

Summary Report of the Effectiveness of the Playtime Talk Intervention at Increasing Peer-Directed  
Social Interaction among Young Children with Pervasive Developmental Disorder

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## Introduction

Autism spectrum disorders (ASD), including autism and pervasive developmental disorder are characterized by skill deficits in the areas of communication, social interaction, and behavior (APA, 2000). Obviously, having delays or deficits in these areas has serious implications for the ability of children with ASD to function effectively within everyday environments (Chandler & Van Laarhoven, 2004). Young children with limited communication and social skills are at increased risk for developing challenging behaviors and as a result, they are at increased risk for placement in restrictive, noninclusive settings and activities (Borthwick-Duffy, 1996; Horner, Carr, Strain, Todd, & Reed, 2002).

Children with autism spectrum disorders often “demonstrate delays, deficits, or atypical characteristics in the frequency, type, and quality of social interactions and social relationships with other individuals” (McConnell, 2002, p. 351). They often are described as using other individuals to meet personal needs with little associated social interaction (e.g., a child takes his sister’s hand and takes her to the kitchen so that she can get him a cookie). They may avoid eye contact and react negatively or indifferently to physical contact and affection and may not follow typical social interaction routines such as taking turns, joint attention, and cooperative play. In fact, many children with ASD prefer to play alone and may actively avoid interacting with others or engage in challenging behavior when peers enter their play or when adults try to engage them in activities with their peers. As a result, children with ASD may have few opportunities to observe and practice appropriate social skills with peers and to develop positive social relationships with peers or siblings (Chandler & Van Laarhoven, 2004). Without intervention, social skill deficits tend to persist into adulthood (Webb, Miller, Pierce, Strawser, & Jones, 2004).

Atypical sensorimotor behaviors and stereotypical behaviors may compound the delays and deficits in peer-directed social interaction (National Research Council, 2001). Atypical sensorimotor behaviors may stem from heightened sensitivities (hypersensitivity) or reduced responsiveness (hyposensitivity) across sensory modalities (Autism Society of America 2004, Characteristics section, para. 6; Ayres & Tickle, 1980). Children who are hyposensitive may increase sensory input or obtain specific forms of sensory stimulation through behaviors such as running, rocking, spinning, and hand flapping or they may “tune-out” entirely and become self-absorbed. Alternatively, children who are hypersensitive may avoid sensory input or specific forms of sensory stimulation. They become overwhelmed with typical levels of sensory stimulation and may engage in avoidance behaviors such as stereotypy, self-injury, withdrawal from social interactions, crying, aggression, and tantrums (Edelson, Goldberg, Edelson, Kerr, & Grandin (1999). Stereotypical behaviors and atypical responses to sensory input often are identified as challenging behaviors because they interfere with learning and with the development of social relationships. Children who display these behaviors as well as poor social skills often are ignored or rejected by peers. Families, teachers, therapists, and other service providers often identify appropriate social behavior and the development of positive social relationships with peers as important goals for children with autism and pervasive developmental disorder.

Several strategies have been developed to address the social/communicative and sensory needs of children with ASD. These include interventions that provide visual supports and/or rehearsal strategies. Visual supports in the form of picture or written schedules may assist the child in understanding what will be happen next or to “rehearse” a skill prior to engagement in an activity (Frost & Bondy, 1994; Hodgdon, 1999; Quill, 1997). Other forms of visual supports

include social stories and videotapes that present visual and auditory examples of appropriate social behaviors. More recently, sensory-based interventions that either increase or decrease sensory input or provide specific forms of sensory input have been used to increase attending skills and to decrease or increase stimulation in order to facilitate learning and interaction.

Playtime Talk is a multicomponent intervention designed to increase peer-directed social interaction skills of children with autism. Playtime Talk combines sensory stimulation, visual supports in the form of picture schedules and video modeling and scripting, and rehearsal with vocal and physical prompting and modeling. A pilot study of Playtime Talk indicated that this multicomponent intervention increased peer-directed social interaction and did so more effectively than an intervention that included visual supports for behavior in the form of books rather than through video modeling and scripting. The primary purpose of the present study was to formally evaluate the effectiveness of the Playtime Talk as a multi-component intervention on the peer-directed social skills of children with social delays and pervasive developmental disorders. A secondary purpose was to determine the effectiveness of the sensory stimulation component of the Playtime Talk intervention on peer-directed social interaction. This study evaluated the effectiveness of the Playtime Talk intervention as it was originally designed for delivery in a classroom setting. No additional components or strategies were imposed during this study.

## Method

### Participants

Four boys, ages 4-7 years of age with a diagnosis within the Pervasive Developmental Disorder spectrum served as target children. Child S was the oldest child at 86 months of age. Child D was 62 months of age, Child C was 59 months of age, and Child J was 55 months of

age. Children were accepted for participation based on the following criteria: vision and hearing within normal limits, English as the child's primary language, at least partial use of spoken language to communicate with others, and the ability to attend to tasks for 3-5 minutes, follow two step directions, use 4-6 word sentences, and follow a picture schedule board. Additional criteria for participation included an interest in playing near or with peers and the ability to make eye contact with peers and adults and to take turns in play with peers given minimal prompts. All children were nominated for participation by their parents.

Two preschool-aged children without disabilities, one boy and one girl, participated as peer playmates during 1/3 of the study sessions (during one of three sessions per week). These children attended the child-care program at Easter Seals and were nominated for participation by their early childhood teacher based on the following criteria: age-appropriate interaction with peers and the ability to follow teacher directions. Each child's parent(s) provided consent for their child's participation and each child expressed a desire to participate in the playgroups.

#### Procedures

The Playtime Talk sessions were provided during hour-long play sessions in a classroom within the Easter Seals building. Sessions occurred three days per week for eight consecutive weeks (with the exception of one week off due to the July 4<sup>th</sup> holiday) beginning in June and ending in August. Sessions were facilitated by a speech and language pathologist and occupational therapist. Two volunteer teaching assistants also participated during the sessions.

Sessions followed the following sequence of activities:

1. Opening welcome circle
2. View videotape
3. structured play activity 1 or obstacle course

4. View videotape
5. Structured play activity 2
6. View videotape
7. Ending circle

*Opening Circle.* During the opening circle, children took off their shoes and socks and sang a hello song to each child. During each child's turn as the focus of the hello song, he or she wore a ball cap that had an eye on the brim. Adults prompted all children to look at and say hello to the child wearing the ball cap. They also prompted the child wearing the ball cap to say hello and to tell the group of children something about himself or herself (e.g., identify a favorite movie or animal). Children then viewed a videotape (described below). At the end of opening circle, children checked their picture schedules to identify the subsequent activity.

*Videotapes* Eight videotapes were developed that depicted typically developing children engaging in appropriate social interactions during play and stating the rules for engaging in those play themes/social interactions (e.g., when I want to ask my friend a question, I look at my friend). These tapes provided a visual model of appropriate behavior and an auditory script of appropriate social/communication skills to use during play. The play themes with friends depicted on the tapes were (1) playing play dough, (2) talking on the phone, (3) playing a game, (4) playing doctor, (5) playing house, (6) playing restaurant, and (7) playing on the playground. The final tape served as an introductory tape that provided an overview of the rules for talking and playing with a friend. This tape was used during the first week of sessions. Each videotape lasted approximately five-minutes. Children viewed one videotape per week. This resulted in nine tape observations per week (3 per session x three sessions per week).

*Structured Play Activities 1 and 2.* The structured play activities consisted of fine motor and sociodramatic play themes that corresponded to the play activities shown on the videotapes. The activities lasted for approximately 15-20 minutes per session. Children were paired together during structured play activities. Play groups consisted of two target children per group on days when the typically developing peers did not participate. When the typically developing peers did participate, playgroups consisted of two target children and one typically developing peer. Group membership varied randomly across sessions. These activities included a combination of child-directed and teacher facilitated teaching strategies. Children were allowed to direct their own play, however, the teachers provided scaffolding to help children play appropriately with activity materials and in some cases, to help children learn how to play the particular activity (e.g., how to serve as the waiter in a restaurant or how to play bingo).

*Obstacle Course.* The obstacle course consisted on a variety of gross motor activities such as climbing, sliding, and jumping. These activities were designed to provide proprioceptive input and sensory stimulation to the children. In addition to the obstacle course, children were able to request specific sensory materials to use throughout the Playtime Talk session. Sensory materials included items such as koosh balls, oral stimulation rings, and weighted vests.

*Ending Circle.* During ending circle, children requested their shoes and socks or identified their particular shoes and socks. They then sang a goodbye song and told each other goodbye.

The teachers and teaching assistants provided vocal and physical prompts for social interaction to the target children and peer playmates throughout the sessions. They also provided praise (e.g., “you got your friend to play with you”) and corrective feedback (e.g., “use your

friend's name so she will know you are talking to her") following successful and attempted initiations and responses.

In addition to the Playtime Talk sessions, each week the parents of the target children received a copy of a videotape that children viewed during the play sessions for that week. Parents were encouraged to watch the videotape with their child at home at least three times per week and to keep a frequency of viewing log.

#### Dependent Variables or Measures

Each hour-long session was videotaped. Data for each target child (i.e., the four children with pervasive developmental disorder), peer playmates, and teachers and teaching assistants were collected from those videotapes. Each session, observers collected three five-minute samples of child and adult behavior during opening circle, structured play activity 1 or obstacle course, and structured play activity 2. Observations began one minute after the start of each activity. The order of coding children alternated across days. For example, on session one the observer coded child 1, 2, 3, and then 4. On session two, the order of child observation was child 2, 3, 4, and then 1 and so on. The following data were collected for target children, peers, and adults (see the observer/coding manual for definitions, examples and nonexamples of behavior and instructions for data collection).

*Child behavior:* Observers recorded the frequency of spontaneous and prompted initiations to peers (this includes initiations to typically developing peers and peers with disabilities) and spontaneous and prompted responses to peers for each target child. Observers also recorded the frequency of initiations and responses of typically developing peers and the three children with pervasive developmental disorders who were not identified as the target child for that observation segment.



*Adult Behavior:* Observers also coded the frequency of prompts to the target child for peer-directed social interaction.

*Interobserver Agreement:* Interobserver agreement was collected by having two observers simultaneously observe and record child and adult behavior during the 5-minute sessions. Agreement was defined as both observers recording the same number of initiations and responses for target children and peer playmates and adult behavior. Agreement was collected for 20% of the total session, distributed evenly across children and phases. Agreement was calculated using the following formula:

$\text{smaller frequency of behavior/larger frequency of behavior} \times 100 = \text{percent of agreement.}$

Agreement across combined behavior categories was 92%. For individual behavior categories, the following interobserver reliability was obtained: target initiations (95%), target responses (88%), peer initiations (97%), peer responses (73%) and adult prompts (93%).

*Parent Satisfaction.* Parents of the target children completed a satisfaction survey at the end of the study indicating their satisfaction with the playgroup sessions and their satisfaction with and perceptions of their child's peer directed social skills.

## Experimental Design

An alternating treatments design was employed to assess the impact of two different conditions on peer-directed social interaction. In this design, two conditions were alternated across sessions. In an alternating treatments design, a difference in the frequency of behavior across the alternating condition indicates the effectiveness of one condition related to the other condition. If the frequency of peer-directed behavior were greater in one condition, then that condition would be identified as more effective than the alternating condition. Alternatively, if

the frequency of behavior were equal across conditions then the conditions would be identified as equal in terms of producing peer-directed behavior.

The daily order of the two alternating conditions was randomly determined with the constraint that a condition was not scheduled to occur for more than two consecutive days. The number of sessions per condition was nearly equal (12 of one condition and 11 of the other).

*Baseline:* During baseline, the target children participated in four to eight 20 minute structured play activities. The teachers and assistants did not prompt peer-directed social interaction during these activities but did provide scaffolding to facilitate toy and activity play.

Following baseline, the Playtime Talk sessions were introduced. These sessions varied in terms of the inclusion or noninclusion of sensory stimulation activities and materials. These two alternating conditions are described below.

*Condition 1: Structured Play Activities 1 and 2.* During this condition, children participated in Structured Play Activity 1 following opening circle. This sociodramatic activity included materials to facilitate “kitchen play” such as plastic food, dishes, pans, and pretend stove, cupboards, and refrigerator. Teachers and teaching assistants provided scaffolding to facilitate sociodramatic play as well as prompts for peer-directed social interaction.

*Condition 2: Sensory Stimulation and Structured Play Activity 2.* During this condition, children participated in the Obstacle Course Activity following opening circle instead of participating in Structured Play Activity 1. Teachers and teaching assistants provided scaffolding to facilitate participation in the obstacle course activities as well as prompts for peer-directed social interaction.

## Results

One of the observation videotapes was damaged resulting in loss of some observation sessions. In addition, some sessions were not audible due to interfering vocalizations by one of more target children and in some sessions, children were not on camera for a sufficient amount of time. As a result, there is variability across target children in the number of sessions observed.

The primary purpose of this study was to evaluate the effectiveness of the Playtime Talk intervention on peer-directed social interaction during a classroom-based playgroup. Table 1 presents the mean frequency of child and adult behavior during baseline and intervention conditions for each target child. Table 1 also presents the mean frequency of adult and child behavior when the four target children's data are combined.

The Playtime Talk intervention was effective at increasing peer-directed social interaction for each target child. None of the children emitted peer-directed initiations or responses during baseline and they did not receive initiations from peers during baseline. The frequency of both spontaneous and prompted peer-directed behavior increased for each target child and for peers during intervention. Spontaneous initiations increased from zero during baseline to a group mean of 1.71 across all play sessions, ranging from a 1.14 - 2.15 initiations across activities. Prompted initiations increased to a group mean of 2.43 across all play sessions, ranging from 1.01 - 3.66 across activities. Spontaneous responses also increased to a group mean of 1.60 across all play sessions, ranging from .84 - 2.57 across activities. Prompted responses increased slightly during intervention with a group mean of .57 across all play sessions.

Peer-directed social interaction occurred most frequently for all children during structured play session 2 (structured play following kitchen or obstacle course). The frequency of adult prompts also was highest in both conditions of structured play session with a mean of 9.35

prompts during play following kitchen and a mean of 8.07 prompts during play following obstacle course. The frequency of peer-directed social interaction and adult prompts was lowest during obstacle course for the target children, peers, and adults. The mean number of adult prompts for social interaction during obstacle course was 1.96, ranging from 1 - 3.10 across target children.

In general, target children engaged in both spontaneous and prompted initiations and responses. However, the frequency of initiations generally was higher than the frequency of responses and the frequency of prompted initiations and responses was greater than the frequency of spontaneous interaction. The frequency of initiations also was greater than the frequency of responding for peers.

The second purpose of this study was to evaluate the impact of the sensory stimulation component of the Playtime Talk intervention on peer-directed social interaction. This impact was evaluated by comparing the frequency of social behavior during structured play 2 following the two alternating structured play 1 conditions, play following the obstacle course activity versus play following the kitchen activity. Figure 1 presents the combined frequency of peer-directed social behavior for the four target children during play following obstacle course and play following kitchen. Figures 2 through 5 present the frequency of spontaneous and prompted initiations and responses for each target child by observation session. Table 1 also presents the mean frequency of peer-directed behavior for the target children, peer behavior, and adult prompts during the two alternating conditions for each target child and for the combined data for the four target children. As seen in these figures and Table 1, there were very few differences between the two alternating conditions. Both conditions produced increases in peer-directed social behavior in comparison to baseline. Prompted and spontaneous initiations increased for

each child ranging from a mean of 1.25 – 3 spontaneous initiations and 2.9 – 4.5 prompted initiations per session during play following obstacle course and a mean range of 1.5 - 2.5 spontaneous initiations and 2.5 – 4.10 prompted initiations during play following the kitchen activity. Prompted and spontaneous responses also increased for each child ranging from a mean of 1.88 – 3.3 spontaneous responses and .9 – 1.38 prompted responses per session during play following obstacle course and a mean range of 2.22 - 3.25 spontaneous responses and .25 – 1.60 prompted responses during play following the kitchen activity.

For children S, C, and D there is a slight increase in three of the four child behaviors (spontaneous and prompted initiations and responses) during play following the obstacle course activity. For child J, there was a slight increase in three of the four child behaviors during play following the kitchen activity. Although there are slight differences between the frequency of peer-directed behavior following obstacle course and kitchen, the levels of social behavior were essentially equal across conditions for the combined group data and for each child. Both produced increases in peer-directed social behavior.

Three parents returned questionnaires regarding their satisfaction with the program and perceptions of their child's progress in peer-directed social interaction. Each parent indicated that their child was more interested in peers and siblings and that their child made more attempts to interact with peers and/or siblings. They also indicated there were increases in pretend play and the use of vocal language for communication and that there were no negative effects for their child of participation in the program. One parent indicated the financial cost of participation was high for their family and was not covered by insurance. Two parents provided viewing logs. One child watched the weekly videotape with his family from 1-5 times per week with a mean of 3 observations per week. The other child watched the video with his parents an average of 2.75

times per week, ranging from 1-6 times per week. These parents indicated that their child was very and moderately attentive, respectively, when they viewed the videotapes at home. In general, the three parents who completed the final survey were satisfied with their child's progress in peer-directed interaction.

## Discussion

This study provides support for the effectiveness of the Playtime Talk program as an intervention to increase peer-directed social interaction of children with autism spectrum disorders and social delays. It also provides support for the effectiveness of both alternating conditions on peer-directed social interaction. This study does not indicate however, that one alternating condition was more effective than the other in producing social interaction; both conditions produced equal amounts of social interaction for each child. It may be that although each condition resulted in increased levels of interaction, they did so for different reasons. The sensory-based activities (sensory stimulation materials and obstacle course) may have affected the children's sensory/motor system, which facilitated attending to the videotaped social skills model and interacting during structured play activities. Participation in kitchen play may have increased interaction with peers during structured play activities because it provided children with additional practice or rehearsal of the skills demonstrated in the videos and additional exposure to adult-delivered prompts for social interaction. Future research might evaluate the effectiveness of a Playtime Talk intervention that adds both the sensory-based component and the additional play activity to the model.

This study evaluated only one component of the Playtime Talk intervention (the sensory-based component). It did not identify other components of the Playtime Talk intervention such as the videotape modeling and scripting or adult prompting. Future research might include greater

numbers of children and include a control group of children who do not receive the multicomponent intervention as well as groups of children who receive only part of the intervention (e.g., Playtime Talk without the videotape or without adult prompting or without families viewing the tape at home). This would identify the component or combination of components that are critical to behavior change. Future research also might examine additional dependent variables such as the quality of child interaction and toy play and the content of child interaction (e.g., asking for a toy versus a two-way conversation),

This study evaluated the effectiveness of Playtime Talk as it is typically delivered in a classroom setting. Other than the alternating kitchen play condition, no changes were made to the intervention and the adults and teaching assistants each determined the frequency and type of prompts that they provided. Because of this, there was variability in the number and type of prompts provided across children and it may be that there were differences in the frequency and type of prompting delivered in this study and in the previous pilot study. Nonetheless, this study and the pilot study support the effectiveness of Playtime Talk as an intervention to increase peer-directed social interaction. Future research might explore the impact on peer-directed behavior when independent variables are consistently applied across adults and children. For instance, the Playtime Talk adults may establish rules regarding the frequency and type of adult prompts (e.g., prompt responses as well as initiations, provide prompts when there has been no interaction for a specific period of time, maintain a consistent level of prompting across all activities). They also may specify a hierarchy of prompt strategies (e.g., use vocal prompts followed by physical prompting) and time delay prompting procedures and strategies for fading adult prompts in order to shift control from adult prompts to natural reinforcers.

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Table 1  
Mean Frequency of Child and Adult Behavior for each Target Child and for all Target Children Across Activities.

<u>Activity</u>	<u>Child and Adult Behaviors For Child S</u>						
	Target Spontaneous Initiations	Target Prompted Initiations	Target Spontaneous Responses	Target Prompted Responses	Peer Initiations	Peer Responses	Adult Prompts
Baseline	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opening Circle	1.28	3.11	.94	.17	1.89	1.06	4.72
Obstacle Course	.56	1.56	.67	.00	1.22	.33	1.56
Kitchen Play	2.40	1.90	2.10	.40	2.90	2.40	3.60
Play following Kitchen	2.00	2.50	2.50	.60	4.80	2.20	10.40
Play following Obstacle	2.20	2.90	2.00	.90	3.90	2.50	8.00

<u>Activity</u>	<u>Child and Adult Behaviors For Child J</u>						
	Target Spontaneous Initiations	Target Prompted Initiations	Target Spontaneous Responses	Target Prompted Responses	Peer Initiations	Peer Responses	Adult Prompts
Baseline	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opening Circle	.89	2.68	.79	.21	2.95	.89	5.53
Obstacle Course	.30	.80	.60	.70	3.90	1.10	3.10
Kitchen Play	1.67	.58	.75	.42	3.75	1.25	3.50
Play following Kitchen	1.50	4.10	2.30	1.60	7.30	3.00	14.20
Play following Obstacle	1.25	4.50	1.88	1.38	5.38	3.63	10.88

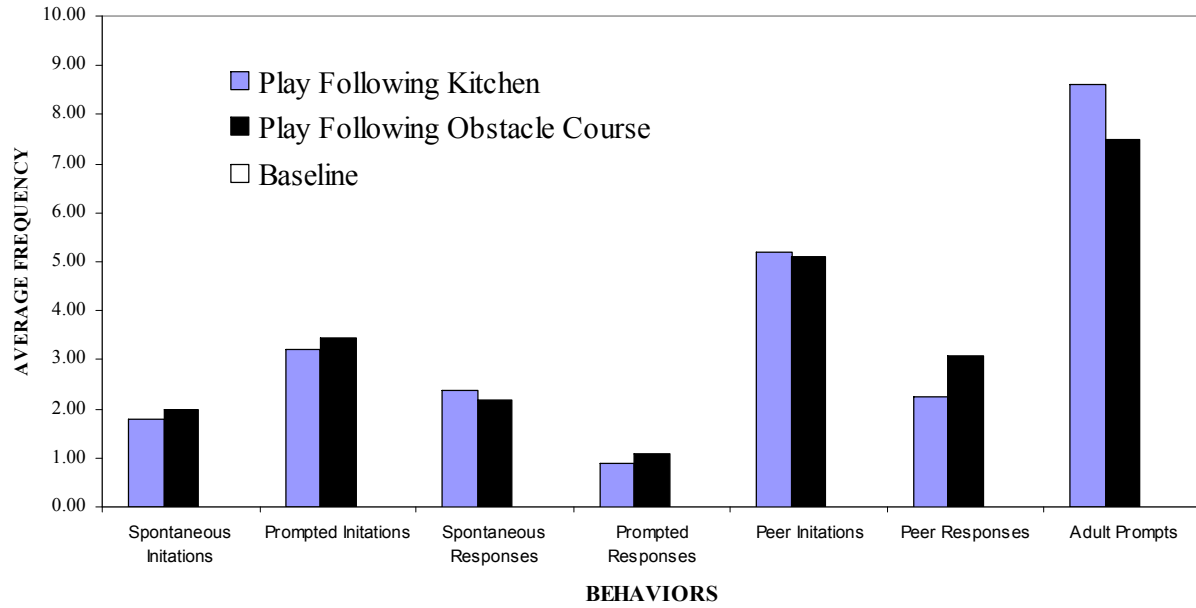
<u>Activity</u>	<u>Child and Adult Behaviors For Child C</u>						
	Target Spontaneous Initiations	Target Prompted Initiations	Target Spontaneous Responses	Target Prompted Responses	Peer Initiations	Peer Responses	Adult Prompts
Baseline	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opening Circle	1.47	3.53	.71	.47	2.76	1.41	5.06
Obstacle Course	1.50	.50	.80	.00	1.90	.80	1.00
Kitchen Play	1.27	1.27	1.45	.27	3.09	1.91	4.73
Play following Kitchen	1.67	3.67	2.22	1.38	6.78	3.00	8.56
Play following Obstacle	2.13	4.25	2.13	1.38	5.38	4.13	6.50

Table 1 continued

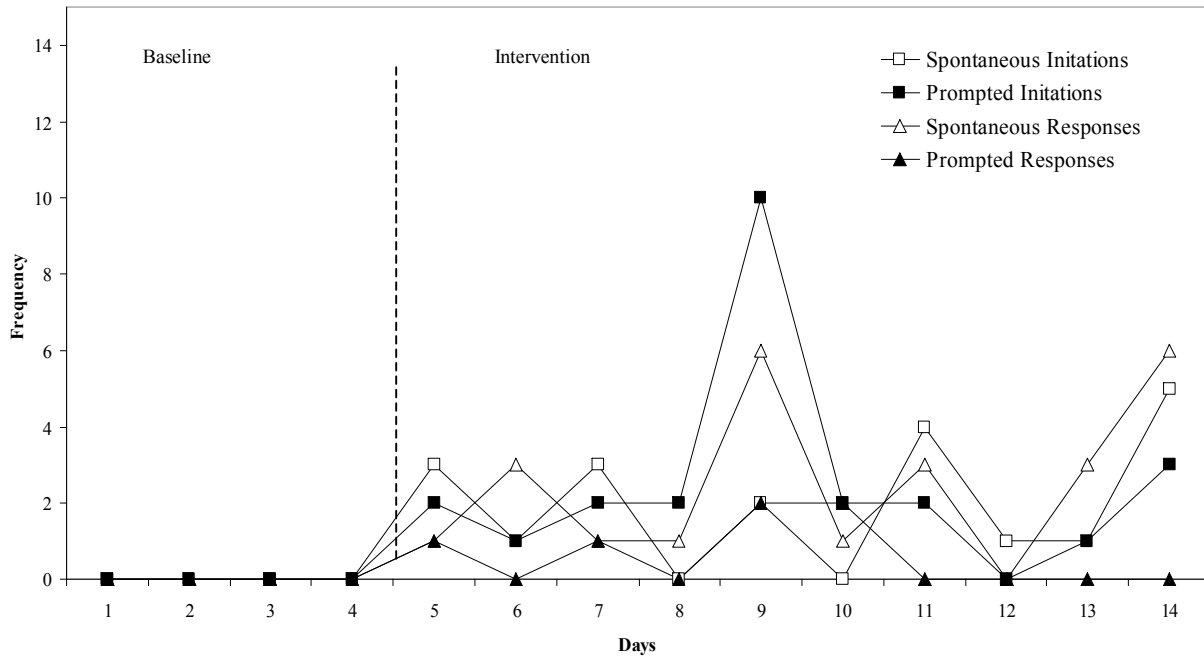
Activity	Child and Adult Behaviors For Child D						
	Target Spontaneous Initiations	Target Prompted Initiations	Target Spontaneous Responses	Target Prompted Responses	Peer Initiations	Peer Responses	Adult Prompts
Baseline	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opening Circle	2.00	2.19	1.19	.25	2.63	1.19	2.81
Obstacle Course	2.20	1.50	1.30	.20	1.90	1.60	2.20
Kitchen Play	2.70	1.20	1.20	.00	1.00	1.90	1.90
Play following Kitchen	2.50	3.25	3.25	.25	3.25	1.50	4.25
Play following Obstacle	3.00	3.00	3.30	1.00	6.80	2.80	6.90

Activity	Child and Adult Behaviors For All Target Children						
	Target Spontaneous Initiations	Target Prompted Initiations	Target Spontaneous Responses	Target Prompted Responses	Peer Initiations	Peer Responses	Adult Prompts
Baseline	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opening Circle	1.41	2.87	.90	.27	2.55	1.13	5.40
Obstacle Course	1.14	1.01	.84	.22	2.33	.95	1.96
Kitchen Play	1.94	1.23	1.37	.27	2.68	1.86	3.43
Play following Kitchen	1.92	3.38	2.57	.95	5.53	2.43	9.35
Play following Obstacle	2.14	3.66	2.33	1.16	5.36	3.26	8.07

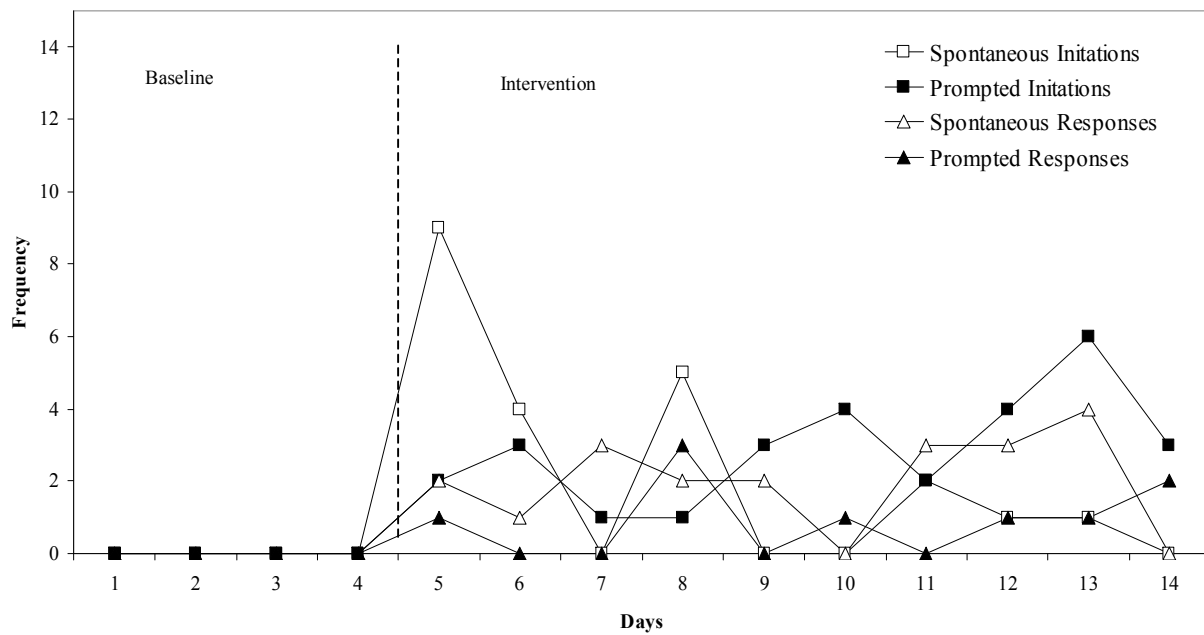
**Figure 1**  
**AVERAGE COMBINED FREQUENCY OF CHILD PEER-DIRECTED**  
**BEHAVIOR AND ADULT PROMPTS**



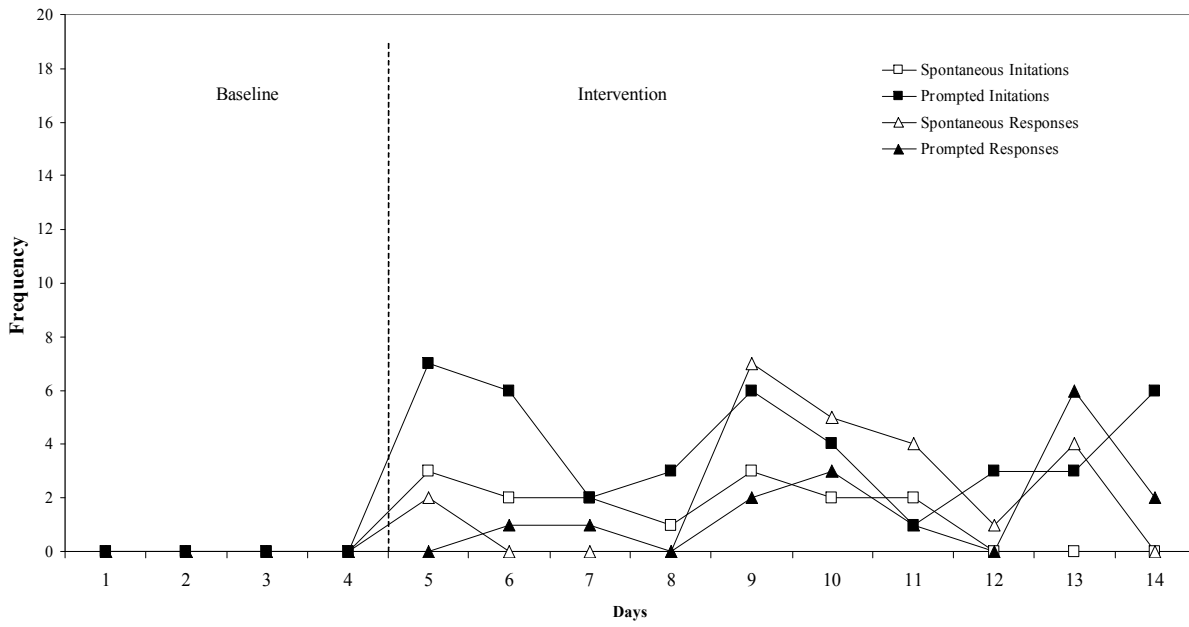
**Frequency of Peer Directed Behavior Following Kitchen For Child "S"**



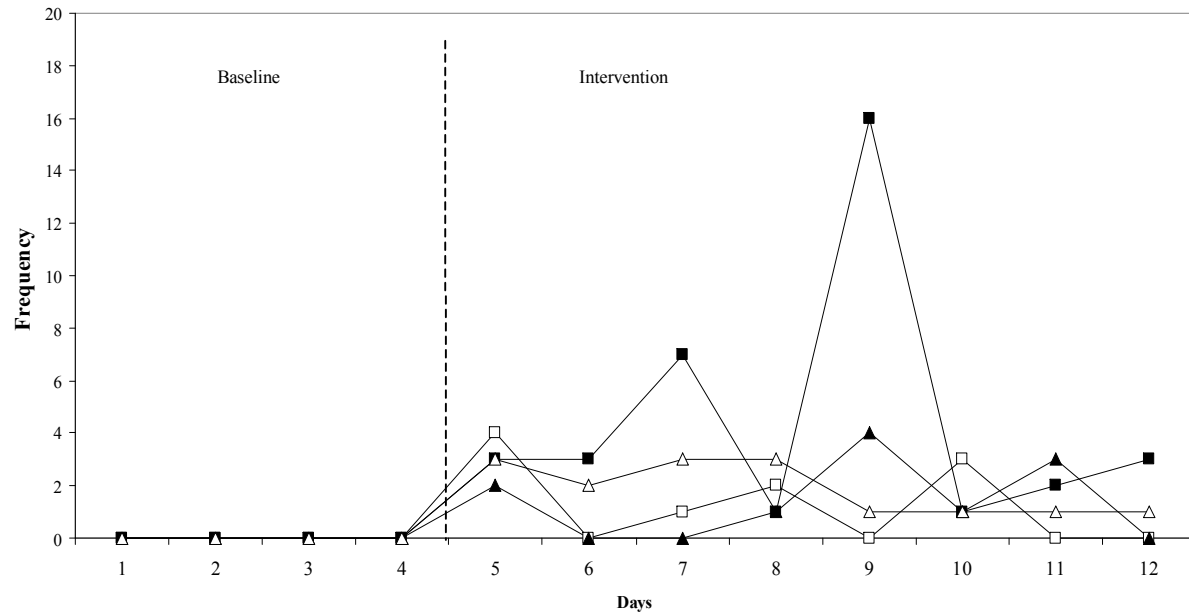
**Frequency of Peer Directed Behavior Following Obstacle Course For Child "S"**



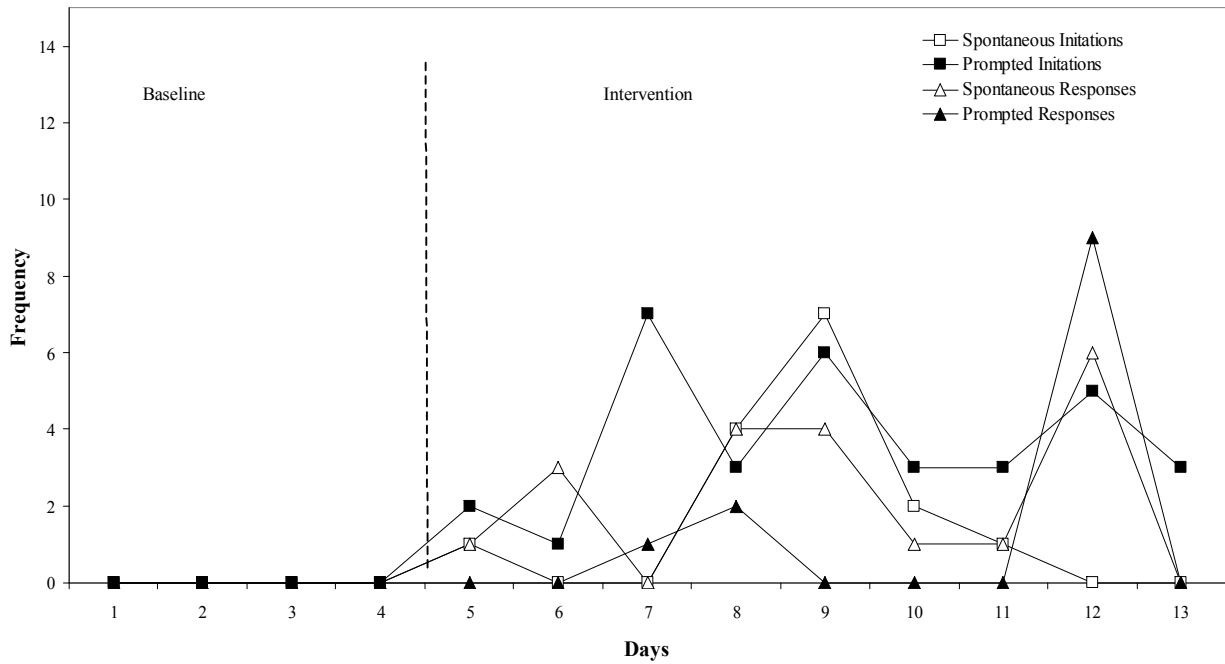
**Frequency of Peer Directed Behavior Following Kitchen For Child "J"**



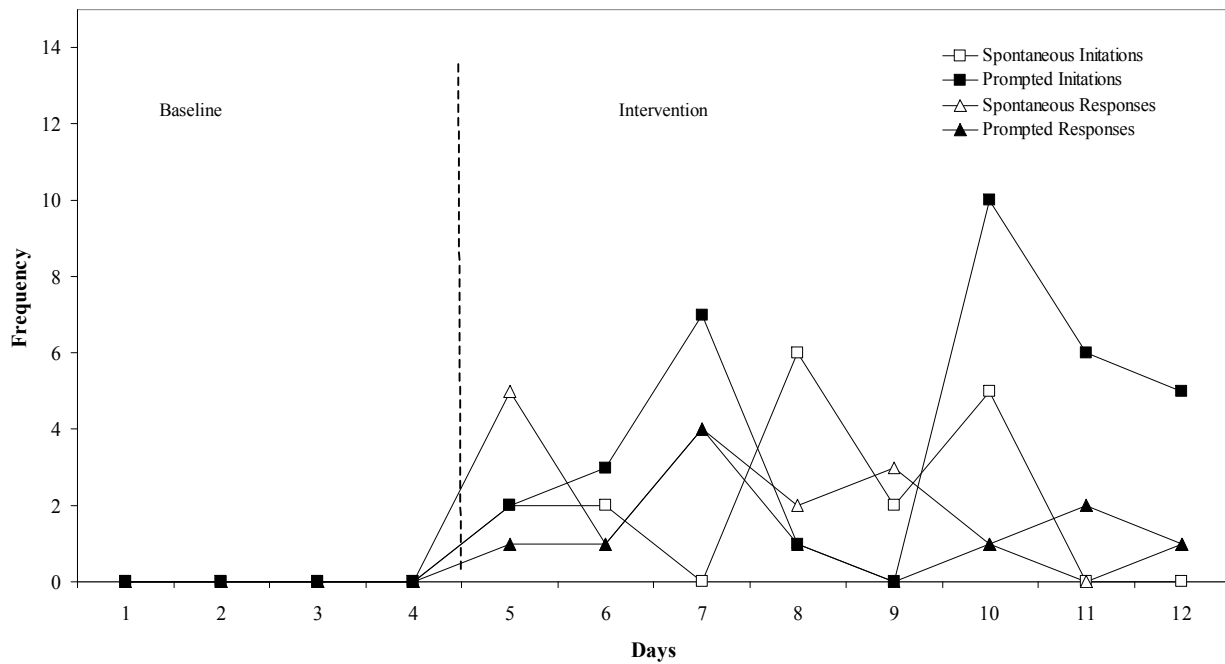
**Frequency of Peer Directed Behavior Following Obstacle Course for Child "J"**



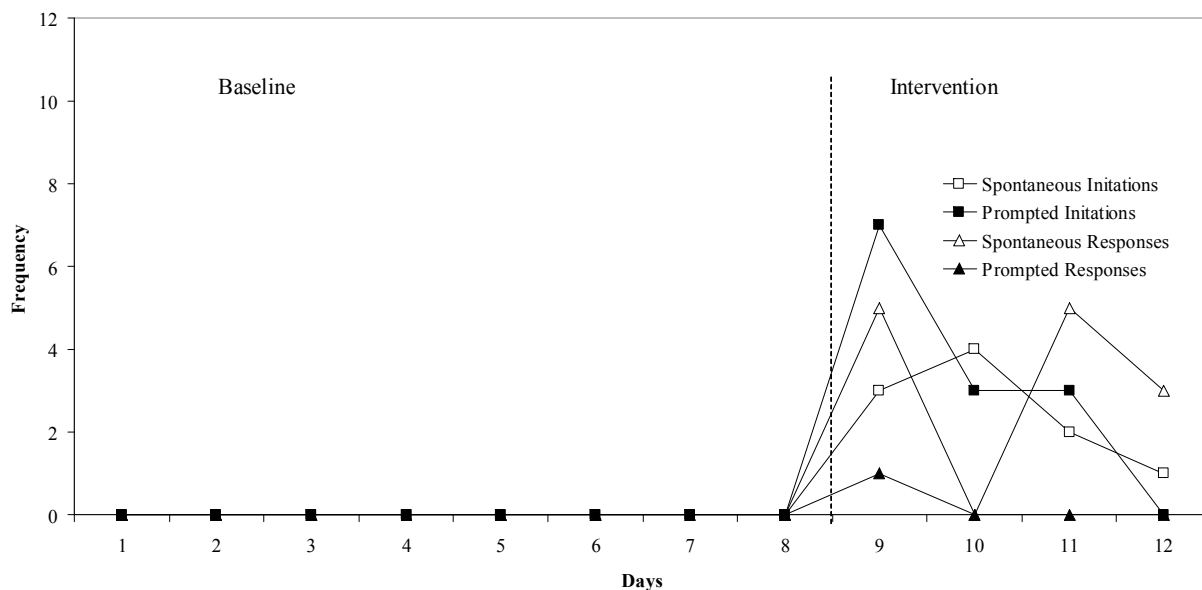
**Frequency of Peer Directed Behavior Following Kitchen For Child "C"**



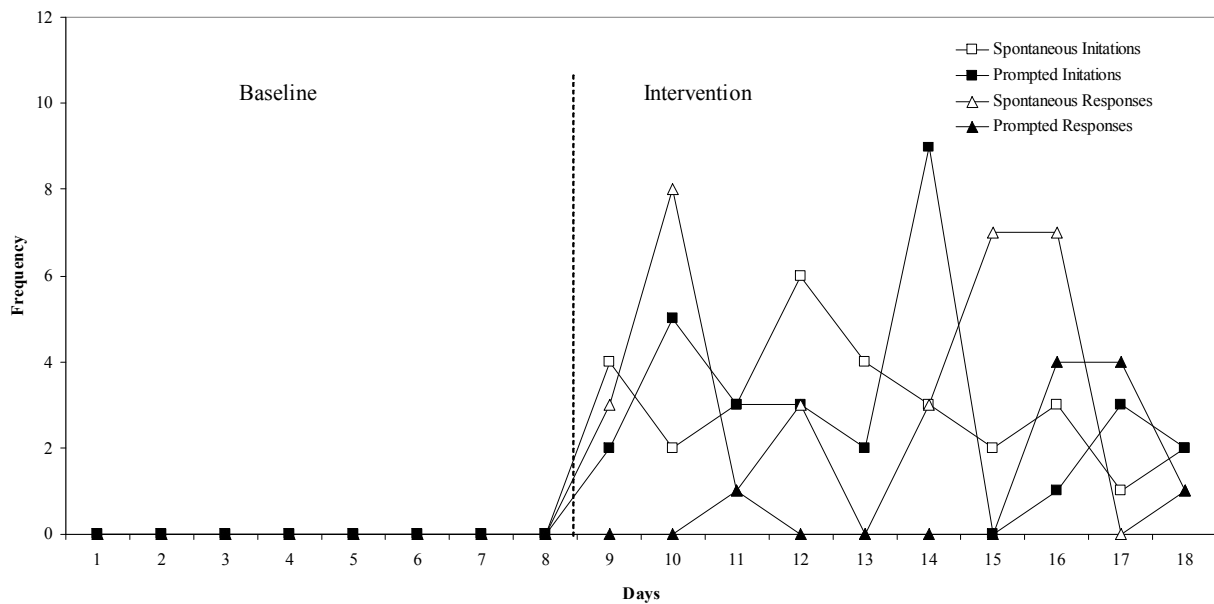
**Frequency of Peer Directed Behavior Following Obstacle Course For Child "C"**



**Frequency of Peer Directed Behavior Following Kitchen For Child "D"**



**Frequency of Peer Directed Behavior Following Obstacle Course For Child "D"**





## **OBSERVATION/CODING MANUAL**

Record the target child's name, session date, your initials or name, and check the type of activity that you are observing on the data sheet. Target child refers to the child you are observing. Peer refers to any child other than the target child.

Code behavior for 5 minutes during (a) obstacle course or kitchen, (b) opening circle, and (c) play. Begin recording one minute after the activity begins (for opening circle do not begin recording until after the children have taken off their shoes and begin singing the welcome song). During each five minute observation, you will be observing and coding behavior for the target child, peers, and adults. Each time you observe a behavior for the target child, peers, and adults, mark it on the data sheet.

Alternate the order of coding children across days. For example on day 1, you may observe child 1, then 2, then 3. On day 2 observe child 2, then 3, then 1. On day 3 observe child 3, then 1, then 2 and so forth.

At the end of the observation session, record the total number of spontaneous and prompted initiations, spontaneous and prompted responses for the target child, the number of initiations and responses for peers, and adult prompts at the bottom of the data sheet.

Include any comments about unusual circumstances you observe such as the child was ill, the child cried during the session, the child was off camera for \_\_\_ number of minutes during the observation, the child refused to join the play, another child was aggressive during the session, etc.

## CHILD BEHAVIOR

### INITIATIONS

Initiations are coded for both the target child (the child you are observing) and for the other peers in the group. Only initiations directed to another child are coded.

Initiations are coded for the target child when he makes an initiation that is clearly directed to a peer. Initiations are coded for a peer when he makes an initiation that is clearly directed to the target child. For the target child, code initiations that are prompted by an adult as /. Code initiations that were not prompted by an adult (i.e., they are spontaneous) as +. For peers you do not need to indicate if initiations were prompted or spontaneous. Simply code all peer initiations as /.

Examples of initiations include: The child touches a peer, gestures to a peer, says a peer's name, makes eye contact with a peer, hands an object to a peer, requests a toy or object from a peer, requests a play action of the peer, offers to share with a peer, comments on a peer's play, starts a conversation with or makes a comment to a peer, compliments a peer, takes a toy from a peer, says hello to a peer.

Nonexamples of initiations include: Initiations are **not** coded when the child makes general comments that are not specifically directed to a peer, talks to the adult, talks to himself or makes general comments regarding desires (e.g., I need a toy) that are not specifically directed to a peer, or looks at or watches a peer playing. During opening circle, group directed hellos and telling the group something (e.g., my favorite animal is \_\_\_) are nonexamples of initiations.

### RESPONSES

Responses are coded for both the target child (the child you are observing) and for the other peers in the group. Only responses directed to another child are coded.

Responses are coded for the target child when he responds to an initiation from a peer and the response is clearly directed to a peer. Responses are coded for a peer when he responds to an initiation from the target child and the response is clearly directed to the target child.

Responses are based on time and can only be coded if they occur within 15 seconds after an initiation occurs. For example, if child A initiated to child B and child B responded within 15 seconds, child A's behavior would be coded as an Initiation and child B's behavior would be coded as a Response.

If more than 15 seconds passes between an initiation and a response, count the child's behavior as a new initiation. For example, if child A initiated to child B and child B responded 20 seconds later, child A's behavior would be coded as an Initiation and child B's behavior would also be coded as an Initiation.

For the target child, code responses that are prompted by an adult as / and responses that were not prompted by an adult (i.e., that were spontaneous) as +. For peers you do not need to indicate if responses were prompted or spontaneous. Simply code all peer responses as /.

When children engage in ongoing conversation, responses would be coded for both children. For example if child A initiated to child B and then child B responded, child A's behavior would be coded as an Initiation and child B's behavior would be coded as a Response. If child A then responded to child B, child A's behavior would be coded as a Response and so forth.

Examples of responses include: The child complies with a request such as handing an object to a peer, answers a question posed by a peer, does the action requested by a peer, takes turns in conversation, shares toys, provides assistance, and resists when a peer takes his toy..

Nonexamples of Responses include: Responses are **not** coded when the child initiates to peers or adults, responds to adults, converses with adults, engages in general comments that are not directed to a specific peer or talks to himself, takes a toy offered by a peer with no direct interaction that acknowledged the initiation (e.g., without saying thank you, smiling at the peer, or talking to the peer).

## ADULT BEHAVIOR

### PROMPTS

Prompts are coded when an adult directs the target child to do a social action directed to a peer (i.e., the teacher prompts the child to initiate or respond to a peer). Prompts may be vocal, gestural, or physical.

Examples of Prompts include: the adult tells the child to look at a peer, listen to a peer, ask a peer for a toy, give a toy to a peer, tell a peer \_\_\_\_, and answer a peer, or when the adult points to a peer the child is to interact with or uses physical prompting to help the child interact (e.g., helps the child hand a toy to a peer). Prompts also are coded when they are offered as feedback that directs the child to interact with a peer (e.g., the adult tells the child to try again, he did not hear you...say it louder).

Nonexamples of Prompts include: Prompts are **not** coded when the adult prompts the group of children (e.g., remember, everyone look at your friend), prompts a child's toy play (e.g., put the ears here), appropriate behavior (e.g., sit down, look at your schedule), or prompts the child to look at another child's play without also prompting a specific social interaction (e.g., look at what Joey is making). Prompts also are not coded when the adults has a conversation with a child or prompts adult-directed communication (e.g., tell me what you want) or asks general questions (e.g., what do you need?).

Child name \_\_\_\_\_ Session Date \_\_\_\_\_ Observer \_\_\_\_\_ Rely \_\_\_\_\_

Activity \_\_\_\_ obstacle course \_\_\_\_ kitchen \_\_\_\_ opening circle \_\_\_\_ play with peer

Target		Peers		Adult
Initiation	Response	Initiation	Response	Prompt
S				
_____				
P				
_____				

Total Initiations S \_\_\_\_\_ P \_\_\_\_\_ Total Initiations \_\_\_\_\_ Total Prompts \_\_\_\_\_

Total Responses S \_\_\_\_\_ P \_\_\_\_\_ Total Responses \_\_\_\_\_

Comments

\* S = spontaneous  
P = promoted

Child name \_\_\_\_\_ Session Date \_\_\_\_\_ Observer \_\_\_\_\_ Rely \_\_\_\_\_

Activity \_\_\_\_ obstacle course \_\_\_\_ kitchen \_\_\_\_ opening circle \_\_\_\_ play with peer

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Total Initiations S \_\_\_\_\_ P \_\_\_\_\_ Total Initiations \_\_\_\_\_ Total Prompts \_\_\_\_\_

Total Responses S \_\_\_\_\_ P \_\_\_\_\_ Total Responses \_\_\_\_\_

Comments

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