22.

**Table 4. Group Sizes and Ratios in Rising Kindergarten Programs** 

	Mean	Range	DECAL Allowable Maximum
Group Sizes	12.0	7 to 16	16
Ratios (Number of Children per Adult)	5.9	3 to 8	8

### LEAD TEACHERS (n = 59)

- **Education.** DECAL required that lead teachers in the RK Program have at least a Bachelor's degree and this requirement appears to have been met. As seen in Figure 4, 97% held at least a Bachelor's degree.
- **Major and Courses Taken.** Close to two-thirds (64%) of the RK Program lead teachers had a degree (Associate's, Bachelor's, or Master's degree) in early childhood education. Other common majors included some other type of education (e.g., elementary, special education; 14%) and child development, human development, or family and consumer sciences (14%). Regardless of major, most had taken at least one college course in early childhood/child development (98%).
- **Teacher Certificates.** Most RK Program lead teachers reported having a Georgia teaching certificate issued by the Professional Standards Commission (68%).
- **Experience.** On average, RK Program lead teachers reported having 5.9 years of experience as a lead teacher in a Georgia's Pre-K classroom (*median* = 5.0, *range* = 1 to 17) and 0.3 years of experience as an assistant teacher in a Georgia's Pre-K classroom (*median* = 0, *range* = 0 to 6).
- **Professional Development.** Over half the lead teachers reported having received professional development in the past year in early language and/or literacy (54%). Professional development in the past year on other topics was less common: socio-emotional development (48%), cultural diversity (35%), math (31%), working with dual language learners (21%), and building partnerships with Latino families (4%).

### ASSISTANT TEACHERS (n = 59)

- **Education:** Assistant teachers in the RK Program generally had 'some college' (37%) or an Associate's degree (32%; see Figure 5).
- **Major and Courses Taken:** Almost one-quarter (24%) of RK Program assistant teachers had a degree (Associate's, Bachelor's, or Master's degree) in early childhood education. Other common majors included some other type of education (e.g., elementary, special education; 8%) and child development, human development, or family and consumer sciences (5%). Regardless of major, most had taken at least one college course in early childhood/child development (81%).
- **Teacher Certificates:** One-fifth (20%) of RK Program assistant teachers reported having a Georgia teaching certificate issued by the Professional Standards Commission.
- **Experience:** On average, RK Program assistant teachers reported having 5.2 years of experience as an assistant teacher in a Georgia's Pre-K classroom (*median* = 3.8, *range* = 0 to 17) and 1.5 years of experience as a lead teacher in a Georgia's Pre-K classroom (*median* = 0, *range* = 0 to 17).
- **Professional Development:** Over half the RK Program assistant teachers reported having received professional development in the past year in early language and/ or literacy (54%). Professional development in the past year on other topics was less common: socio-emotional development (41%), cultural diversity (33%), math (31%), working with dual language learners (23%), and building partnerships with Latino families (15%).

### TRANSITION COACHES (n = 60)

- **Education:** Transition coaches in the RK Program generally held at least a Bachelor's degree (78%; see Figure 6).
- Major and Courses Taken: Just over one-third (35%) of RK Program transition coaches had a degree (Associate's, Bachelor's, or Master's) in early childhood education. Other common majors included some other type of education (e.g., elementary, special education; 20%) and child development, human development, or family and consumer sciences (8%). Regardless of major, most RK Program transition coaches reported having taken at least one college course in early childhood/child development (88%).
- **Experience:** For most RK Program transition coaches (73%), 2013 was their first summer serving as a transition coach. For 22% it was their second summer and for 5% it was their third summer.

### **SERVICES FOR FAMILIES**

In order to learn about the role families play in programs, transition coaches in RK Programs were asked about workshops and activities they provided or planned to provide for parents; ways families participated; and the supports, information, and services that programs provided to families.

Figure 4. Education Levels of Lead Teachers in Rising Kindergarten Programs

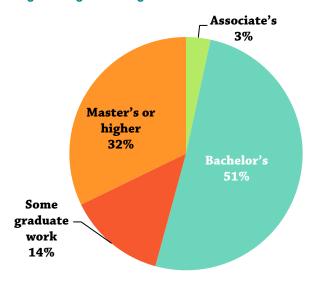
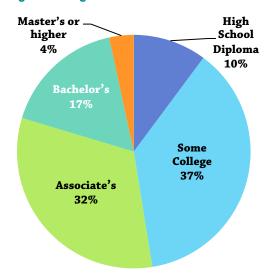
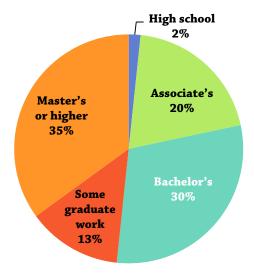


Figure 5. Education Levels of Assistant Teachers in Rising Kindergarten Programs



- **Parent Conferences:** Most RK Program transition coaches reported scheduling parent conferences once (38%) or twice (19%) during the summer; although a substantial group (43%) reported that they do not schedule parent conferences.
- Home Visits: As seen in Table 5, just over half of the RK Program transition coaches reported having visited some of the children's homes, but only 8% reported having visited all the children. Lead and assistant teachers were also asked about home visiting and they were less likely to have visited children's homes than the transition coaches. Combining the responses of the transition coaches, lead teachers, and assistant teachers, in 70% of programs, one of the three reported having visited the homes of at least some of the children (not tabled).

Figure 6. Education Levels of Transition Coaches in Rising Kindergarten Programs



■ Workshops and Family Activities: On average, RK Program transition coaches reported that they had or planned to have 6.5 (range = 3 to 12) family workshops or activities during the summer, which is a little more than one per week during the sixweek program. The most common topics included: early literacy (97%); kindergarten (how to enroll, what to expect, etc.; 93%); parenting and behavior management (76%); nutrition, food preparation, and food safety (73%); the importance of physical activity (63%); and early math (63%).

- **Family Participation:** RK Program transition coaches were asked what kinds of opportunities there were for families to participate in the RK Program. Table 6 shows their responses, ordered from most to least common. Families were offered many different opportunities to participate in the program, with the most common types being helping in the classroom, reading to the children, and eating with the class.
- Services and Supports Provided to Families: RK Program transition coaches were asked what kinds of supports their RK Program provides to families and how they help families to find services and resources in the community. Tables 7 and 8 show their responses, ordered from most to least common. All transition coaches reported coordinating community services and helping to locate events for families with young children; most also helped with finding social and mental health services and school-age care.

**Table 5. Home Visiting in Rising Kindergarten Programs** 

Have you visited the homes of the children in your program/classroom?					
None A Few Most All					
Transition Coach	47%	33%	12%	8%	
Lead Teacher	76%	22%	2%	0%	
Assistant Teacher	74%	24%	2%	0%	

**Table 6. Opportunities for Families to Participate in Rising Kindergarten Programs** 

What kinds of opportunities are there or will there be this summer for families to participate in your program?	% Yes
Help out in the classroom as needed	93%
Read to the children in the class	92%
Eat with their child's class or help at meals	84%
Help out on field trips	83%
Social activity for families at school/center (e.g., pizza night)	82%
Share a family or cultural tradition with their child's class	70%
Social activity for families in the community (e.g., picnic at a local park, bowling)	63%
Help with jobs outside of the classroom (e.g., help with laundry, prepare snacks/materials)	41%

**Table 7. Services Provided to Families in Rising Kindergarten Programs** 

Does your program provide any of the following materials or services to families?	% Yes
Coordination of community services for families (e.g., provide information about services, assist families in contacting services, provide follow-through with families)	100%
Reading activity packs to take home	81%
Lending library for families	72%
Translation of your program's written materials for families who do not speak English	62%
Distribution of translated materials about community services (in a language other than English)	60%
Interpretation at program events, activities, conferences, or meetings for families who do not speak English	47%

**Table 8. Finding Services in the Community for Families in Rising Kindergarten Programs** 

Does your program help families find services or resources in the community to help with any of the following things?	% Yes
Activities or events in the community for families and children	100%
Social service needs (financial, health care, housing, etc.)	97%
Mental health needs (counseling, therapy, support groups)	86%
School-age care	85%
Translation or interpretation in the community for families who do not speak English	62%

### TRANSITION ACTIVITIES

Students in the RK Program are old enough to start kindergarten at the end of the summer. To understand how programs are helping children and families make the transition, RK Program transition coaches were asked about services they provide. The most common practice was providing written materials to families about transitions in general (100%). Other common practices included: sharing information about the child with the new school or classroom (73%); giving parents the child's portfolio to take to kindergarten (71%); and inviting kindergarten teacher to visit preschool classroom (67%). Less common practices included meeting with parents and kindergarten teacher together (40%) and taking children to the kindergarten (24%).

### RECRUITMENT STRATEGIES

In order to better understand how programs go about finding children for the RK Program, questions were asked about strategies they used and agencies and community groups with whom they collaborated. The responses appear in Tables 9 and 10, ordered from most to least common.

**Table 9. Recruitment Strategies Used in Rising Kindergarten Programs** 

Which of the following strategies did you use to recruit children to participate in your program this summer?	% Yes
Word of mouth	97%
Sent home information to families in our regular (school-year) early childhood program(s)	89%
Fliers or posters here at our center/school	88%
Fliers or posters elsewhere in the community (e.g., grocery stories, churches, social service agencies)	84%
Sent home information via local elementary schools	71%
Sent home information via other early education programs	68%
Open house before the program began	66%
Newspaper advertisements or public service announcements	34%
Information on our program's website	34%
Road signs or signs in front of our site	33%
Radio advertisements or public service announcements	9%

Table 10. Agencies or Community Groups that Collaborated in Recruitment in Rising Kindergarten Programs

What agencies or community groups did you collaborate with to recruit applicants to your program this year?	% Yes
Schools	86%
Other Georgia's Pre-K Program site(s)	83%
Other child care facilities	77%
Neighborhood and community centers	69%
Department of Family & Children's Services	53%
Faith-based organizations, church/temple bulletins	51%
Local public health center(s) or local mental health center(s)	50%
Child care resource and referral agencies	48%
Family Connection Agency or family resource center	47%
Pediatricians' offices	42%
Parks and recreation centers	42%
Ethnic/cultural organizations	27%
Local interagency councils	20%
Domestic violence shelter(s)	12%
Developmental evaluation center(s)	11%

RK Program transition coaches were also asked three open-ended questions about their recruitment strategies. The first simply asked them to note any other strategies they had used, in addition to those listed above. The most common response (about 20%) indicated that they contacted families with children on the Georgia's Pre-K wait list or the kindergarten enrollment list, or whose child had only attended Georgia's Pre-K for a partial year.

Ninety-six percent (96%) of RK Program transition coaches reported that they made a special effort to recruit children who had not gone to Georgia's Pre-K. The second open-ended question asked them to describe how they recruited those children. In general, the strategies they reported were very similar to the ones they used to recruit all children. It is worth noting, however, that one creative transition coach used Facebook, Craigslist, and texting parents to recruit children who had not gone to Georgia's Pre-K.

The final open-ended question about recruitment asked which strategies and collaborations transition coaches found most effective and why. More than a third of the RK Program transition coaches indicated that the most effective recruitment strategy was word of mouth, generally because of the trust that families have with teachers, other families, and resources in the community. RK Program transition coaches also reported that the Georgia's Pre-K wait list was effective in the recruiting process, along with contacting personnel at the elementary schools (principals, teachers), contacting families directly (flyers, calling, visiting door-to-door), and contacting other community resources. Social media was described as very effective by one of the transition coaches.

### **CHALLENGES TO RECRUITMENT**

Most RK Program transition coaches reported few challenges in recruiting children. Coaches responded to the items in Table 11 using a five point scale, where 1 indicated 'not a challenge,' 3 indicated 'somewhat of a challenge,' and 5 indicated 'a major challenge.' In general, the transition coaches indicated few challenges in recruitment. The highest rated challenge—lack of transportation—was rated lower than 'somewhat' on this scale. On all items, the most common (i.e., modal) response was 'not a challenge.' In future summers, it might be useful to ask families about the challenges of enrolling and participating in the summer program to learn more about how the program can best meet families' needs.

**Table 11. Challenges to Recruitment for Rising Kindergarten Programs** 

How large of a challenge were each of the following in recruiting children to participate?	Rating*
Families lack transportation so they can't get their children to the program.	2.5
DECAL does not advertise enough.	2.3
Families find the application process burdensome (too many forms, applications only accepted during limited hours).	2.2
We do not have money for advertising.	2.0
Eligible families move a lot making them hard to locate.	1.9
Many eligible families do not want their children in a formal early childhood program.	1.8
Many eligible families do not speak English making it difficult for us to communicate with them.	1.7
The six-week program does not meet the needs of many working families.	1.7
Many families believe they have to pay for the program.	1.7
We do not know how to identify and approach families who might be eligible.	1.5
The program's hours do not meet the needs of many working families.	1.5

<sup>\*1 =</sup> Not a Challenge | 3 = Somewhat of a Challenge | 5 = A Major Challenge

An open-ended question asked RK Program transition coaches if they experienced any other recruitment challenges, especially for children who had not gone to Georgia's Pre-K. The most frequent response was that the recruitment process started too late. This meant that it was difficult to contact families because children were no longer in school, and often parents had already made summer plans by the time they learned about the summer program.

### **ATTENDANCE**

In past summers, DECAL had noted that attendance was lower during the summer than during the school year. One goal of this evaluation was to determine why. RK Program transition coaches were asked "What do you think prevents children who are enrolled in your program from attending more often?" They responded to the items below using a five point scale, where 1 indicated 'not a barrier,' 3 indicated 'somewhat of a barrier,' and 5 indicated 'a major barrier.' Table 12 lists the average responses, from the highest to lowest.

What do you think prevents children who are enrolled in your program from attending more often?	Rating*
Family trips and summer visitors interfere.	3.6
Families do not think of the summer program as 'real school.'	3.0
Families lack transportation so they can't get their children to the program.	2.5
Parents have irregular work schedules.	2.0
The families of participating children move often.	1.8
Program hours do not meet families' schedules.	1.7

**Table 12. Barriers to Attendance in Rising Kindergarten Programs** 

An open-ended question asked RK Program transition coaches if there were other issues that prevented children from having better attendance. A little over 50% of the transition coaches responded. Of those who responded, almost half (n=14) indicated that parents' lack of engagement or motivation contributed to attendance problems, with a few describing parents as "lazy" or "not making an effort." These types of comments that blame parents are concerning because they seem to indicate a lack of understanding for many of the challenges low-income families may face. Additional issues included: rising kindergartners who had older siblings at home who were not attending a summer program did not always want to come to 'school,' doctors' appointments, and child illness. Five transition coaches stated specifically that there were no attendance issues at their sites.

### PRIDE IN THE RISING KINDERGARTEN SUMMER TRANSITION PROGRAM

Finally, RK Program transition coaches responded heartily to the question "What are you most proud of about your program?" The building of relationships with parents and parents' increasing involvement in the program was echoed many times. Responses included: "Relationships built with parents!" and "I feel I have cultivated a community of families, prepared them for kindergarten, prepared the families to feel confident in supporting their [child's] academic future."

# **Conclusions and Recommendations from the Rising Kindergarten Program Evaluation**

The skills of children participating in the 2013 Rising Kindergarten Summer Transition Program generally increased during the summer. Similar gains were seen in the first three years of the program. Although we cannot know for certain that the gains were the result of participation, we do know that the gains have been replicated over several years, tending to indicate that the program is of value to the children it serves.

In general, class sizes and child-to-adult ratios were below DECAL's maximum allowable and well within the guidelines endorsed by the National Institute for Early Education Research (Barnett, Carolan, Fitzgerald, & Squires, 2012). Lead teachers and transition coaches were generally well-educated with specialized training in early childhood. All these structural features should allow programs to maximize instructional impact and attend to the individual needs of participating children.

<sup>\*1 =</sup> Not a Barrier | 3 = Somewhat of a Barrier | 5 = A Major Barrier

Despite these structural features, classroom quality showed a pattern similar to findings from pre-k studies both in Georgia and in other states (Denny, Hallam, & Homer, 2012; Maier, Vitiello, & Greenfield, 2012; Peisner-Feinberg et al., 2013): scores for Emotional Support and Classroom Organization were high, but scores for Instructional Support were low. It is important to note, though, that most studies are conducted in school-year pre-k programs. This evaluation provides evidence that the quality of the pre-k experience is essentially the same during the summer as it is during the school-year. As with school-year programs, DECAL might want to provide additional supports and professional development to RK Program teachers to strengthen Instructional Support, which has been linked to children's gains in academic skills (Mashburn et al., 2008).

Transition coaches reported providing a wide array of opportunities to and services for parents and families. Future research might collect information from the families themselves, to learn what services and opportunities they found helpful and what needs might be going unaddressed.

Transition coaches reported a wide variety of strategies to recruit children into the program, most of them involving fliers, posters, or other written materials for families. They generally reported experiencing few barriers in recruiting families, but again collecting data from the families would provide a more complete picture of reasons that families do or do not enroll their children in the summer program. Several coaches did note that they learned about the summer program too late in the school year for recruitment to be most effective. To the extent feasible, it would be useful for DECAL to notify programs earlier in the school year.

In summary, the Rising Kindergarten Summer Transition Program is similar in quality to the school-year pre-k program, and children have consistently demonstrated gains in school readiness skills during their participation. The replication of changes in children's skills over the past few years provides evidence for the effectiveness of the program in preparing children to succeed when they enter kindergarten. To further strengthen the program, DECAL may find it useful to gather information from families about how the program can better meet their needs and to provide professional development to support the quality of teaching during the summer.

# Evaluation of the Rising Pre-Kindergarten Summer Transition Program

### **Purposes**

The Evaluation of the Rising Pre-Kindergarten Summer Transition Program (RPre-K) had several goals: (1) describe the quality of the RPre-K classrooms, (2) understand the amount and purposes of Spanish and English used in the classrooms, (3) describe the services provided by these programs to participating children and their families, and (4) understand reasons that attendance in this summer program may be lower than during the school year.

The RPre-K program was modeled on the RK program but served children the summer prior to the Pre-K year and was tailored to meet the needs of families and children who spoke Spanish at home. The decision to create a program for this population was a result of an evaluation that indicated more supports may be needed for dual-language learners as they begin their Pre-K year. The evaluation found that many dual-language learners were entering Georgia's Pre-K significantly behind their peers and, while making gains throughout the program, were exiting with a similar achievement gap (Peisner-Feinberg, et al., 2013).

### Sample

Information for this study was gathered from all 19 RPre-K Program classrooms, lead teachers, and assistant teachers. Additionally, the 11 transition coaches who worked with these 19 classes provided information for this study. All data were collected by a single, bilingual data collector, who was certified as reliable on the CLASS observation by Teachstone. She was an employee of FPG and had been trained on proper data collection procedures.

### Information Collected

- Classroom Assessment Scoring System (CLASS) (Pianta et al., 2008). The CLASS provides an assessment of the quality of teacher-child interactions. See page 6 for more details about this measure.
- Language Use Inventory (LUI). This tool was created specifically for this study by the study's authors. Its purpose was to quantify the amount of English and Spanish being used in the classrooms, as well as the purposes for each language. Current research recommends the strategic use of the home language when working with dual language learners (Castro, Espinosa, & Páez, 2011; Goldenberg, 2008). Teachers' use of the home language is "strategic" when it is employed in an intentional manner during selected key points of instruction, such as clarifying and extending concepts. Indeed, a strong foundation in the home language has been linked to achievement in English (August & Shanahan, 2006). When using Spanish and English in the classroom, it

is important that both languages be used for a range of purposes that include direct instruction and behavior management. Using both languages helps children continue to grow in their home language while acquiring English and reinforces the value of both languages (August & Shanahan, 2006).

To complete the Language Use Inventory the data collector spent five minutes observing language use in the classroom after completing the coding for each CLASS cycle. At the end of the five minutes, she responded to a series of questions regarding language use. The first set of questions asked her to indicate the 'primary language' (English or Spanish) used during those five minutes by: (a) the lead teacher speaking to children, (b) the assistant teacher speaking to children, (c) children speaking to the lead teacher, (d) children speaking to the assistant teacher, and (e) children speaking to children. If no conversation took place between the specified roles, she was instructed to indicate 'N/A.'

Following the 'primary language' items, the data collector was asked to indicate if English and/or Spanish had been used for "explicit instruction for academic content" and if English and/or Spanish had been used "by teachers for managing children's behavior." In order to simplify this coding, the data collector was instructed to apply a narrow definition of instruction, focusing only on intentional, explicit interactions with an academic focus, like language and literacy, math, or science. Likewise, she was instructed that behavior management should only include interactions that were clearly designed to manage the classroom, such as redirecting or correcting misbehavior, or reminding children about classroom rules and expectations, such as keeping hands and feet to self, quiet voices, listening ears, walking feet, etc. We recognize that young children learn through a variety of interactions and that a wide array of exchanges could be defined as academic in nature or as aimed at managing behavior. However, we intentionally used narrow definitions here so that we could easily compare these two types of interactions. By definition, this means that many teacher/child interactions were not coded during these observations.

These questions regarding primary language, academic content, and behavior management were repeated after each CLASS cycle for a total of six<sup>6</sup> cycles during the observation morning. Then, at the end of the observation morning, the data collector was asked to indicate if the room included English and/or Spanish books and English and/or Spanish object labels for children (such as *clock/reloj* under the clock, instructions for hand washing in English and/or Spanish).

It is important to note that this tool was created specifically for this study and has not been used elsewhere. Training was minimal and there was not an opportunity to establish inter-rater reliability. For these reasons, these should be considered pilot data that give a glimpse of language use and should be interpreted cautiously.

■ **Lead and Assistant Teacher Questionnaires.** In each participating classroom, the lead and assistant teachers were asked to complete a questionnaire. The questionnaire was the same one used in the Rising Kindergarten Classroom Quality Study and

- included items about experience, education, professional development, and knowledge and use of Spanish. Of the 19 leads and assistants asked to complete the questionnaire, 18 leads (95%) and 17 assistants (89%) did so. Each lead and assistant teacher was given \$50 as a 'thank you' for her or his participation.
- **Transition Coach Questionnaire.** The transition coach for each participating classroom was also asked to complete a questionnaire. Eight sites hosted two RPre-K classes, and in these sites one full-time transition coach served both classes; therefore there were 11 transition coaches for the 19 RPre-K classes. In addition to the items asked of teachers (experience, education, professional development, and knowledge and use of Spanish), the transition coaches were asked about workshops they were holding for families, opportunities for families to participate, services they provide to families, and barriers they saw to higher attendance. The questionnaire was very similar to the one used in the Rising Kindergarten Classroom Quality Study. All 11 transition coaches returned the completed questionnaire. Each transition coach was given \$50 as a 'thank you' for her or his participation.

### **Findings**

### **Classroom Quality as Measured by the CLASS**

As seen in Table 13, in the RPre-K Program classrooms, the mean score was 6.0 for the Emotional Support domain, 5.4 for the Classroom Organization domain, and 2.4 for the Instructional Support domain. Figures 7, 8, and 9 illustrate the distribution of scores on the three domains. On Emotional Support, over half (53%) of the classrooms were rated a 6.0 or above, and no classroom was rated below 5.0. The range of scores on Classroom Organization was a bit wider, but still a substantial group (31%) was rated at 6.0 or above and no classroom was below a 3.5. As in most studies, the Instructional Support scores were markedly lower, with most classrooms (80%) scoring below a 3.0 and no classroom scoring higher than 4.5.

In terms of Emotional Support and Instructional Support, the CLASS scores for RPre-K Program classrooms were comparable to CLASS scores found in the random sample of 60 Rising Kindergarten Program classrooms described on pages 7 and 8. RPre-K Program classrooms were a bit lower than RK Program classrooms on Classroom Organization. In comparison to a recent evaluation of Georgia's Pre-K program during the 2011–12 school year (Peisner-Feinberg et al., 2013), these RPre-K CLASS scores were slightly higher on Emotional Support and roughly comparable on Classroom Organization and Instructional Support. These comparisons should be interpreted cautiously, though, because of the small number of RPre-K programs (n = 19).

Table 13. CLASS Means in Rising Pre-K Programs, Rising Kindergarten Programs, and Georgia's Pre-K

	RPre-K (n = 19)	RK (n = 60)	GA Pre-K (n = 100)
Emotional Support	6.0	6.0	5.5
Classroom Organization	5.4	5.9	5.2
Instructional Support	2.4	2.6	2.8

Figure 7. CLASS Emotional Support in Rising Pre-K Programs

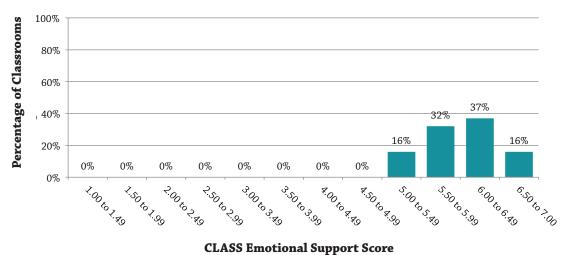
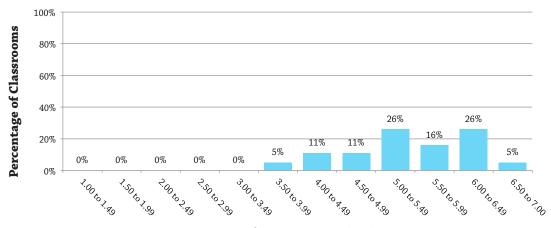
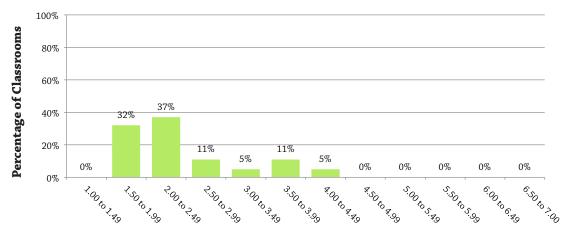


Figure 8. CLASS Classroom Organization in Rising Pre-K Programs



**CLASS Classroom Organization Score** 

Figure 9. CLASS Instructional Support in Rising Pre-K Programs



**CLASS Instructional Support Score** 

### **Teacher and Transition Coach Spanish Knowledge and Use**

- Lead Teachers: Most of the RPre-K lead teachers indicated they were native English speakers (67%), but 17% reported being native Spanish speakers and 17% reported that they spoke both English and Spanish as their native languages. All lead teachers reported that they could speak at least some Spanish. Half reported only being able to give a simple command to a child in Spanish, whereas 11% indicated they could have an extended conversation with a child, and 39% indicated they could have an in-depth conversation with an adult.
- Assistant Teachers: Almost half (47%) of the RPre-K assistant teachers indicated they were native English speakers, whereas 35% reported being native Spanish speakers, 6% reported that they spoke both English and Spanish as their native languages, and 12% spoke another language as their native language. All assistant teachers reported that they could speak at least some Spanish, and 47% reported that they could have an in-depth conversation with an adult in Spanish.
- **Either Lead or Assistant:** Combining the information received from lead and assistant teachers, in 94% of rooms either the lead or the assistant reported speaking Spanish well enough to have an in-depth conversation with an adult. In the remaining 6% of the classrooms, one adult reported being able to have an extended conversation with a child. Thus, every RPre-K classroom had a teacher with high-level Spanish skills.
- **Transition Coaches:** The RPre-K transition coaches reported a high level of proficiency in Spanish as well. Most indicated that they were native Spanish speakers (73%) or that they spoke both English and Spanish as their native language (18%). All except one reported being able to have an in-depth conversation with an adult in Spanish. The one remaining transition coach reported no ability to communicate in Spanish.

### **English and Spanish Use in the Classroom**

As described earlier, after each CLASS cycle<sup>7</sup> the observer spent five minutes watching language interactions between various people in the room and noting if they were primarily in English, primarily in Spanish, or if there were no language interactions (N/A). As seen in Table 14, teachers were more likely to speak to children in English than in Spanish, but Spanish was the predominant language for a large proportion of the cycles. Children were somewhat more likely to speak to the assistant teacher than to the lead teacher in Spanish. Conversations between children were typically in Spanish.

Table 14. English and Spanish in Rising Pre-K Programs<sup>8</sup>

	English	Spanish	N/A <sup>9</sup>
Lead teacher talking to children	71%	29%	0%
Assistant teacher talking to children	53%	44%	4%
Children talking to lead teacher	61%	34%	6%
Children talking to assistant teacher	31%	54%	14%
Children talking to children	17%	66%	17%

### **Purposes of English and Spanish in the Classroom**

After each five-minute language use observation, the data collector noted if English and/or Spanish had been used during that time for explicit instruction for academic content (i.e., language and literacy, math, science). As described above, in order to simplify this measure, the data collector was instructed to define instruction quite narrowly, focusing only on instances where the lead or assistant teacher was clearly providing academic content. Then, the data collector noted if English and/or Spanish had been used for managing children's behavior (e.g., redirecting or correcting misbehaviors; reminding children about classroom rules and expectations such as keeping hands and feet to self, quiet voices, listening ears, walking feet, etc.), again using a narrow definition of behavior management. Figures 10 and 11 illustrate the English and Spanish use for academic content and for behavior management and indicate that both languages were commonly used for both types of activities.

Finally, the data collector also noted if books and labeled objects in the classroom were in English and/or Spanish. Table 15 presents the results. The majority of the rooms had books in both English and Spanish, but one in three rooms had no Spanish books. Fewer rooms had labels in both English and Spanish.

Table 15. Books and Labeled Objects in English and/or Spanish in Rising Pre-K Programs

	Both English & Spanish	English Only	Spanish Only	No books/ labels
Books	63%	32%	0%	5%
Labeled objects	42%	47%	0%	11%

Figure 10. Languages Used in Cycles with Academic Content in Rising Pre-K Programs

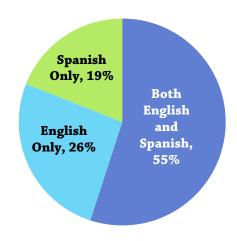
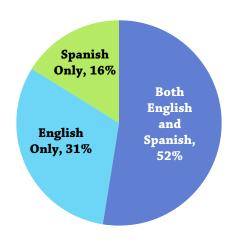


Figure 11. Languages Used in Cycles with Behavior Management in Rising Pre-K Programs



### **Group Sizes and Ratios**

The data collector counted children and adults present in each classroom six times, at the start of each CLASS observation cycle. Table 16 provides observed mean group sizes and ratios for RPre-K Programs. As noted above, it is easier for adults to meet the health and developmental needs of each child if there are fewer children and more adults in a group.

In all classes, the average group sizes and ratios were at or below the maximum allowable by DECAL for RPre-K Program classes (Bright from the Start: Georgia Department of Early Care and Learning, 2013). Additionally, these mean group sizes and ratios were smaller than those observed in the Rising Kindergarten Program described earlier in this report (group size mean=12.0, ratio mean=5.9) and smaller than those seen in a recent study of Georgia's tradi-

tional, school-year Pre-K program (group size *mean*=21.4; Peisner-Feinberg et al., 2013). This finding is not surprising because the allowable maximum group size was lower for RPre-K than for either of these other programs. Further, the challenges in recruiting children for this new program could explain, at least in part, the small number of children in each class.

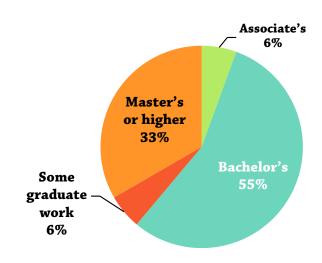
Table 16.	Group Size	s and Ratios	in Rising	<b>Pre-K Programs</b>
-----------	------------	--------------	-----------	-----------------------

	Mean	Range	DECAL Allowable Maximum
Group Sizes	10.1	7 to 14	14
Ratios (Number of Children per Adult)	4.9	4 to 7	7

### Lead Teachers (n = 18)

- **Education**: Lead teachers in RPre-K Programs generally held at least a Bachelor's degree (94%; see Figure 12).
- Major and Courses Taken: Two-thirds (67%) of RPre-K Program lead teachers had a degree (Associate's, Bachelor's, or Master's degree) in early childhood education. Other common majors included some other type of education (e.g., elementary, special education; 11%) and child development, human development, or family and consumer sciences (6%). Regardless of major, most had taken at least one college course in early childhood/child development (89%). Fewer lead teachers had taken a college course in teaching young children whose home language is not English (44%) or bilingual or dual language development in young children (44%).
- **Teacher Certificates**: Most RPre-K Program lead teachers reported having a Georgia teaching certificate issued by the Professional Standards Commission (67%). Sixteen percent (16%) had a certification specific to "English Speakers of Other Languages" (ESOL). Additionally, 5% had an endorsement specific to ESOL.

Figure 12. Education Levels of Lead Teachers in Rising Pre-K Programs

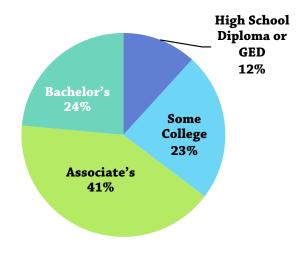


- **Experience:** On average, RPre-K Program lead teachers reported having 2.7 years of experience as a lead teacher in a Georgia's Pre-K classroom (*median* = 1.3, *range* = 0 to 13) and 0.5 years of experience as an assistant teacher in a Georgia's Pre-K classroom (*median* = 0, *range* = 0 to 6).
- Professional Development: At least half of lead teachers reported having received professional development in the past year in early language and/or literacy (76%), math (56%), socio-emotional development (50%), working with dual language learners (63%), and building partnerships with Latino families (50%). Additionally, 44% reported having received professional development in cultural diversity in the past year.

### Assistant Teachers (n = 17)

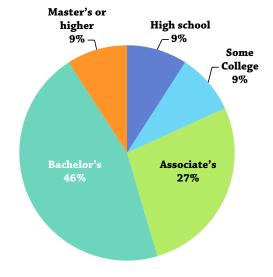
- **Education:** The most common educational level among assistant teachers in the RPre-K Program was an Associate's degree (41%; see Figure 13).
- Major and Courses Taken: Forty-one percent (41%) of RPre-K Program assistant teachers had a degree (Associate's or Bachelor's) in early childhood education. No assistant teacher majored in some other type of education (e.g., elementary, special education) nor child development, human development, or family and consumer science. Regardless of major, most reported having taken at least one college course in early childhood/child development (82%). Fewer assistant teachers reported having taken a college course in teaching young children whose home language is not English (24%) or bilingual or dual language development in young children (6%).

Figure 13. Education Levels of Assistant Teachers in Rising Pre-K Programs



- **Teacher Certificates:** Almost one-quarter (24%) of RPre-K Program assistant teachers reported having a Georgia teaching certificate issued by the Professional Standards Commission. However, no assistant teachers had a certification specific to "English Speakers of Other Languages" (ESOL). Five percent (5%) did have an endorsement specific to ESOL.
- **Experience:** On average, RPre-K Program assistant teachers reported having 5.1 years of experience as an assistant teacher in a Georgia's Pre-K classroom (*median* = 3.5, *range* = 0 to 25) and 0.5 years of experience as a lead teacher in a Georgia's Pre-K classroom (*median* = 0, *range* = 0 to 8).
- **Professional Development:** Over half of the assistant teachers reported having received professional development in the past year in early language and/or literacy (69%), math (67%), socio-emotional development (53%), cultural diversity (56%), and working with dual language learners (63%). Additionally, 47% reported having received professional development in building partnerships with Latino families in the past year.

Figure 14. Education Levels of Transition Coaches in Rising Pre-K Programs



### Transition Coaches (n = 11)

- **Education:** Most of the RPre-K transition coaches held at least a Bachelor's degree (55%; see Figure 14).
- **Major and Courses Taken:** Only 18% of RPre-K transition coaches had a degree (Associate's, Bachelor's or Master's) in early childhood education and 9% had a degree in another type of education. Most transition

coaches majored in unrelated fields. Only 36% of RPre-K transition coaches reported having taken at least one college course in early childhood/child development. Even smaller numbers reported having taken a course focused on teaching young children whose home language is not English (18%) or bilingual or dual language development in young children (20%).

**Experience:** For all 11 RPre-K Program transition coaches, 2013 was their first summer serving as a transition coach.

### **Services for Families**

In order to learn about the role families play in programs, RPre-K Program transition coaches were asked about workshops and activities they provided or planned to provide for parents; ways families participate; and supports, information, and services programs provide to families.

- **Parent Conferences.** Most RPre-K Program transition coaches reported that they did not schedule parent conferences in the summer (64%). All of those that did schedule conferences during the summer (36%) reported scheduling two conferences.
- **Home Visits**. As seen in Table 17, just under half of the transition coaches reported having visited a few of the children's homes, but no transition coach reported having visited most or all of the children's homes. Lead and assistant teachers rarely reported having visited children's homes. Combining the responses of the transition coaches, lead teachers and assistant teachers, in 68% of programs, one of the three reported having visited the homes of a few of the children (not tabled).
- Workshops and Family Activities. On average, transition coaches reported that they had conducted or planned to conduct 5.9 (range = 1 to 8) family workshops or activities during the summer, which is about one during each week of the six-week program. The most common topics included: early literacy (100%); Georgia's Pre-K (how to enroll, what to expect, etc.) (100%); parenting and behavior management (91%); nutrition, food preparation, and food safety (82%); general health and well-being issues for children (82%); overall child development (82%); and early math (72%).
- **Family Participation:** Transition coaches were asked what kinds of opportunities there were for families to participate in the RPre-K Program. Table 18 shows their responses, ordered from most to least common.
- Services and Supports Provided to Families: RPre-K transition coaches were asked what kinds of supports their program provides to families and how they help families to find services and resources in the community. Tables 19 and 20 show their responses, ordered from most to least common. It is noteworthy that all transition coaches reported that their program provided translation services and translated materials.

**Table 17. Home Visiting in Rising Pre-K Programs** 

Have you visited the homes of the children in your program/classroom?				
	None	A Few	Most	All
Transition Coach	53%	47%	0%	0%
Lead Teacher	94%	6%	0%	0%
Assistant Teacher	76%	24%	0%	0%

**Table 18. Opportunities for Families to Participate in Rising Pre-K Programs** 

What kinds of opportunities are there or will there be this summer for families to participate in your program?	% Yes
Share a family or cultural tradition with their child's class	82%
Social activity for families at school/center (e.g., pizza night)	82%
Read to the children in the class	80%
Help out in the classroom as needed	73%
Eat with their child's class or help at meals	73%
Help out on field trips	70%
Help with jobs outside of the classroom (e.g., help with laundry, prepare snacks/materials)	55%
Social activity for families in the community (e.g., picnic at a local park, bowling)	45%

**Table 19. Services Provided to Families in Rising Pre-K Programs** 

Does your program provide any of the following materials or services to families?	% Yes
Translation of your program's written materials for families who do not speak English	100%
Interpretation at program events, activities, conferences, or meetings for families who do not speak English	100%
Reading activity packs to take home	91%
Distribution of translated materials about community services (in a language other than English)	91%
Coordination of community services for families (e.g., provide information about services, assist families in contacting services, provide follow-through with families)	91%
Lending library for families	64%

**Table 20. Finding Services in the Community for Families in Rising Pre-K Programs** 

Does your program help families find services or resources in the community to help with any of the following things?	% Yes
Translation or interpretation in the community for families who do not speak English	100%
School-age care	91%
Activities or events in the community for families and children	82%
Social service needs (financial, health care, housing, etc.)	73%
Mental health needs (counseling, therapy, support groups)	73%

### **Attendance**

In past summers, DECAL had noted that attendance was lower during the summer than during the school year. They were particularly interested in better understanding attendance issues in this first year of RPre-K. To this end, RPre-K Program transition coaches were asked "What do you think prevents children who are enrolled in your program from attending more often?" Coaches responded to the items below using a five point scale, where 1 indicated 'not a barrier,' 3 indicated 'somewhat of a barrier,' and 5 indicated 'a major barrier.' No item on the list was rated as a 'major barrier.' The responses are listed in Table 21, ordered from the highest to lowest, with lack of transportation rated as the biggest barrier.

**Table 21. Barriers to Attendance in Rising Pre-K Programs** 

What do you think prevents children who are enrolled in your program from attending more often?	Rating*
Families lack transportation so they can't get their children to the program.	3.4
Family trips and summer visitors interfere.	2.7
Parents have irregular work schedules.	2.5
Families do not think of the summer program as 'real school.'	2.2
The families of participating children move often.	1.6
Program hours do not meet families' schedules.	1.5

<sup>\*1 =</sup> Not a Barrier | 3 = Somewhat of a Barrier | 5 = A Major Barrier

An open-ended question asked RPre-K Program transition coaches if there were other issues that prevented children from having better attendance. Some mentioned that having older siblings at home during the summer makes it hard for rising pre-k children to want to come to 'school.' In addition to scheduling challenges associated with family trips and summer visitors, doctors' appointments and child illness were mentioned as issues that sometimes prevented children from attending.

### **Pride in Rising Pre-K Programs**

All of the RPre-K Program transition coaches responded to the question "What are you most proud of about your program?" Many comments focused on being proud of the children and the teachers: "They were just a fantastic group!" and "The children are learning their daily routines and are eager to attend every day." Many transition coaches spoke very highly of parents: "The families are highly motivated with the program, very cooperative." One transition coach mentioned being proud "To help families in their own language (Spanish)."

# Conclusions and Recommendations from the Rising Pre-K Program Evaluation

In many ways the Rising Pre-K Program appears to be responsive to the learning and development needs of young children who are Spanish-speaking dual language learners (DLLs). It is a

promising finding that both English and Spanish are being used in these classrooms, both for instruction and for behavior management, because the use of both languages likely increases the learning opportunities. When both languages are used, children may learn a new concept in English or Spanish. It is also important for young DLLs to see both languages as valuable for learning. Likewise, the fact that every classroom had a lead and/or assistant teacher with strong Spanish skills and that almost all transition coaches spoke Spanish is encouraging and likely to lead to better outcomes for children and strengthened communications with parents. The group sizes and child-to-adult ratios seen in these RPre-K Program classrooms were excellent, much better than typically seen in early childhood programs. Additionally, the Emotional Support and Classroom Organization domains were rated as high. Instructional Support, however, was low. As noted earlier, this pattern of Emotional Support and Classroom Organization being considerably higher than Instructional Support is similar to findings from other studies (Denny et al., 2012; Maier et al., 2012; Peisner-Feinberg et al., 2013). The relatively high level of Emotional Support is a positive sign because fostering positive teacher-child relationships is critical for supporting DLLs in the classroom. Effective teacherchild relationships that promote children's socioemotional development are particularly important for young DLLs as a means for promoting their classroom participation and enhancing their social status (Castro, Peisner-Feinberg, Buysse, & Gillanders, 2010; Gillanders & Castro, 2007). However, other research has suggested that Instructional Support is most closely linked to children's gains in academic skills (Mashburn et al., 2008), so DECAL should con-

# **Supporting DLLs** in Early Childhood Classrooms

Current research regarding how to support DLLs in early childhood classrooms highlights the importance of using dual language instruction and targeting specific areas that are critical for promoting the development of DLLs' language and literacy skills (August & Shanahan, 2006; Castro et al., 2010). For example, vocabulary and phonological skill development appear to be particularly important areas for dual language instruction because similarities across languages mean that what is learned in one language helps children build similar skills in the other (LaForett, Fettig, Peisner-Feinberg, & Buysse, 2012). Specific strategies may include direct teaching of words, incorporating incidental and multiple exposures to words in a range of meaningful social contexts (Castro et al., 2010), incorporating dialogic reading strategies in which the adult prompts the child to help in telling the book's story (Tysbina & Eriks-Brophy, 2010), using words that are identical or similar in English and Spanish to teach vocabulary, and highlighting similarities and differences between words and sounds in English and Spanish (LaForett et al., 2012). In addition, experts on dual language development emphasize the importance of having a clear plan for the contexts in which English and the home language are used (Genesee, 2008). All of these strategies should be emphasized in future RPre-K classrooms, and future evaluation efforts might attempt to measure them.

sider providing supports and professional development to RPre-K teachers to strengthen that aspect of classroom quality.

A few concrete recommendations emerged from this study. First, all RPre-K classrooms should have books and labeled objects in both English and Spanish. In 2013, one-third of classrooms

had no Spanish books, and almost half had no Spanish labels. This change would be relatively easy to make and would not only increase children's exposure to print in Spanish, but could also be used for teaching specific skills (e.g., vocabulary, phonological awareness), illustrating differences between the English and Spanish languages, and stimulating conversation between children and teachers. Storybook reading featuring themes and content from children's cultures is recommended for increasing children's comprehension, whereas labeling objects in both languages is consistent with suggestions that DLLs benefit from pictures and other visual cues regarding key information and classroom procedures (Goldenberg, 2008).

Second, DECAL should consider requiring all RPre-K classrooms to use a structured curriculum, such as the Opening the World of Learning (OWL) curriculum, as is done in the Rising Kindergarten classrooms. OWL offers lessons in English and in Spanish and encourages dual language instruction. A structured curriculum tailored to dual language classrooms could help teachers with the intentional use of English and Spanish.

Last, Santos and Ostrosky (2004) suggest that the extent to which teachers understand the process of second language acquisition and are able to correctly distinguish language issues from behavioral difficulties is critical for fostering positive relationships with DLLs. For this reason, it might strengthen the program to ensure that all teachers and transition coaches have taken college course work or recent professional development that focuses on the specific issues that are unique to early childhood education for DLLs.

### Overall Conclusions

The development of summer pre-k programs underscores Georgia's continued commitment to providing a free educational experience for children prior to kindergarten entry, particularly those from low-income families. For several consecutive years, children in the Rising Kindergarten Program have shown language and literacy gains. The size of the gains was somewhat unexpected and implies a successful implementation. Furthermore, replication of the findings from the first three years strengthens the evidence for the effectiveness of the RK Summer Transition Program. These findings, however, must be interpreted with caution because the study did not include a comparison group of children who did not attend the Rising Kindergarten Program. The quality of teacher-child interactions in 2013 was on par with what researchers typically see in school-year pre-k. Transition coaches also reported providing a wide array of supports and services to parents.

In 2013, DECAL pilot-tested a new program for rising pre-kindergartners who were dual language learners, informed by the evaluation findings of Georgia's Pre-K Program in which the skills of children from homes where Spanish was the predominant language were much lower than those from homes where English predominated (Peisner-Feinberg et al., 2013). This program offered a free, six-week educational experience to children the summer before they were eligible to participate in Georgia's Pre-K. The evaluation of the pilot suggests that the program is of similar quality to the year-round pre-k program and that children in the program are exposed to English and Spanish. Enriching the environment (e.g., labeling objects in Spanish and English) and providing a literacy-based curriculum developed for dual language learners could strengthen the program.

Future program efforts should focus on supporting teachers to improve Instructional Support in the classroom and ensuring that teachers are well-versed in the latest information on how young children acquire language and literacy skills. Future research efforts could emphasize learning more about the ways language is used in the classroom and on hearing from the parents of participating children about their experiences with the programs.

### References

- August, D., & Shanahan, T. (Eds.). (2006). Developing literacy in second-language learners: Report of The National Literacy Panel on Language-Minority Children and Youth. Mahwah, NJ: Lawrence Erlbaum Associates.
- Barnett, W.S., Carolan, M.E., Fitzgerald, J., & Squires, J.H. (2012). The state of preschool 2012: State preschool yearbook. New Brunswick, NJ: National Institute for Early Education Research.
- Bright from the Start: Georgia Department of Early Care and Learning. (2013, May 21). Rising pre-k summer transition program frequently asked questions. Retrieved from http://www.decal.ga.gov/documents/attachments/Rising\_PK\_STP\_FAQ.pdf
- Castro, D. C., Espinosa, L. M., & Páez, M. M. (2011). Defining and measuring quality in early childhood practices that promote dual language learners' development and learning. In M. Zaslow, I. Martinez-Beck, K. Tout, & T. Halle (Eds.), Quality measurement in early childhood settings (pp. 257-280). Baltimore, MD: Brookes.
- Castro, D. C., Peisner-Feinberg, E., Buysse, V., & Gillanders, C. (2010). Language and literacy development in Latino dual language learners. Promising instructional practices. In O. N. Saracho and B. Spodek (Eds.), *Contemporary perspectives on language and cultural diversity in early childhood education* (pp. 65-93). Greenwich, CT: Information Age.
- Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 115-159.
- Denny, J. H., Hallam, R., & Homer, K. (2012). A multi-instrument examination of preschool classroom quality and the relationship between program, classroom, and teacher characteristics, *Early Education & Development*, 23:5, 678-696, doi: 10.1080/10409289.2011.588041
- Early Childhood Research Institute on Measuring Growth and Development. (1998). Research and development of individual growth and development indicators for children between birth and age eight. (Tech. Rep. No. 4). Minneapolis: University of Minnesota, Center for Early Education and Development.
- Genesee, F. (2008). Early dual language learning. Zero to Three, 30, 17-23.
- Gillanders, C., & Castro, D. (2007). Reading aloud to English language learners. Children and Families, 21(3), 12-14.
- Goldenberg, C., (2008). Teaching English language learners. What the research does—and does not—say. *American Educator*, Summer, 8-44.
- LaForett, D. R., Fettig, A., Peisner-Feinberg, E. S., & Buysse, V. (2012). Recognition & Response for Dual Language Learners: Instructional adaptations for young dual language learners. *Young Exceptional Children Monograph Series*, 14, 115-132.
- Maier, M. F., Vitiello, V., & Greenfield, D. B. (2012). A multilevel model of child- and classroom-level psychosocial factors that support literacy resilience of children in Head Start. *Early Childhood Research Quarterly, 27(1)*, 104-114.
- Mashburn, A. J., Pianta, R. C. Hamre, B. K., Downer, J. T. Barbarin, O. A. Bryant, ... Howes, C. (2008). Measures of class-room quality in prekindergarten and children's development of academic, language, and social skills. *Child Development*, 79(3), 732-749. doi: 10.1111/j.1467-8624.2008.01154.x
- Maxwell, K., Kainz, K., Kraus, S., Hume, K., Ponder, B., & O'Callaghan, R. (2011). Evaluation findings from Georgia's 2010 pre-k summer transition program. Chapel Hill: The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute.
- Maxwell, K., Yi, P., Kraus, S., Hume, K., Ponder, B., & O'Callaghan, R. (2012). Evaluation findings from Georgia's 2011 pre-k summer transition program. Chapel Hill: The University of North Carolina at Chapel Hill, Frank Porter Graham Child Development Institute.
- Maxwell, K., Yi, P., Kraus, S., Hume, K., Ponder, B., & O'Callaghan, R. (2013). Evaluation findings from Georgia's 2012 pre-k summer transition program. Chapel Hill: The University of North Carolina, Frank Porter Graham Child Development Institute.
- Peisner-Feinberg, E. S., Schaaf, J. M., LaForett, D. R., Hildebrandt, L.M., & Sideris, J. (2014). Effects of Georgia's Pre-K Program on children's school readiness skills: Findings from the 2012–2013 evaluation study. Chapel Hill: The University of North Carolina, FPG Child Development Institute. Retrieved from http://fpg.unc.edu/sites/fpg.unc.edu/files/resources/reports-and-policy-briefs/GAPreKEval\_RDDReport%203-4-2014.pdf
- Peisner-Feinberg, E. S., Schaaf, J. M., & LaForett, D. R. (2013). Children's growth and classroom experiences in Georgia's Pre-K Program: Findings from the 2011–2012 evaluation study. Chapel Hill: The University of North Carolina, FPG Child Development Institute. Retrieved from <a href="http://www.fpg.unc.edu/sites/fpg.unc.edu/files/resources/reports-and-policy-briefs/GAPreKEval2011-2012Report.pdf">http://www.fpg.unc.edu/sites/fpg.unc.edu/files/resources/reports-and-policy-briefs/GAPreKEval2011-2012Report.pdf</a>
- Pianta, R. C., La Paro, K. M., & Hamre, B. (2008). Classroom Assessment Scoring System (CLASS): Pre-K Version. Baltimore, MD: Paul H. Brookes.
- Santos, R. M., & Ostrosky, M. M. (2004). *Understanding the impact of language differences in classroom behavior. What Works Issue Brief No. 2.* Champaign, IL: Center on the Social and Emotional Foundations for Early Learning. Retrieved from <a href="http://csefel.vanderbilt.edu/briefs/wwb2.pdf">http://csefel.vanderbilt.edu/briefs/wwb2.pdf</a>
- Tysbina, I., & Eriks-Brophy, A. (2010). Bilingual dialogic book-reading intervention for preschoolers with slow expressive vocabulary development. *Journal of Communication Disorders*, 43, 538-556. doi:10.1016/j.jcomdis.2010.05.006
- Zill, N., & Resnick, G. (1998). Head Start Family and Child Experiences Survey. Rockville, MD: Westat.

### **Endnotes**

- Due to budget constraints, the program was reduced from 180 to 160 days for the 2011–2012 school year. The program increased from 160 to 170 days for the 2012–2013 school year and returned to full funding for 180 days of instruction in the 2013–2014 school year.
- 2 Preliminary analyses compared pre-test scores for the 126 children who had post-test scores to the 34 children who did not. The children who did not participate in the post-test data collection were significantly lower than those who did participate on two of 11 pre-test outcomes: IGDI Alliteration Score and Story & Print Concepts Book Comprehension Sum. No differences at pre-test were found between leavers and stayers for the other nine outcomes. Thus, there was not overwhelming evidence that the leavers and stayers were different at baseline. To be consistent with previous years' analyses, this report presents findings only for children who completed both the pre- and post-test measures.
- 3 Three level hierarchical linear models were used to assess change from pre- to post-test for children who participated in both waves of data collection (n = 126). The models were estimated using PROC MIXED in SAS v 9.2, accounting for multiple measurements within child (pre and post) and multiple children within programs. The reduced form equation for these models was:

$$y_{tjk} = \beta_0 + \beta_1 x Time_{tjk} + \upsilon_k + \upsilon_{0j} + \varepsilon_{tjk}$$

In the equation above, the outcome at time t for child j in program k is a function of an overall intercept and the effect of time. The coding of time (0 = pre, 1 = post) allowed for the intercept to represent average pre-test scores and the coefficient for  $\beta_1$  to represent the magnitude and direction of average change from pre- to post-test. The hierarchical modeling and associated parsing of error terms  $(\upsilon_k + \upsilon_{0j} + \varepsilon_{ijk})$  adjusted the standard error of the time coefficient to account for non-independence of the sample due to repeated measures and clustering within center. The statistical test of the time coefficient was a formal test of whether the change from pre- to post-test was significantly different from zero. The d-type effect size was calculated by dividing the time coefficient by the sample standard deviation of the corresponding pre-program outcome score. (In this dataset, standard deviations of pre-program outcomes are in general larger than those of post-program outcomes. As a result, the first set of sample standard deviations was used to calculate effect size estimates more conservatively.)

- 4 Power analysis revealed that with a sample size of 60, the 95% confidence interval for CLASS scores would be ±.26, meaning if (for example) the mean value were 3, we would be 95% certain that the real value was between 2.74 and 3.26.
- 5 Because the program was only 6 weeks long, CLASS visits took place at almost any point during the program. The only days during which no visits occurred were the first three days and last two days.
- 6 In a few cases, fewer than 6 cycles were observed and coded. Four classrooms received only 5 cycles, and one classroom received only 4 cycles. This was typically due to the observation window ending before there was time to complete the sixth cycle.
- 7 In most classrooms (n = 14), this language use observation was completed six times. However, in four classes, it was completed only five times and in one classroom only four times.
- 8 These values were calculated by first creating a percentage for each classroom, then taking the mean of the percentages across the 19 rooms.
- 9 N/A indicates that no talking between these individuals was observed.

