Jumpstart
Children first.

## 1,433
Children Served

Program Description

- Jumpstart identified summer as an opportunity to support kindergarten readiness for many more children in underserved communities, who may not have access to enriching summer learning activities compared to their peers from more affluent homes
- In prior years, summer programs varied in curricula and approach; in 2018, Jumpstart developed a standardized summer curriculum
- Summer-specific curriculum includes theme-based activities for the classroom, as well as activities for meals and outside time
- Over 6-10 weeks, members (trained adult volunteers) serve in multiple classrooms for at least 4.5 hours per week, providing individualized support in language and literacy content, and implementing small-group activities designed to boost children's oral language and social-emotional development

Jumpstart School Success Checklist (JSSC)

- Indirect assessment (teacher observation)
- 15 items focus on language/literacy skills and social-emotional competencies that have a language component
- Scores range from 1 to 5
- Rating on each item must be whole number (no decimals or fractions); not ideal for measuring incremental growth over short periods
- Gain of 1 point over the course of a school year is considered substantive
- Measures broad set of language and literacy skills; not perfectly aligned with summer curriculum
- 412 children in evaluation sample

77% of children in the evaluation sample **made gains**.

Children in **summer** programs made an average pre- to post-intervention **gain** of **0.46** over the course of the summer (**6-10 week** program), just under half of the **school-year** gain of **1.05** (**20 week** program). Therefore, given the length of the summer programs relative to school-year programs, gains are consistent with expectations.

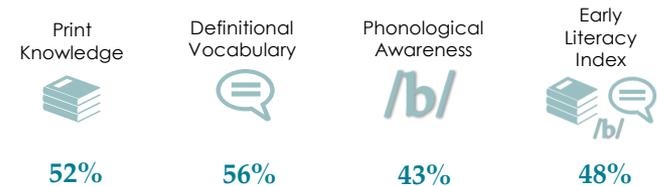1.05 **School Year**

0.46 **Summer**
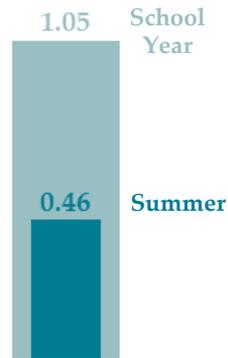
The future of Jumpstart's summer programming and its evaluation

- For 2019 and beyond, Jumpstart is continuing to improve summer programming and to assess opportunities for growth
- Given the challenges of measuring growth over short timeframes, Jumpstart is exploring various assessment tools that align with the program and are methodologically and contextually appropriate

Test of Preschool Early Literacy (TOPEL)

- Direct assessment
- Raw scores are converted to standard scores that are norm-referenced and account for child's age
- Standard scores of 90-110 are in the "Average" range; children scoring in this range are on track in development of language skills

- Three **subtests**
  - Print Knowledge **(PK)**
  - Definitional Vocabulary (**DV**; aligns with summer curriculum's focus on oral language)
  - Phonological Awareness **(PA)**
- **Early Literacy Index (ELI)**: Composite score based on subtest scores; gives picture of overall literacy skills
- 63 children in evaluation sample

Large **percentages** of children in the summer evaluation sample **made gains** on the Definitional Vocabulary subtest, which aligns with the summer curriculum's focus on oral language.

Print Knowledge	Definitional Vocabulary	Phonological Awareness	Early Literacy Index
52%	56%	43%	48%

Children in **summer** programs made **gains** on all subtests and the ELI. Gains were 1/4 to 1/2 of those seen in **school-year (SY)** programs, consistent with expectations given the length of summer programs relative to school-year programs. The largest gains were on the DV subtest, which aligns with the summer curriculum's focus on oral language.

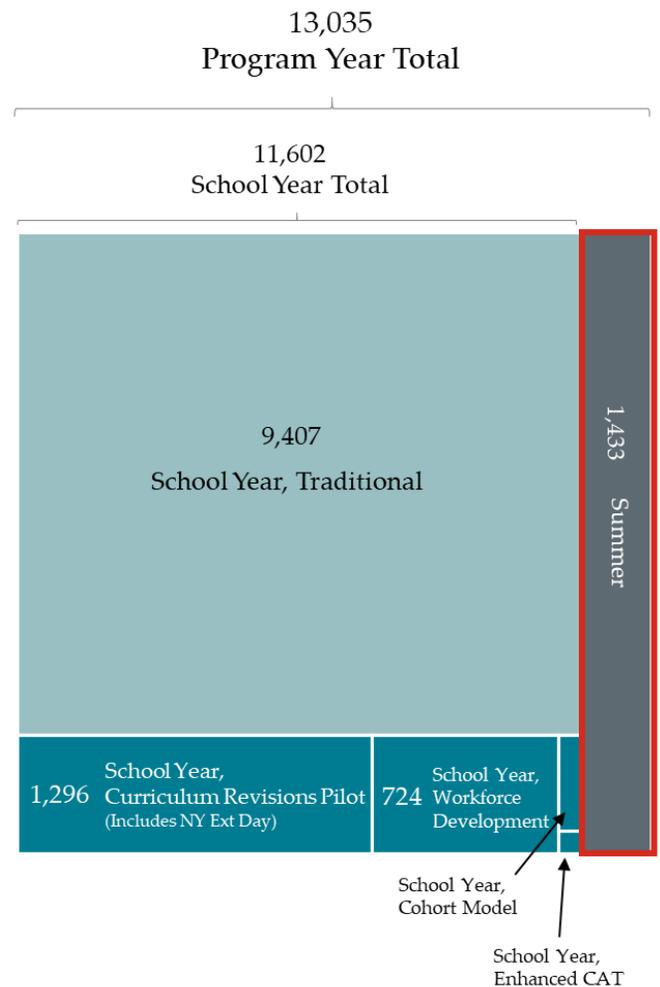|	PK	DV	PA	ELI
SY	+5.67	+6.07	+6.85	+7.86
Summer	+1.84	+3.25	+1.60	+2.84
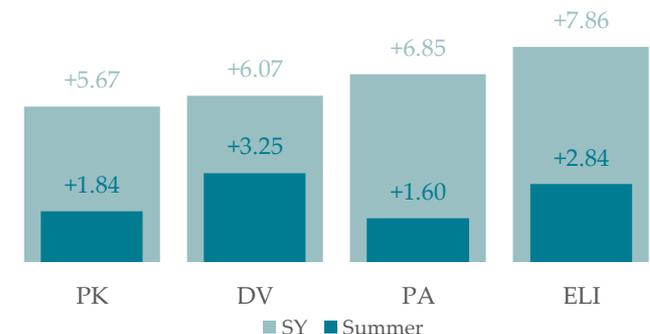
■ SY ■ Summer

INTRODUCTION

Summer is an important time for supporting the development of the academic and social-emotional skills preschoolers need to be successful in kindergarten (Condliffe, Foster, & Jacob, 2017; Duncan et al., 2018). While children from affluent homes have access to enriching summer learning opportunities that help them develop the skills needed for kindergarten readiness, children growing up in economic poverty often do not (Redford & Burns, 2018). Identifying summer as an opportunity to support kindergarten readiness for many more children in underserved communities, Jumpstart made it an organizational priority to expand and improve its summer programming.

In prior years, Jumpstart's summer programs varied in their curricula and implementation as well as their approach to evaluation (i.e., how they assessed children and collected basic information). For 2018, Jumpstart developed and piloted a more standardized curriculum in order to ensure that all of its summer programs were driving toward the same language, literacy, and social-emotional skill development.

Jumpstart's summer program enhances the learning environments in summer preschool classrooms and/or other childcare spaces through small-group learning experiences and interactions designed to boost oral language and social-emotional development. Adult volunteers, called Jumpstart members, are trained to provide individualized support in language and literacy content and implement a summer-specific curriculum that includes theme-based activities for the classroom as well as extension activities for meals and outside time. Over the course of six to ten weeks, members serve in multiple classrooms, working with children for at least 4.5 hours per week. Children participate in core learning experiences—including Small Group Reading, Small Group Discovery, and Small Group Explorations—up to three times per week.

In the summer of 2018, stand-alone Jumpstart summer programming[i] was offered in California (Los Angeles Summer Program), Massachusetts (National Direct's Boston Summer Program and Roxbury/Bunker Hill Community Colleges' Summer Program), Illinois (National Direct's Chicago summer program), Pennsylvania (National Direct's Pittsburgh Summer Program), New York (New York's summer program), New Jersey (Kean University's Summer Program), and Washington, D.C. (Serve DC's Summer Program). Additional programming was also offered across the network to meet school-year goals for participation; these included DePaul University's Summer Program, Dominican University's Summer Program, Middlesex/Northern Essex Community Colleges' Summer Program, and Worcester State University's Summer Program.

To understand how well the new summer program model was working, and whether it was producing the intended outcomes for children in terms of their language, literacy, and social-emotional skills, Jumpstart's Research and Evaluation department analyzed demographic and assessment information collected for participating children.

13,035
Program Year Total

11,602
School Year Total

9,407
School Year, Traditional

1,433
Summer

1,296
School Year,
Curriculum Revisions Pilot
(Includes NY Ext Day)

724
School Year,
Workforce
Development

School Year,
Cohort Model

School Year,
Enhanced CAT

How did children receiving summer programming in 2018 progress in language and literacy skills over the course of the summer?

METHODS

Participants

Of the 13,035 children who participated with Jumpstart over the course of the 2017-2018 program year, a total of 1,433 did so during the summer.[ii]

Demographics

Among the 1,433 children participating in summer programs, 850 had demographic information available and family consent for Jumpstart to use this information. Their data are summarized in Figures 1-3, and shown in full in the Appendix.

In terms of race/ethnicity, 42% percent of children in summer programs were identified by their families as Black or African American, and 36% as Latinx. Children came from a wide variety of language backgrounds. A large percentage (29%) came from homes in which Spanish was spoken most often. Although a majority (65%) came from homes in which English was spoken *most often*, many these homes were multilingual environments in which children were acquiring more than one language (i.e., they were dual language learners, or DLLs). In fact, 68% of children were identified as DLLs. In terms of race/ethnicity and home language, children in summer programs were similar to children participating during the school-year. However, more children in summer programs (68%) were identified as Dual Language Learners, as compared to 57% DLLs in school-year programs; this is likely driven by the fact that children and families speak languages other than the home language.[iii]

The average age of children in summer programs was 44.94 months (3 years, 9 months), while the average age of children in school-year programs was 48.63 months (4 years, 1 month). Because age was calculated as of 10/1/2017[iv] for all children, this means that by the time they were exposed to Jumpstart and were administered their pre-intervention assessments, children in summer programs were more similar in age to children served during the school-year when they were assessed at pre-intervention.

Figure 1. Reported race and ethnicity for children participating in summer programming. Note: 60% of children had race/ethnicity reported for them.

Figure 2. Language most spoken in the homes of children participating in summer programming. Note: 92% of children had language information reported for them.
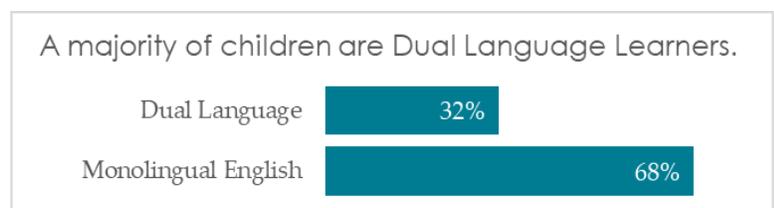
Figure 3. Dual Language Learner status of children participating in summer programming.

Evaluation Samples

Of the 1,443 children who participated in Jumpstart summer programs, 412 were included in the *JSSC* evaluation sample, and 63 were included in the *TOPEL* evaluation sample. Children were included in the evaluation sample if they had family consent for evaluation activities, and pre- and post-intervention assessment data. In contrast to typical practice for Jumpstart's evaluation of school-year programming, a dosage criterion was not used to identify the evaluation sample for summer programming. No children were assessed on both assessments.
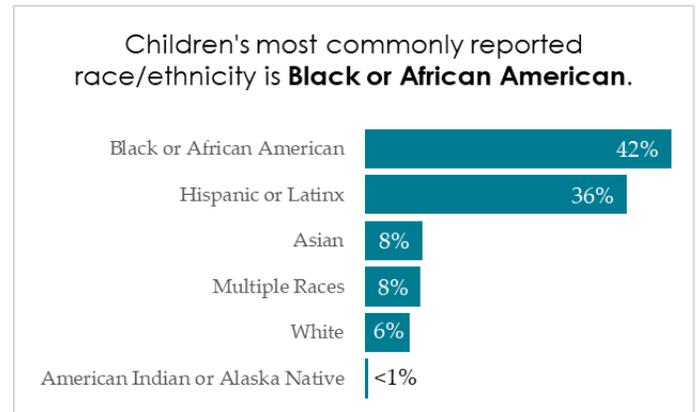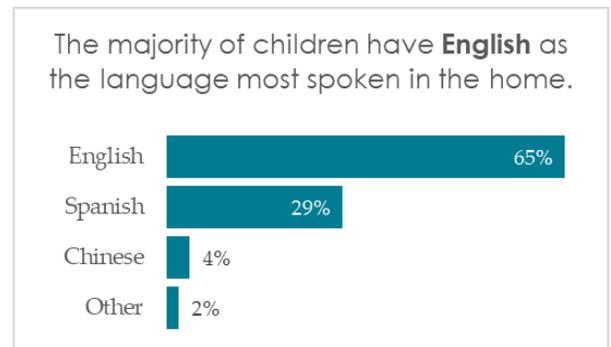
Assessments

The *Jumpstart School Success Checklist* (*JSSC*) has traditionally been the tool Jumpstart has used to assess children's language and literacy skills. It is comprised of 15 items from the HighScope Educational Research Foundation's Preschool *Child Observation Record* (*COR*), 2nd Edition (HighScope, 2003), a standardized teacher observational tool. The 15 items focus on language and literacy skills as well as social-emotional competencies that have a language component (e.g., relating to adults through conversation, and making choices and plans by verbally expressing them). On each item, a child is given a score of 1, 2, 3, 4, or 5, where each score corresponds to a specific skill/behavior, and higher scores represent a more developmentally advanced skill. For example, on Item 7 (Reading), a child who receives a 4 recognizes a written word, while a child who receives a 5 can read aloud a simple phrase or sentence.

Preschool teachers complete the *JSSC* at pre-intervention (before children are exposed to Jumpstart) and at post-intervention (after program completion). Unless otherwise noted, *JSSC* scores are reported as total scale scores (an average of the scores for the 15 items), rather than as subscales that measure distinct areas.

Because the ratings on each item of the *JSSC* must be whole numbers (i.e., cannot be fractions or decimals), the *JSSC* is well positioned to measure growth over relatively long periods, and may not be ideal for detecting incremental growth over shorter periods like the summer. Furthermore, the *JSSC* measures a broad set of language and literacy skills, and as such, is not perfectly aligned with the summer curriculum's focus on oral language. As part of a continuous effort to align its assessments with the program, Jumpstart will move away from using the *JSSC* to evaluate summer programs starting in 2019.

Test of Preschool Early Literacy (TOPEL)

The *Test of Preschool Early Literacy (TOPEL)* is a direct assessment tool for 3-to-5-year-old children widely used in intervention research.[v] Trained assessors administer the *TOPEL* at pre- and post-intervention. The *TOPEL* has three subtests: Phonological Awareness, Definitional Vocabulary, and Print Knowledge. The Definitional Vocabulary subtest assesses oral language—a focus of the summer curriculum—while the other two subtests allow us to look at other important language and literacy skills.

Children score one point for each item answered correctly (e.g., on the Phonological Awareness subtest, correctly pointing to the picture of a lamb when prompted with "now point to lamp without /p/"). The total number of points on each subtest is the raw score for that subtest. A child's raw scores are converted to standard scores that are norm-referenced and based on their chronological age. Their standard scores on the three subtests are combined to produce the Early Literacy Index (ELI), a composite score that provides a picture of their overall literacy skills.

As with the *JSSC*, higher standard scores on the *TOPEL* represent more advanced skills. The mean score for the three subtests and the ELI is 100, with scores in the "Average" range falling between 90 and 110. The closer a child's standard score is to 100, the closer their performance is to what is expected for their age. Scores above 110 suggest that children possess skills that are expected for their age, and are likely to be good at a wide range of activities that predict reading and school success.

Pre- to Post-Intervention Gains on the *JSSC*

Of the 412 children included in the *JSSC* evaluation sample, 317 (77%) made pre- to post-intervention gains. Children in the sample began the summer with an average pre-intervention score of 3.02, and ended the summer with an average post-intervention score of 3.48 (see Figure 4). An average pre-intervention score close to 3.00 indicates that children were displaying skills such as rhyming one word with another, using vocabulary related to a particular subject, and making the sound of a letter they were looking at. An average score close to 4.00 would indicate that children are able to contribute to an ongoing conversation, name ten or more letters, and recognize a written word.
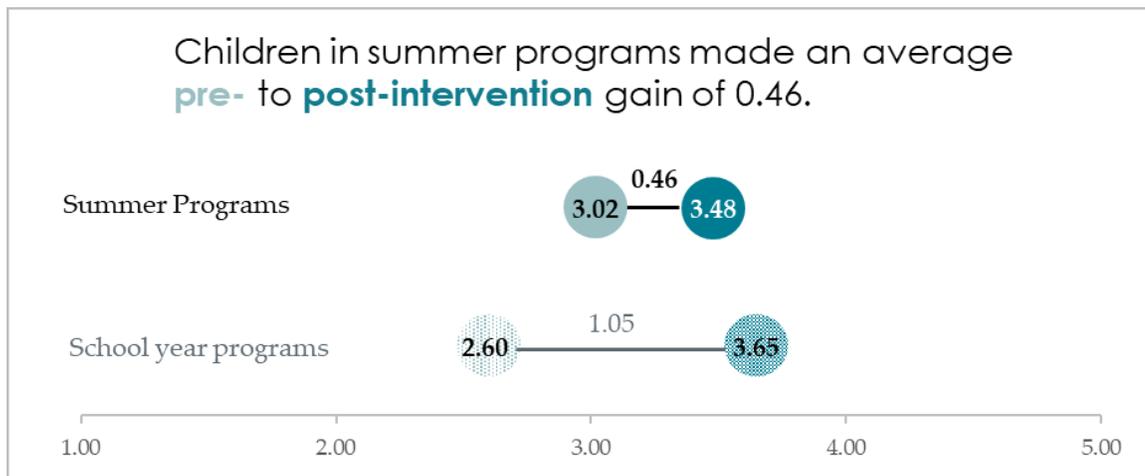

Figure 4. Pre- to post-intervention gains on the *JSSC* for children in summer and school-year programs.

Over the course of the summer, children in the sample made an average gain of 0.46 on the five-point scale of the *JSSC* (see Figure 4). As a reference, children participating with Jumpstart over the course of an entire school year typically make an average gain of 1.00 or more. For summer programming that takes place over a shorter period, smaller gains are expected. It is also possible that incremental growth made by some children may not be detected, given that item-level scores on the *JSSC* are whole numbers only.

It is worth noting that children entering summer programs began with a baseline score (3.02) that was considerably higher than the baseline score of children entering school-year programs (2.22 for Curriculum Revisions Pilot programs and 2.60 for programs using the curriculum as it was before the revision)[vi]; thus, children participating in summer programming had a relatively high baseline and less room for growth on the five-point scale of the *JSSC*. While the summer model changed from 2017 to 2018, making it difficult to compare the results across years, it is interesting to note that results for 2018 are more positive than for 2017, in terms of the percentage of children making gains on the *JSSC* (77% in 2018 versus 71% in 2017) and in the size of gains (0.46 in 2018 versus 0.16 in 2017).

Pre- to Post-Intervention Gains on the *TOPEL*

Of the 63 children included in the *TOPEL* evaluation sample, 30 (48%) made pre- to post-intervention gains on the Early Literacy Index (ELI), a composite, standard score obtained by combining the scores of all three subtests.[vii]

The Definitional Vocabulary subtest, which measures single-word oral and definitional vocabulary, was associated with the largest percentage of children (56%; 35 children) making pre- to post-intervention gains. This result aligns with the summer curriculum's focus on oral language. Fifty-two percent of children in the sample (33) made gains on the Print Knowledge subtest, which measures alphabet knowledge, and 43% (27) made gains on Phonological Awareness, which measures elision (omission of one or more sounds in a word to form a new word) and blending abilities. See Figure 5.

| 52% Print Knowledge | 56% Definitional Vocabulary | /b/ 43% Phonological Awareness | 48% Early Literacy Index |

Figure 5. Percentage of children making gains over the course of the summer on each of the subtests and the ELI.

As a group, children in the evaluation sample demonstrated gains on all three subtests and the ELI. Because standard scores take a child's chronological age into account, making a gain on these measures indicates growth beyond what would be expected given typical development. Pre- and post-intervention averages and average gains are shown in Table 1.

Table 1
Pre- and Post-Intervention Scores on Each TOPEL Subtest and ELI

Subtest	Average Pre-intervention Score	Average Post-intervention Score	Average Gain
Print Knowledge	104.62	106.46	+1.84
Definitional Vocabulary	98.59	101.84	+3.25
Phonological Awareness	88.73	90.33	+1.60
Early Literacy Index	96.05	98.89	+2.84

Note: Gains shown here are averages of individual children's gains, and may not equal the difference between the average pre-intervention and average post-intervention scores.

The largest gains were seen on the Definitional Vocabulary subtest (+3.25), which aligns with the summer curriculum's focus on oral language. As a reference, during the school-year, *TOPEL* gains on the Definitional Vocabulary subtest ranged from 6.07 for programs implementing the traditional curriculum (i.e., before revision) to 10.54 for Curriculum Revisions Pilot programs. Given that summer programs were about one quarter of the length of the school-year program, the fact that children in summer programs made an average gain of 3.25 points during the summer—more than half of that seen for traditional school-year programs and more than a third of that seen for Curriculum Revisions Pilot programs—is remarkable.

On the Phonological Awareness subtest, children began the summer with an average pre-intervention score in the Below Average range (below 90, as defined by the authors of the assessment), and ended the summer with an average post-intervention score in the Average range (between 90 and 110). Children who display scores in the Below-Average range are likely to have difficulties with early literacy. The fact that these children ended the program with a scores in the Average range is promising and a move in the expected direction. Displaying skills that are expected for their age by program's end, they are considered to have "closed the gap" with their peers in the normed sample, and are closer to being on track to meeting kindergarten language and literacy benchmarks.

As mentioned above, the summer model changed from 2017 to 2018, making it difficult to compare the results across years. However, it is interesting to note that children participating in 2018 began with slightly higher baseline scores on the Print Knowledge and Definitional Vocabulary subtests, and made smaller gains. In contrast to children participating in 2017, who had a small loss on the Phonological Awareness subtest, children participating in 2018 made a gain on that subtest.

In addition to this evaluation, Jumpstart sought strategic guidance from an external consultant, Julie Poncelet Consulting (JPC), on selecting the appropriate tools to measure key outcomes for the summer program moving forward. JPC observed summer programs in 2018, interviewed staff, and analyzed child assessment data; JPC then shared its findings with Jumpstart in February, 2019. A notable finding of the work was that most early childhood assessments are developed to evaluate longer-term interventions and that assessments most suited to shorter-term interventions focus on progress monitoring of emergent literacy skills, with limited options focusing exclusively on oral language development. While JPC's recommendations did not clearly highlight one specific assessment as the right tool moving forward, the work did include ideas for types of assessments to consider.

In terms of the types assessment tools for Jumpstart to consider, JPC made several recommendations. The tool(s) should be:

- **Purpose-driven and aligned with Jumpstart's summer program outcomes.** The assessment(s) should align with the summer program's focus on strengthening children's oral language and social-emotional development.
- **Quick and simple to administer**. Assessors should be able to administer the assessment(s) in less than 30 minutes per child.
- **Methodologically sound and contextually appropriate**. The assessment should be standardized, externally validated, reliable, and supported by research. The tool(s) must also be appropriate for children aged 3-5, and work for varied implementations of the summer program as driven by localized needs.
- **One standard assessment process implemented consistently across all Jumpstart sites**. All Jumpstart sites should use the same assessment process (including tools) to ensure consistent progress-monitoring across the program. When possible, both pre- and post-tests should be administered by the same individuals to ensure systematic and consistent application.

It is unlikely that one single tool will meet all of these criteria and fit into the structure of Jumpstart's summer program. Jumpstart is reflecting on the learnings from JPC's work, and is continuing to explore tools that meet some of the criteria above as it develops future internal evaluations of summer programming.

SUMMARY

As part of a multi-year initiative to expand and improve summer programming, Jumpstart developed and piloted a standardized summer model in 2018. Over the course of six to ten weeks, children participating in Jumpstart's summer programs in 2018 made demonstrable growth in language and literacy skills—gains that were sizeable enough to be detected by tools normally used to monitor growth over longer periods. A large majority of children in the evaluation sample (77%) made gains on the *JSSC*, and *TOPEL* results indicate that in all skill domains measured, children made growth beyond what would be expected given typical development. In particular, children made the largest gains on the Definitional Vocabulary subtest of the *TOPEL*, suggesting that the summer curriculum's focus on oral language is producing the desired outcomes. Children also made notable growth in Phonological Awareness, beginning with pre-intervention scores in the Below-Average range and finishing with post-intervention scores in the Average range (i.e., "closing the gap"). Given the short duration of Jumpstart summer programs, as well as the variation in implementation across sites, these positive results are encouraging.

For 2019 and beyond, improving summer programming, and assessing opportunities for growth, continues to be a priority for Jumpstart. Based on the information gathered by the external consultant JPC, Jumpstart will continue to explore other assessment tools, to better capture the progress that participating children are making. It will be important to examine the language and literacy outcomes of participating children as Jumpstart's summer programming evolves.

The table below shows demographic information for 850 children served during the summer who had information available and family consent for Jumpstart to use this information. Data for all children served throughout the program year (grey) are shown as a reference alongside the summer data.

Percentage of Children in Each Demographic Category During the 2016-2017 Program Year

DEMOGRAPHICS	Percentage, Summer 2018	Percentage, All 2017-2018
Race/Ethnicity		
American Indian or Alaska Native	<1%	1%
Asian	8%	7%
Black or African American	42%	34%
Hispanic or Latinx	36%	40%
Middle Eastern or North African	-	<1%
Native Hawaiian or Other Pacific Islander	-	<1%
White	6%	8%
Multiple Races	8%	11%
Language Most Spoken in the Home		
Arabic	<1%	1%
Cape Verdean Creole	<1%	<1%
Chinese	4%	4%
English	65%	67%
Haitian Creole	<1%	1%
Portuguese	-	<1%
Spanish	29%	24%
Vietnamese	-	<1%
Other	2%	2%
Dual Language Learner Status		
Dual Language	68%	57%
Monolingual English	32%	43%
Gender		
Female	49%	50%
Male	51%	50%
Age		
Under 3 years (36.00 months) old	15%	7%
3 years (36.00 - 47.99 months) old	49%	40%
4 years (48.00 - 59.99 months) old	33%	50%
5 years (60.00 - 71.99 months) old	2%	3%
6 years (72.00 months) or older	<1%	<1%

Note: Percentages may not total 100% due to rounding. Response rates varied across demographics: Race/Ethnicity = 60%; Home Language[viii] = 92%; Gender = 96%; Age = 95%.

i "Stand-alone" summer programming refers to programming that implemented the summer curriculum and were separate from any school-year programming (e.g., in terms of funding or goals for number of children served). It does not include other programming that may have taken place during the summer months but were an extension of school-year programming (e.g., for the purpose of filling volunteer slots).

ii Of these, 1,223 received stand-alone summer programming, while an additional 210 participated during the summer months as an extension of school-year programming.

iii Families are asked three questions about their child's language background: 1) What is the language _**most spoken in the home**_? 2) What language is your _**child most comfortable**_ speaking? 3) What _**other languages**_ are spoken in the home?
Children's home languages reported are based on responses to #1, and DLL status is determined using information combined from all three questions.

iv A typical start date for the program year

v The _TOPEL_ is a standardized, norm-referenced measure of early language and literacy skills. Norm-referenced tests compare and rank test takers in relation to others who have already taken the test – the normative sample. The _TOPEL_ was normed on a group of 842 children from across the U.S. This sample closely approximates the U.S. population by geographic area, gender, ethnicity, family income, families' educational attainment, exceptionality status (e.g., learning disorders, emotional disturbance, hearing impairment), and age.

vi Because school-year programs were evaluated separately based on the version of the curriculum used, baseline scores are reported separately. However, since baseline scores indicate children's skill levels _**before**_ they were exposed to Jumpstart programming, any differences in baseline scores seen across program types are not a result of the program type; rather, they provide context for where children were starting and how much room for growth they had. The _JSSC_ outcomes for children participating in school-year programming can be found in the report _Major Findings for Children Participating in Traditional Jumpstart Programming_.

vii The ELI is a composite score obtained by converting the sum of the standard scores on the subtests to a standard score; it is not an average of the standard scores on the subtests.

viii To report home language on the child consent form, families were asked to choose the language most spoken in the home.