



# National Evaluation Results 2005-2006: Executive Summary

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## The Jumpstart Program

Jumpstart is an early childhood intervention for preschool-age children (three- and four-year-olds) from low-income families who are attending community-based, early education and child care programs, including Head Start programs. Its mission is to “work toward the day that every child enters school prepared to succeed.” Jumpstart realizes this mission by engaging young children in one-to-one interactions and group activities several times a week with trained adults (Corps members) who use a specific curriculum focused on language, literacy, initiative, and social skill acquisition. The skills that the curriculum emphasizes have been shown to correlate strongly with early school success and achievement.

## Jumpstart Sessions

Jumpstart activities occur in two-hour sessions scheduled twice a week during the school year within the regular preschool or child care program day or afterwards. Jumpstart Corps members also spend six hours a week in the regular classroom assisting teachers, for up to 240 hours of service to children during the year.

Jumpstart sessions are currently implemented through two different types of classroom models. Traditionally, a Jumpstart session occurs in a classroom set-aside exclusively for Jumpstart Corps members and their partner children. In other centers, however, Jumpstart runs an alternative session delivery model in which Jumpstart sessions occur within the regular preschool classroom. Jumpstart operates the in-classroom model (I-Mod) for three primary reasons: 1) space restrictions in program partner centers; 2) scheduling limitations at the center; and 3) center philosophy and desire for Jumpstart to serve as many children as possible (i.e., not targeting services).

During the in-classroom Jumpstart sessions, the same space is shared between Corps members working with Jumpstart participants (partner children) and classroom teachers and/or paraprofessionals working with the remaining children. In many cases, these non-Jumpstart children join Corps members and Jumpstart participants for Jumpstart circle time and/or choice time activities. The in-classroom model allows other children also to be exposed to Jumpstart’s curriculum and active learning approach, which stresses adult-child interactions.

## Evaluation Procedure

Jumpstart’s evaluation includes pre- and post-intervention contrasts for participants and comparison group children using observational data. The children’s classroom teachers in early education and child care centers provide ratings of children’s skills levels at the beginning and end of the Jumpstart program period. Jumpstart modified the High/Scope Educational Research Foundation’s instrument, the *Preschool Child Observation Record*, to create a shorter version for the classroom teachers’ assessments.

Jumpstart’s version, the *School Success Checklist*, is comprised of 15 items assessing language, literacy, initiative, and social relations skills. These 15 items are subdivided into

two subscales (language-literacy and initiative-social relations). The subscale analysis in these school readiness domains provides a more rigorous approach to looking for evidence of the program's effect than looking at changes only in individual skill areas.

At the beginning of the year, children participating in Jumpstart and a comparison group of their peers from the same classrooms are matched by age and gender. Because Jumpstart sites operated I-Mod sessions in 2005-06 in many program partner centers across the country, 42 percent of these comparison group children were actually present and involved in Jumpstart sessions.

## Evaluation Results<sup>1</sup>

The results below describe the changes in children's development over the course of the program year. The summary of findings includes a discussion of the fall and spring teacher ratings and the gains made by Jumpstart children compared to their peers, and the percentage gains on the overall scale and two subscales.

The fall 2005 checklist results indicated that participants and non-participants were very similar in age. However, the participant group had significantly more males and English-only speaking children than the comparison group. Teacher's ratings on the checklist items in the fall showed that Jumpstart children's scores in specific skill areas were very similar to those for the comparison group. For more information on the children included in the evaluation, see Appendix B.

The results from the 2005-2006 Jumpstart program evaluation indicate that:

- Jumpstart provided services to preschool-age children who had less well-developed language, literacy, initiative, and social relations skills as their peers.
- Children who participated in Jumpstart made significantly<sup>2</sup> greater gains in school readiness skills than children who did not participate.
- Over the course of the year Jumpstart children achieved, on average, a 26 percent gain, which was significantly greater than the average gain achieved by their peers not receiving the Jumpstart program.
- These findings suggest that the Jumpstart program is having the desired effect on children's language, literacy, initiative, and social relational skill acquisition.

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<sup>1</sup> This material is adapted from the *2005-06 Evaluation of Jumpstart* report by consultant Shelby Miller, Ph.D.

<sup>2</sup> "Significant" is used in this report to refer to statistical significance ( $p=.05$ ); i.e., the statistical probability that results could not have occurred by chance alone more than 5 times out of 100, and that the effects can be assumed to be associated with Jumpstart program participation. Jumpstart is committed to a high bar of achievement. The standard of  $p=.05$  for statistical significance is a commonly accepted standard in the social science research field. Statistical significance of  $p=.05$  is scientifically accepted, rigorous, and difficult to meet. Significance was determined through statistical analyses conducted by Jumpstart's assessment consultants.

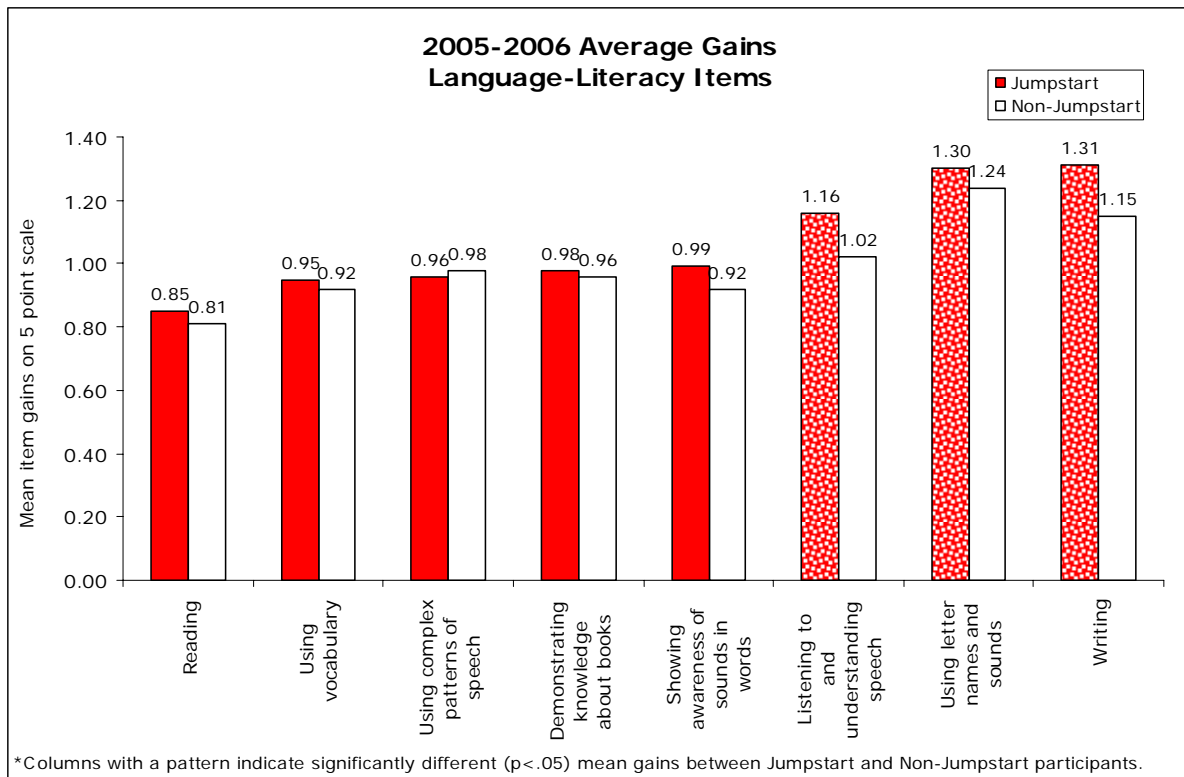
### Fall and Spring Scores on Individual Checklist Items

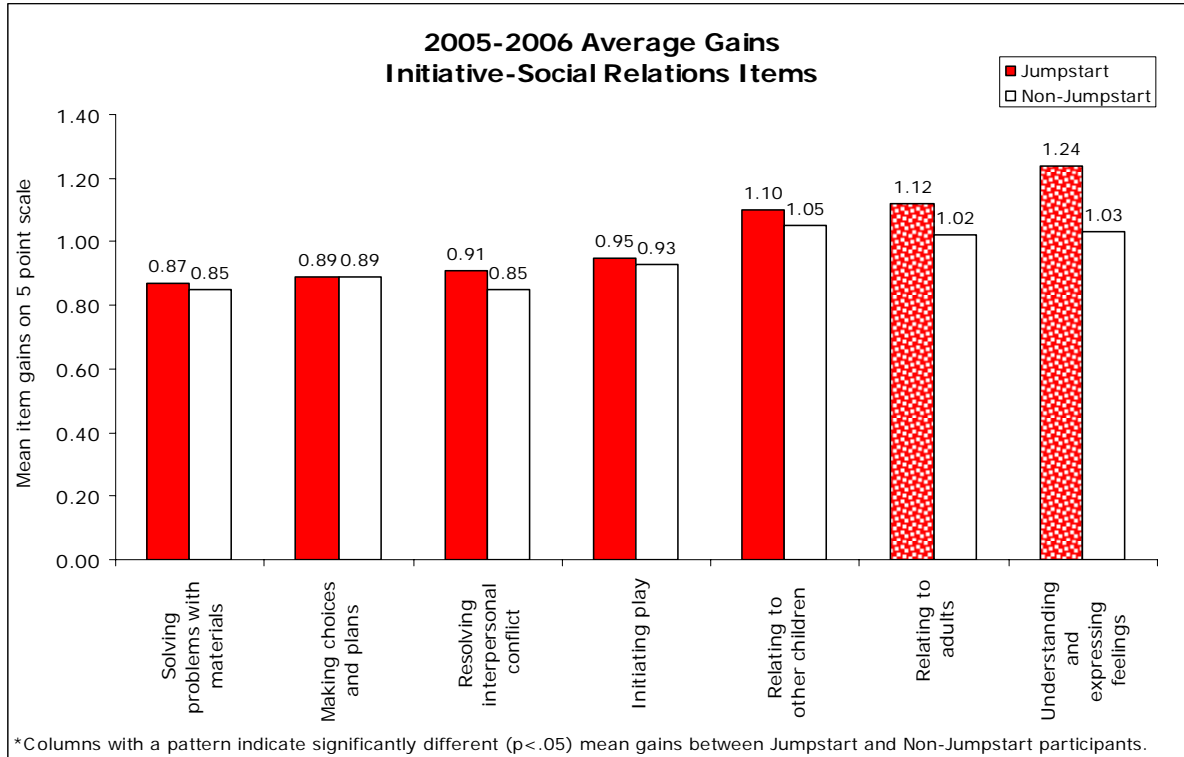
- At the beginning of the year, teachers' ratings were **significantly lower** for Jumpstart children than for non-Jumpstart children **on four of the 15 items of the checklist**. This finding indicates that in 2005-06 the evaluation results were more scientifically reliable because the intervention (or treatment) group and the comparison group had similar skill levels at baseline. Beginning the year with statistically similar groups allows for more meaningful comparisons of child gains by the end of the year.
- At the end of the year, Jumpstart children showed **significantly higher scores on five of the 15 items**.

### Gains on Individual Checklist Items

To evaluate the developmental progress of children over the course of the program year, the amount of change (mean gains) made by both groups of children were compared on each of the 15 checklist items.

- The average gains during the year were greater for Jumpstart children than for non-Jumpstart children on **13 of 15 checklist items**. The gains were **statistically significant on five items**.





### Gains On Subscales

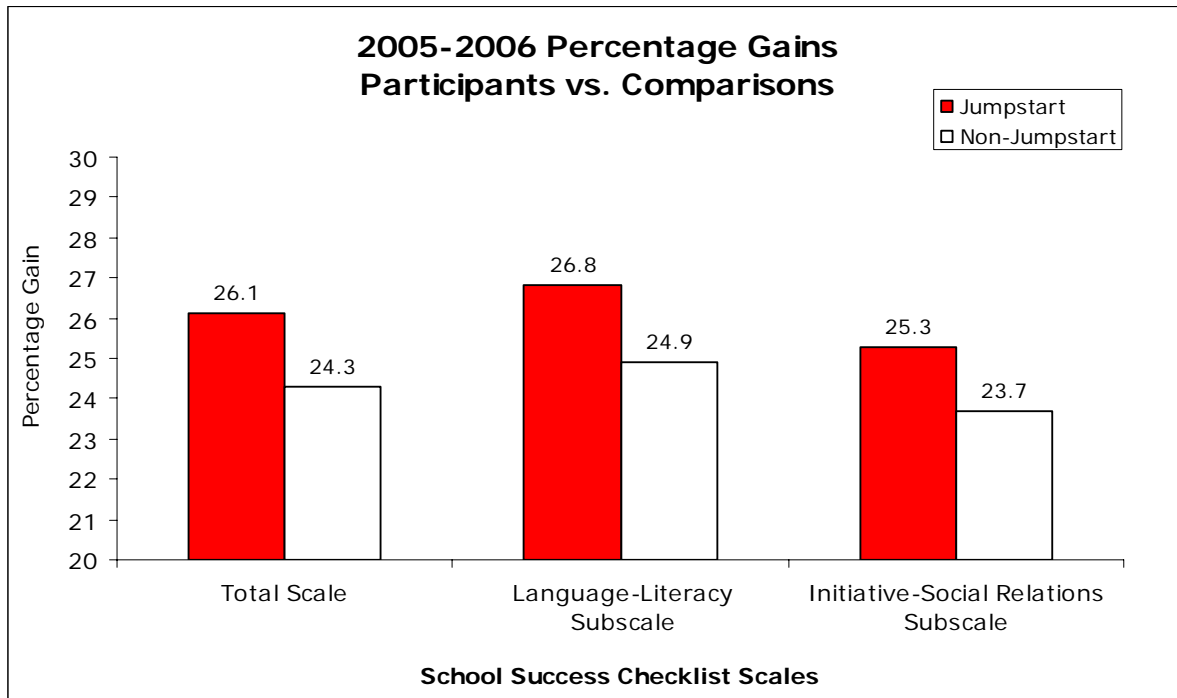
To better understand the areas in which Jumpstart had the greatest impact, the evaluators compared the gains that children made on the two subscales of the *School Success Checklist*: language-literacy, and initiative-social relations skills. Subscales are a stronger measure of progress because they look at a collection of items related to a specific skill area. Examination of subscales provides more information about Jumpstart's impact.

- In the fall, Jumpstart children had average scores on the total scale and both subscales that were slightly lower than those of the comparison children, but not significantly different, indicating the overall equivalence of the two groups at baseline. In the spring, participants' scores on all three scales were higher, but not significantly higher, than the scores of the comparison group children on the total scale and both subscales.
- Over the course of the year, Jumpstart children's **average gains on the total scale and both subscales were significantly greater** than those of the comparison group children.

To understand the dimensions of change for both groups on the total measure and the two subscales, percentage gains also were calculated. The percentage gain assumes that a one point (1.0) gain on the scale between fall and spring is a 25 percent gain because a child at the lowest point on the scale (a rating of 1) can improve by as much as four points (to the highest rating of 5).

As the next graph shows, the participants' percentage gains exceeded those of the non-participants on the total measure and the two subscales. The differences between the two groups' gains were statistically significant on the total scale ( $F=6.40$ ,  $sign.=.011$ ),

language-literacy subscale ( $F=6.82$ ,  $sign.=.009$ ) and the initiative-social relations subscale ( $F=4.38$ ,  $sign.=.036$ ).



Since the in-classroom model (see description on page 1 under Jumpstart sessions) exposed the comparison group to the Jumpstart curriculum, the gains achieved by those children were likely higher than if Jumpstart participants' gains were compared to other children who were not exposed at all to Jumpstart activities. Since almost half of the national comparison group was affected by the in-classroom model, the results from the 2005-06 national evaluation under-estimate the impact of the program on the children who participated.

## APPENDIX A: EVALUATION TOOL & PROCEDURE

### *The Measure*

To create a shorter assessment for the children's classroom teachers to use, Jumpstart modified the High/Scope Educational Research Foundation's *Preschool Child Observation Record (COR)*<sup>3</sup>. Jumpstart's version, the *School Success Checklist*, is comprised of 15 of the 32 items assessing language, literacy, initiative, and social relations skills. The *Checklist* does not require direct observation but instead relies on the teachers' experiences with the children. Jumpstart chose the *COR* because it has been shown to have good test properties for a diverse group of children and to be helpful for engaging early childhood educators in program improvement.

Two subscales for the *Checklist* can be derived based on the developmental skills being assessed: language-literacy (8 items), that includes, for example, the abilities to listen to and understand speech, and identify sounds and letters; and initiative-social relations (7 items), that includes, for example, the abilities to express choices and initiate play, relate to adults and children, and resolve conflicts.

### *The Method*

In the fall, teachers were instructed to complete a *School Success Checklist* on twice as many children as were needed for participation. The classroom teachers used the following guidelines to identify the children they thought would benefit most from participating in the Jumpstart program.

- Child was between 36 and 59 months old at the start of the program year.
- Child had excellent or good attendance at his/her early childhood center.
- Child had limited (but not extremely) language-literacy and initiative-social relational skills.
- Child did not exhibit highly disruptive behavior in the classroom.
- Child was not receiving special education services (or likely to) that year.

Using the provided assessments and demographic information, Jumpstart's evaluation consultants created a roster by eliminating any children who were outside of the desired age range, had extremely high or low ratings or were missing data on a majority of the assessment items. The teachers were instructed to offer the Jumpstart program to every other child listed on the rosters starting with those with lower scores until sufficient numbers were enrolled. Those children who were not offered the program and those children whose parents refused the offer of participation comprise the comparison group.

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<sup>3</sup> High/Scope Educational Research Foundation. (2003). *Preschool Child Observation Record, Second Edition*. Ypsilanti, MI: High/Scope.

The full *Child Observation Record (COR)* is a 32-item measure assessing four categories of children's skills (language and literacy; initiative and social relations; creative representation, movement, and music; and mathematics and science) with five possible statements and accompanying ratings for each item describing the highest level of behavior characteristic for the skill being assessed. The reliability (how well various measurements of something agree with each other) of the *COR* is quite high (total Cronbach's alphas of .91 and above). The measure's external validity was confirmed by modest correlations identified between scores on the *COR* and those on the Cognitive Skills Assessment Battery (<http://www.highscope.org>).

This enrollment process comes close to random assignment, and thus provides a more rigorous method of evaluating the impact of the program because the differences between groups of children at the start of the year can be assumed to not affect the results. Following the teachers' spring assessments, the consultants also eliminated children from the participant group who had attended program activities for fewer than four months and children from both the participant and comparison groups for whom all or the majority of the spring assessment data were missing.

Classroom teachers completed *School Success Checklists* at the beginning and end of the 2005-06 school year in 52 of 59 sites nationwide (see next page).

## APPENDIX B: DETAILS OF THE SAMPLE

- **4,110 children in the evaluation sample**

Jumpstart participants: 1,599 (39%)

Comparison group from the same early care & education classrooms: 2,511 (61%)

- **The sample includes 52 of the 59 sites in the Jumpstart network**

Akron, OH; Atlanta, GA (2 sites); Baltimore, MD; Boston, MA (7 sites); Bridgewater, MA; Brooklyn, NY; Charlottesville, VA; Chicago, IL (3 sites); Claremont, CA; Columbia, SC; Columbia, MO; Dearborn, MI; Eau Claire, WI; Frankfort, KY; Fresno, CA; Fullerton, CA; Geneva, NY; Hammond, LA; Irvine, CA; Kansas City, MO; Kingston, RI; Lexington, KY; Lubbock, TX; Mankato, MN; McLean County, IL; New York, NY (2 sites); Oakland, CA; Philadelphia, PA; Queens, NY; San Francisco, CA (2 sites); Santa Monica, CA; Seattle, WA; St. Louis, MO; Syracuse, NY; Tallahassee, FL; Tempe, AZ; Topeka, KS; Washington, DC (2 sites); Ypsilanti, MI; and Zanesville, OH

Four Jumpstart sites were not included in the national sample because the program did not operate at these sites for at least four months: Baton Rouge at Southern University, California State University-Northridge, Houston Community College, and the University of New Orleans. In addition, Jumpstart Rochester at the University of Rochester did not serve children within the eligible age range; Jumpstart TSU at Texas Southern University did not identify which children were provided program services; and Jumpstart Pittsburgh at University of Pittsburgh did not have any comparison children.

- **Average age of the total sample was 48.8 months (4 years, 1 month)**

**Range:** 36 to 59 months

Jumpstart participants: 48.8 months

Comparison group: 48.8 months

- **Gender: 48% female, 52% were male**

Jumpstart participants: 46% female, 54% male

Comparison group: 50% female, 50% male

- **Language:** Of the total sample, 64% spoke only English, 18% spoke both English and another language (primarily Spanish); 13% spoke Spanish only; 3% Chinese only; and 2% spoke another single language other than English, Spanish or Chinese.

Jumpstart participants: 69% English only, 31% English and another language, or other single language only

Comparison group: 61% English only, 39% English and another language, or other single language only

*\*The group differences by gender and language were statistically significant. The participant group included significantly more males and English-only-speaking children than the non-participant group.*

## APPENDIX C: 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 letterlike 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.

## APPENDIX C: JUMPSTART SCHOOL SUCCESS CHECKLIST

### 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.