

**JUMPSTART 2013-2014**

**AMERICORPS NATIONAL DIRECT PROGRAM EVALUATION**

**EFFECTS ON PRESCHOOL-AGE CHILDREN'S SCHOOL READINESS SKILLS  
IN PROGRAMS SUPPORTED BY THE CORPORATION FOR NATIONAL AND  
COMMUNITY SERVICE/AMERICORPS' NATIONAL DIRECT GRANT**

**PREPARED BY SHELBY H. MILLER AND PETER A. ABRAMS**

**NOVEMBER 2015**

---

## **INTRODUCTION**

---

### **JUMPSTART**

Jumpstart is a supplemental educational program for preschool-age children from low-income communities who are attending local early education and child care programs including public school pre-kindergarten, Head Start, and other centers. Jumpstart's mission is to "work toward the day that every child enters school prepared to succeed." It realizes this mission by engaging young children in purposeful group learning activities with trained adults (in this case primarily young adult Corps members from local colleges, universities, and other local partners) who use Jumpstart's curriculum focused on developing language and literacy skills, and social-emotional competencies. The skills that the Jumpstart curriculum emphasizes have been shown to correlate strongly with early school success and achievement.

### **JUMPSTART SESSIONS**

Jumpstart's learning activities occur in two-hour sessions scheduled twice weekly during the school year (approximately 20 weeks in duration) in the regular preschool or child care program day. Jumpstart Corps members work with teachers to serve every child in the classroom during each session. Every week the Corps members also spend up to six additional hours in the classrooms assisting teachers or working with children, and two to five hours engaged in team planning meetings and other community service activities.

### **HIGH IMPACT PARTNERING**

High Impact Partnering is a consulting firm dedicated to strengthening non-profit program development, evaluation, and communication strategies in order to increase organizational and programmatic impacts. Its professionals work with private foundations, governmental entities, and health, education, and other human service nonprofits to create and expand innovative research-based initiatives, design program and policy development strategies, develop and implement monitoring and evaluation systems, and improve internal and external communication. The firm's work focuses heavily on issues related to early childhood and adolescent development, and the building of public service systems. Shelby H. Miller, High Impact Partnering's Co-Founder and Principal, has been providing consultation to Jumpstart on program evaluation for more than a decade.

High Impact Partnering conducted an independent evaluation of the Jumpstart programs supported by the Corporation for National and Community Service/AmeriCorps' National Direct grant in the 2013-2014 school year. Jumpstart provided High Impact Partnering with a datafile and codebook, and High Impact Partnering's researchers analyzed the data and drafted this detailed report. High Impact Partnering was not involved in evaluation's design, sample selection or data collection activities.

## REPORT OVERVIEW

This report presents findings regarding the demographic characteristics of the Jumpstart participant and comparison group children, and the effects related to language, literacy, initiative, and social relations associated with participation in the Jumpstart program at the National Direct program sites supported by the AmeriCorps grant.

Jumpstart's university and other community partners for the National Direct program sites during the 2013-2014 school year were: American University, Central Connecticut State University, DePaul University, Dominican University, Emory University, Georgia Institute of Technology, Kean University, Merrimack Valley Community Corps, Montclair State University, New York University, Northwestern University, Pace University, Roosevelt University, Rutgers University-Camden, Rutgers University-Newark, Seattle University, Southern Connecticut State University, Suffolk University, Temple University, Texas Tech University, Trinity Washington University, University of California-Los Angeles, University of Connecticut, University of Pittsburgh, University of Rhode Island, University of Washington, Wheelock College, and Whittier College.

The results of the evaluation are presented in this report in relation to the following three questions:

- 1. What were the demographic characteristics of the evaluation sample of Jumpstart participant and comparison group children in the programs that were supported by the AmeriCorps' National Direct grant in the 2013-2014 school year?**
- 2. Did the Jumpstart participants in the programs supported by the AmeriCorps' National Direct grant in the 2013-2014 school year demonstrate greater gains than the comparison children over the program year on a measure of language, literacy, initiative, and social relations skill development, the *Jumpstart School Success Checklist (JSSC)*?**
- 3. Did the Jumpstart participants in the programs supported by the AmeriCorps' National Direct grant in the 2013-2014 school year demonstrate greater gains than the comparison children over the program year on a direct measure of language and literacy skill development, the *Test of Preschool Early Literacy (TOPEL)*?**

---

## SUMMARY OF MAJOR FINDINGS

---

The results from the 2013-2014 evaluation of the Jumpstart National Direct program sites indicate that:

- **Jumpstart provided services to 4,017 preschool-age children at the National Direct program sites.**
- **Ninety-six percent of the 2,301 Jumpstart participants in the National Direct program evaluation sample made gains in language and literacy skills during the program year in contrast with 84% of the 629 comparison group members.**
- **On average, 58% of the 2,301 Jumpstart participants in the National Direct program evaluation sample demonstrated substantial gains of one developmental level (1.0) or more on the *Jumpstart School Success Checklist* in contrast with 31% of the 629 comparison group members.**
- **The Jumpstart participant group in the National Direct program evaluation sample demonstrated an average point gain of 1.13 (indicating slightly more than one developmental level (1.00), a substantial and meaningful increase) in contrast with the comparison group's average point gain of .66. The difference between the two groups' average point gains on the total *JSSC* was statistically significant.**
- **Seventy-eight percent of the Jumpstart children assessed with the *Test of Preschool Early Literacy* (106) demonstrated gains on its overall Early Literacy Index while 60% of the comparison group (48) did so.**

---

## THE EVALUATION SAMPLE

---

During the 2013-2014 school year, Jumpstart provided services to 4,017 children enrolled at the start of the year in the program partner classrooms served by the National Direct grant. These 4,017 children represent 35.3% of the 11,372 children served by Jumpstart across the United States in the 2013-2014 school year. Of these 4,017 children, 2,301 children were included in the evaluation sample. To be included in the evaluation sample, the children had to meet the following criteria: be between 36 and 59 months old at the start of the school year, have parental permission for the evaluation activities, have completed the Jumpstart program (enrolled for 120 days or more in Jumpstart), have *Jumpstart School Success Checklist* assessments for both the fall and spring, and have fall assessment scores that were not extremely high (average score above 4.0 on a 1-5 scale). The evaluation team trimmed the datafile to include only the 2,301 children (the participant group) that met these criteria. Most children were eliminated from the sample because they did not have both fall and spring *Jumpstart School Success Checklist* data.

At the beginning of the 2013-2014 school year, the Jumpstart national staff asked the site managers and program directors the National Direct program sites to recruit children for a comparison group from other early childhood education and child care centers in their communities or nearby communities that:

- Served sizeable proportions of low-income families
- Enrolled children who were demographically comparable (e.g., age, gender, race/ethnicity, and home language) to the children participating in Jumpstart
- Had classrooms in which children did not receive supplemental early literacy interventions such as volunteer reading or tutoring
- Had administrators and teachers who were willing to participate in Jumpstart’s assessment process using the *Jumpstart School Success Checklist* and in several sites also the *Test of Preschool Early Literacy* in the fall and spring of the school year.

Seven hundred eighty-two children were recruited for the comparison group at the National Direct program sites. The High Impact Partnering evaluation team checked the datafile to be sure that the comparison and participant group data were trimmed the same way (children were between 36 and 59 months old at the start of the school year, had parental permission for the evaluation activities, had *JSSC* assessments for both the fall and spring, and had fall assessment scores that were not extremely high (average score above 4.0 on a 1-5 scale)). These checks resulted in the elimination of 153 children from the comparison group.

As part of an expanded pilot project, the *Test of Preschool Early Literacy* was administered to a select number of Jumpstart program sites in the United States in the 2013-2014 school year. *TOPEL* data were available for 106 participants and 17 comparison group children at the National Direct sites. Additional data on another 31 comparison group children from a non-National Direct site were added to the evaluation datafile to allow for statistical analysis.

**The final evaluation sample was comprised of 2,301 program participant and 629 comparison group children.**

---

## CHILDREN’S DEMOGRAPHIC INFORMATION

---

Demographic information on the Jumpstart 2,301 participant and 629 comparison group children in the evaluation sample served at the National Direct program sites is displayed in Table 1. As the table shows, the two groups were very similar in age, home language, gender, and race<sup>1</sup>. The lack of statistically significant differences between the two groups’ demographics helped to eliminate these variables as possible explanations for variations in the program effects.

Table 1. *Demographic Information for Jumpstart Participant and Comparison Groups in the Evaluation Sample*

---

<sup>1</sup> Analyses (e.g., Chi-square tests, analyses of variance) were computed to determine if differences between the groups were statistically significant. If the differences were statistically significant (i.e., below the .05 level), the values (size of the difference) and the level of significance are displayed. If not, they are noted as “n.s.” for not significant.

Demographic Variables	Participant Group	Comparison Group	Sign.
<b>Average Age (in months) (at the start of the program year)</b>	48.82	48.50	n.s.
<b>Primary Home Language</b>	78.5% English 13.3% Spanish 5.9% Chinese 2.3% Other	80.5% English 12.9% Spanish 4.3% Chinese 2.3% Other	n.s.
<b>Gender</b>	52.4% Male 47.6% Female	51.5% Male 48.5% Female	n.s.
<b>Race</b>	40.6% Black 30.8% Latino/a-Hispanic 10.4% White 9.7% Asian 8.5% Other	43.2% Black 31.8% Latino/a-Hispanic 9.7% White 6.0% Asian 9.3% Other	n.s.

---

## CHILD OUTCOMES

---

### *Jumpstart School Success Checklist: Results*

The *Jumpstart School Success Checklist* used in this evaluation is Jumpstart’s adaptation of the HighScope Educational Research Foundation’s (2003) *Preschool Child Observation Record, Second Edition (COR)* (Ypsilanti, MI: HighScope)<sup>2</sup>. The *JSSC* includes fifteen items from the *COR* that are directly related to Jumpstart’s emphasis on early literacy skills. These items focus on language and literacy skills, and social-emotional competencies that have a language component (e.g., relating to adults through conversation, and making choices and plans by verbally expressing them). The *JSSC* includes all eight items from the *COR*’s Language and Literacy category, all four items from its Social Relations category, and three of the four items from its Initiative category. Jumpstart does not use the fourth item from the Initiative category (“Taking care of personal needs”) as this marker of development is not applicable to the Jumpstart program.

---

<sup>2</sup> The *Child Observation Record (COR)* is a 32-item measure assessing categories of children’s skills: language and literacy; initiative; social relations, creative representation, movement, and music; and mathematics and science. Each item is comprised of five possible statements and accompanying ratings describing the highest level of behavior characteristic for the skill being assessed. The reliability of the *COR* is high (Cronbach’s alphas of .91 and above in various studies). The measure’s external validity is confirmed by modest correlations identified between scores on the *COR* and those on other measures such as the *Cognitive Skills Assessment Battery* (<http://www.highscope.org>).

The *JSSC* data collection process involves teachers rating participant and comparison group children on the measure in the fall before they start (or would start, if in the comparison group) the Jumpstart program and in the spring after they complete (or would complete, if in the comparison group) the program. The *JSSC* has 15 items on which each child is rated based on his or her demonstrated level of ability for that skill (range from 1-5). For each number 1-5 on the *JSSC*, a child must have mastered a specific skill in order to receive that score. The skills are arranged developmentally on the *JSSC* from easiest to hardest. As a result, an increase of one point on an item is considered a change of one developmental level for that skill.

In order to understand the dimensions of change over the program year for the Jumpstart participant and comparison groups, average item scores and average fall-to-spring point gains on the total *JSSC* were calculated. As illustrated in Table 2, the Jumpstart participant group began the program year with an average fall item score that was significantly lower than that for the comparison group (2.42 versus 2.80), and concluded the program year with an average spring item score that was significantly higher than that for the comparison group (3.55 versus 3.46).

Table 2. *Average Item Scores and Point Gains on the Total JSSC*

	Average Item Scores* (Total Scale)		Average Point Gains
	Fall 2013	Spring 2014	
<b>Participant Group</b>	2.42	3.55	1.13
<b>Comparison Group</b>	2.80	3.46	.66
<b>Anovas</b>	F=97.67/df=1/2928 Sign.=.000	F=4.39/df=1/2928 Sign.=.036	F=169.71/df=1/2928 Sign.=.000

• Note: Scores are on a 1-5 scale.

**The Jumpstart participant group demonstrated an average point gain of 1.13 (indicating slightly more than one developmental level (1.00), a substantial and meaningful increase) on the total *JSSC* in contrast with the comparison group’s average point gain of .66. The difference between the two groups’ average point gains on the total *JSSC* is statistically significant. This finding indicates that the participant group is making greater gains over the year in language, literacy, initiative, and social relations skills than the comparison group. While the participant groups starts behind the comparison group in the fall, it exceeds the comparison group in the spring on average item scores on the total *JSSC*.**

The evaluators explored the meaning of the size of the Jumpstart program effect by calculating Cohen’s *d* on the two group’s gains on the *JSSC* Total Scale. The Cohen’s *d* statistic provides a quantitative measure of the strength of the difference observed. Understanding the effect size facilitates the interpretation of the substantive significance (as contrasted with the statistical significance) of a research effect. The Cohen’s *d* of .46 is considered to be close to a medium size effect (.50) (1/2 of a standard deviation).

Table 3 that follows presents the average gains for each of the 15 *JSSC* items for both the participant and comparison groups. While both groups made gains on all of the items, the gains of the participant group were consistently higher.

Table 3: Average Item Gains on the JSSC

JSSC Items	Participant Group Average Gains	Comparison Group Average Gains
Item 1: Listening to and understanding speech	1.05	.71
Item 2: Using vocabulary	.99	.59
Item 3: Using complex patterns of speech	.97	.62
Item 4: Showing awareness of sounds in words	1.14	.76
Item 5: Demonstrating knowledge about books	.95	.50
Item 6: Using letter names and sounds	1.28	.82
Item 7: Reading	.96	.65
Item 8: Writing	1.10	.87
Item 9: Making choices and plans	.86	.59
Item 10: Solving problems with materials	.95	.64
Item 11: Initiating play	.94	.53
Item 12: Resolving interpersonal conflict	.91	.66
Item 13: Understanding and expressing feelings	1.09	.77
Item 14: Relating to adults	1.00	.63
Item 15: Relating to other children	.95	.65

The next table, Table 4, displays the percentages of the participant and comparison groups who demonstrated any gains and who showed gains of one developmental level (i.e., 1-point) or more. Ninety-six percent of the children participating in Jumpstart demonstrated gains from fall to spring on the total scale of the JSSC in contrast with 84% of those in the comparison group. Additionally, 58% of the participants had gains of one developmental level or more on the JSSC while 31% of the comparison group did. These encouraging findings about the gains over the program year demonstrate that Jumpstart continues to have a positive effect on a vast majority of children.

Table 4. Percentage of Participant and Comparison Groups with Any Gains and Large Gains on the JSSC

	Percentage of children making any gains on the JSSC (Total Scale)	Percentage of children making gains of one developmental level or more on the JSSC (Total Scale)
Participant Group	96.3%	57.8%
Comparison Group	84.4%	30.5%

### ***Test of Preschool Early Literacy: Results***

The second measure used in the Jumpstart National Direct program evaluation, the *Test of Preschool Early Literacy*, is a standardized, norm-referenced measure of early language and literacy skills for children age 3-5 years. It is one of the most widely used instruments for children of this age in intervention research. The *TOPEL* has three subtests that align directly with Jumpstart's three target domains and skills: Phonological Awareness (Jumpstart domain: phonological awareness), Definitional Vocabulary (Jumpstart domain: oral language), and Print Knowledge (Jumpstart domain: books and print knowledge).

During the 2013-2014 program year, *TOPEL* assessments were completed in both the fall and spring on 106 participant and 17 comparison group children at the National Direct Jumpstart sites. As noted previously, additional *TOPEL* data on another 31 comparison group children from another similar Jumpstart program site were used in the analyses for this evaluation.

Raw scores for each of the three *TOPEL* subtests were computed based on each child's performance on specific test items. Each child's raw scores and age then were compared to the national sample of *TOPEL* scores to determine standard scores and percentile ranks for each subtest. The standard score for each subtest has an average of 100. A child with a standard score of 100 is average and performed as well or better than 50% of his or her peers (i.e. children in the national *TOPEL* sample) and performed worse than the other 50% of his or her peers.

An overall Early Literacy Index (ELI) also was calculated from the sum of the three standard scores. This Early Literacy Index provides an overall standard score for all three subtests that can be used to describe a child's early literacy skills as measured by the *TOPEL*. ELI scores range from 0-200, with an ELI of 100 indicating average early literacy skills for a child's age group.

**As shown in Table 5, the Jumpstart participant group evidenced mean gains over the school year on all subtests of the *TOPEL*: Print Knowledge, Definitional Vocabulary, and Phonological Awareness, as well as on the Early Literacy Index, that far exceeded those of the comparison group.**

*Table 5. Mean Gains on the TOPEL Standard Scores from Fall to Spring*

<b>Subtests and Composite Index</b>	<b>Participant Group Mean Gains – Fall to Spring <i>TOPEL</i> Standard Scores</b>	<b>Comparison Group Mean Gains – Fall to Spring <i>TOPEL</i> Standard Scores</b>
<b>Print Knowledge</b>	4.13	.33
<b>Definitional Vocabulary</b>	10.39	6.02
<b>Phonological Awareness</b>	8.86	2.31
<b>Early Literacy Index</b>	9.79	3.71

In addition, Table 6 illustrates the percentages of the Jumpstart participant and comparison groups that made gains on the *TOPEL* individual subtests and the Early Literacy Index. Seventy-eight percent of Jumpstart participant group and 60% of the comparison group demonstrated gains from fall to spring on the *TOPEL* Early Literacy Index—the overall measure of children’s early literacy skills.

The evaluation team also investigated the size of the Jumpstart program effects by calculating Cohen’s *d* on the two group’s gains on the *TOPEL* Early Literacy Index. The Cohen’s *d* of .485 is considered to be close to a medium size effect (.50).

Table 6. Percentage of Jumpstart Children Making Gains on the *TOPEL* subtests and Early Literacy Index in 2013-2014

Subtests and Composite Index	Participant Group Percentage Making Gains (Standard Scores)	Comparison Group Percentage Making Gains (Standard Scores)
Print Knowledge	51%	46%
Definitional Vocabulary	81%	69%
Phonological Awareness	69%	56%
Early Literacy Index	78%	60%

To further investigate the extent of the two groups’ gains on the *TOPEL* over the school year, the percentages of children who achieved scores on the subtests and ELI below, within, and above the target developmental range (standard score of 90-110) by the end of the Jumpstart program were examined. As shown in Table 7, with the exception of the Print Knowledge subtest, greater proportions of the Jumpstart participant group than the comparison group ended the year within or above the target developmental range on the *TOPEL* subtests and Early Literacy Index.

Table 7. Percentage of Jumpstart Participant and Comparison Groups Below, Within or Above the Development Range on the *TOPEL* Subtests and Early Literacy Index at End of Program Year 2013-2014

Subtests and Composite Index	Percentage of Children Below Developmental Range (Standard Scores)		Percentage of Children Within Developmental Range (Standard Scores)		Percentage of Children Above Developmental Range (Standard Scores)	
	Participant	Comparison	Participant	Comparison	Participant	Comparison
Print Knowledge	29.6%	30.0%	35.8%	38.0%	34.6%	32.0%
Definitional Vocabulary	30.9%	22.0%	44.4%	52.0%	24.7%	26.0%
Phonological Awareness	54.3%	44.0%	34.6%	48.0%	11.1%	8.0%
Early Literacy Index	45.7%	36.0%	37.0%	54.0%	17.3%	10.0%

## **EXPLANATIONS FOR VARIANCES IN DEVELOPMENTAL GAINS**

The evaluators used multiple regression analyses with stepwise methods to understand the relative contribution of the child's participation in Jumpstart, skill level at the start of the program, age, gender, race/ethnicity, and home language to his or her developmental advancement as indicated by the percentage gains on the *JSSC* total scale and increases in the *TOPEL* Early Literacy Index score over the school year.

As shown in Table 8, these analyses indicated that the child's skill level at the start of the year was the strongest predictor of percentage gains for the *JSSC* total scale and *TOPEL* measure subtests and composite index. This is often the case in developmental research with young children. Child's age, gender, race, and home language explained significant proportions of the additional variance (beyond that explained by other variables explaining greater proportions of variance) in the percentage gains on the *JSSC* total scale. Child's age accounted for a significant portion of the additional variance on the *TOPEL Definitional Vocabulary* subtest; gender and program status explained significant amounts of additional variance on the *TOPEL Phonological Awareness* subtest; and program status explained a significant portion of the additional variance on the *TOPEL Early Literacy Index*.

Table 8. Amounts of Variance on the JSSC and TOPEL Explained by Demographic Factors and Program Status

<b>Child Outcomes</b>	<b>Variables Explaining Significant Amounts of Variance in the Outcome (Child's Starting Score, Age, Gender, Race, and Program Status Were Investigated)</b>	<b>Amount of Variance Explained (Entered stepwise)</b>
<b>JSSC Total Scale Percentage Gain</b>	Total Scale Score at Start of Program (low score – more change)  Age at Start of Program Year Gender (Female) Race (White) Race (Other) Language (Other)	R-Square Change=.218 (Sign.=.000)  Additional Variance Explained When Variable Is Added  .046 (Sign.=.000) .005 (Sign.=.000) .001 (Sign.=.032) .002 (Sign.=.004) .001 (Sign.=.011)
<b>TOPEL Print Knowledge Gains on Standard Score</b>	Standard Score at Start of Program (low score - more change)	R-Square=.169 (Sign.=.000)
<b>TOPEL Definitional Vocabulary Gains on Standard Score</b>	Standard Score at Start of Program (low score - more change)  Age at Start of Program Year	R-Square=.191 (Sign.=.000)  Additional Variance Explained When Variable Is Added .021 (.001)
<b>TOPEL Phonological Awareness Gains on Standard Score</b>	Standard Score at Start of Program (low score - more change)  Gender (Female) Gender (Female) and Program Status (in Jumpstart)	R-Square=.191 (Sign.=.000)  Additional Variance Explained When Variables Are Added .038 (.016) .032 (.023)
<b>TOPEL Early Literacy Index Gains on Standard Score</b>	Standard Score at Start of Program (low score - more change)  Program Status (in Jumpstart)	R-Square=.105 (Sign.=.000)  Additional Variance Explained When Variable Is Added .149 (.013)

## CONCLUDING COMMENTS

The 2013-2014 evaluation of Jumpstart's supplemental early childhood educational intervention at program sites supported by AmeriCorps' National Direct grant confirms Jumpstart's effectiveness in increasing the school readiness skills of preschool-age children from low-income communities. The Jumpstart participants made significantly greater gains than their comparison counterparts on two instruments: one that assessed language, literacy, initiative, and social relations skills; and the other that measured phonological awareness, definitional vocabulary, and print knowledge. The use of the two instruments provides more robust assurance about the program's effects. When added to existing pre-kindergarten, Head Start, and child care center programs, Jumpstart can help increase children's specific language and social skills. Children who have less well developed skills at the start of the school year benefit the most from Jumpstart participation.

The researchers recommend that Jumpstart target the program as effectively as possible to preschool age children who have less well developed skills as indicated by lower fall scores on the *JSSC*. This could be accomplished by limiting participation to classrooms with three-year-olds and younger four-year-olds. The researchers also suggest that the evaluation be improved by matching participant and comparison children's starting scores even more closely and using the *TOPEL* with all children.

---

## APPENDIX

### *JUMPSTART SCHOOL SUCCESS CHECKLIST*

#### **1. Listening to and understanding speech**

1. Child responds with actions or words to a suggestion, request, or question.
2. When listening to a story, rhyme, or narrative, child anticipates and fills in a word or phrase.
3. When listening to a story, rhyme, or narrative, child comments on or asks a question about it.
4. Child contributes to an ongoing conversation.
5. Child sustains a dialogue by taking three or more conversational turns.

#### **2. Using vocabulary**

1. Child talks about people or objects close at hand.
2. Child talks about absent people or objects.
3. Child uses vocabulary related to a particular subject.
4. Child uses two or more words to describe something, e.g. "That's a big, furry dog."
5. Child asks about the meaning of a word.

#### **3. Using complex patterns of speech**

1. Child uses words and phrases.
2. Child uses a sentence of four or more words.
3. Child uses two or more simple sentences in a row.
4. Child uses a compound subject or object in a sentence, e.g. "I'm going to make a car and a garage for it."
5. Child uses a clause that starts with "when," "if," "because," or "since" in a sentence.

#### **4. Showing awareness of sounds in words**

1. During play, child makes the sound of an animal or vehicle, or some other environmental sound.
2. Child joins in saying or repeating a rhyme or a series of words that start with the same sound.
3. Child rhymes one word with another or makes up a phrase or sentence that includes a rhyme.
4. Child says that two words begin with the same sound.

5. Child creates a pair or series of words that start with the same sound.

#### **5. Demonstrating knowledge about books**

1. Child shows interest when a book is read aloud.
2. Child holds a book right-side up, turns the pages, and looks at them.
3. Child asks another person to read a book to him or her.
4. Looking at the pictures in a book, child tells the story or makes up a story related to the pictures.
5. Child points to the words in a book or follows a line of text while telling or reading the story.

#### **6. Using letter names and sounds**

1. Child says or sings some letters.
2. Child names three or more alphabet letters he or she is holding, looking at, typing, or making.
3. Child makes the sound of a letter in a word he or she is looking at, writing, or typing.
4. Child names 10 or more letters over time.
5. Child says a word and identifies the beginning letter or letter sound.

#### **7. Reading**

1. Child uses the same word to name more than one object.
2. Child says what a picture or symbol represents.
3. Child calls attention to print.
4. Child recognizes a written word.
5. Child reads aloud a simple phrase or sentence.

#### **8. Writing**

1. Child writes using pictures, squiggles, or letter-like forms.
2. Child uses clay, wire, or sticks to make a recognizable letter.
3. Child writes two or more recognizable letters.
4. Child writes a string of letters and reads them or asks to have them read.
5. Child writes a phrase or sentence of two or more words.

### **9. Making choices and plans**

1. Child indicates a choice by pointing or some other action.
2. Child expresses a choice in one or two words.
3. Child expresses a choice with a short sentence, e.g., "I'm gonna play with the truck."
4. Child makes a plan with one or two details, e.g. "I'm going to work in the block area with the fire truck."
5. Child makes a plan with three or more details e.g. "I'm going to paint my mom a picture of our new truck and I'm gonna use two brushes and the green paint."

### **10. Solving problems with materials**

1. Child expresses frustration when encountering a problem with materials.
2. Child identifies a problem with materials and asks for help.
3. Child tries one way to solve a problem with materials.
4. Child tries two ways to solve a problem with materials.
5. Child tries three or more ways to solve a problem with materials.

### **11. Initiating play**

1. Child engages in exploratory play, e.g. fills and empties a bucket with sand.
2. Child makes something with materials, e.g. rolls playdough into a long string and then connects the ends.
3. Child engages in pretend play.
4. During play with other children, child adds an idea that changes the play in some way.
5. Child joins with other children in playing a game with rules.

### **12. Resolving interpersonal conflict**

1. In a conflict with another child, child responds with yelling or physical action.
2. Child requests adult help in resolving a conflict with another child.
3. Child identifies the problem in a conflict with another child.
4. With adult help, child offers a solution to a conflict.
5. Child negotiates the resolution of a conflict with another child.

### **13. Understanding and expressing feelings**

1. Child expresses an emotion.
2. Child comforts another child e.g. patting, hugging, giving something to an upset child.
3. Child talks about an emotion e.g. "I'm mad – don't take my truck!"
4. Child represents an emotion through pretend play or art.
5. Child identifies an emotion and gives a reason for it e.g., "Sari is sad today because she misses her Mommy."

### **14. Relating to adults**

1. Child participates in a conversation initiated by a familiar adult.
2. Child participates in a conversation initiated by an unfamiliar adult.
3. Child initiates an interaction with an adult.
4. Child sustains an interaction with an adult.
5. Child involves an adult in an activity and sustains the involvement.

### **15. Relating to other children**

1. Child responds when another child initiates an interaction.
2. Child initiates an interaction with another child (verbally or nonverbally).
3. Child sustains an interaction with another child e.g. conversation of 5 or more exchanges or extended non-verbal interaction.
4. Child invites another child to play.
5. Child shows loyalty to another child e.g. plays repeatedly with the same child, consistently saves a seat for the same child.



