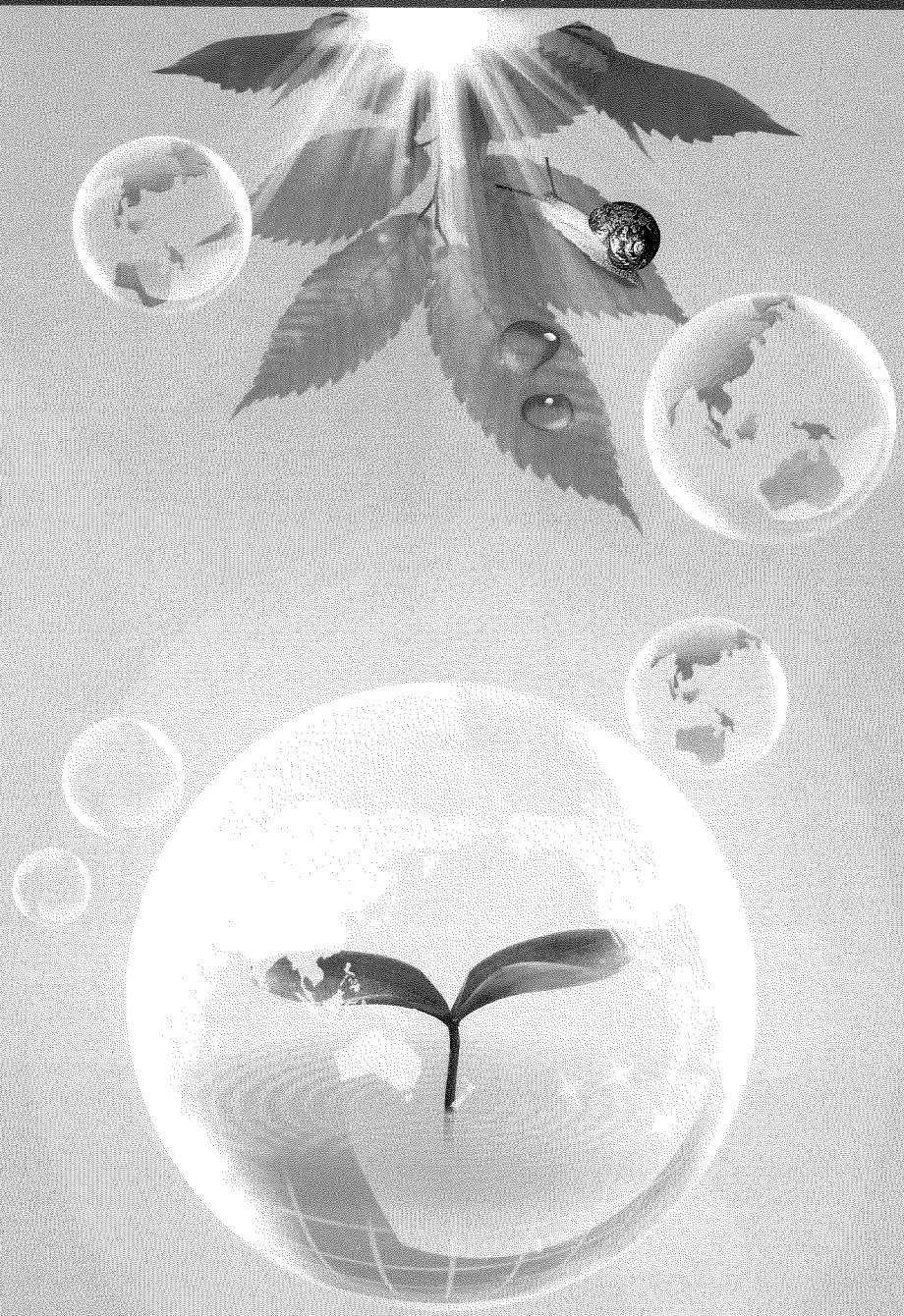
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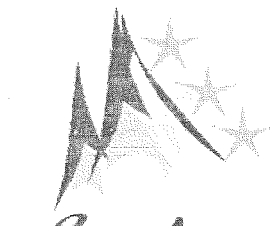
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Strategies Used by a Mother to Develop the Vocabulary of Her Child with Autism during Play Activities

Tuğba Taskın-Eser, Nur Akçin
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Abstract: Main goal of this research is, to describe the strategies applied by a mother with a child with autism speaking with single word sentences, for improving her child's vocabulary during play activities. This research is based on a case study design, a qualitative research methodology. The participants of this research are a mother with a child with autism and her three-year-old autistic boy child. The database for this research had been gathered using; diaries, field notes, detailed observations, interviews, and video recordings. Video tape recordings were performed and analyzed, during play activities at natural home environment. The mother's interactions with her child were analyzed in the aspect of "play activities". Video tape analyses were made by way of ethnographic analytic techniques. According to research findings, 11 verbal and 3 non-verbal strategies were determined, which were frequently used by the mother with an interaction with her child. As a conclusion it is possible to say that this study is important in exemplifying that modeling method, mand-model procedure, time delay procedure, and incidental teaching procedure methods can be used in daily lives of mother and child.

Key words: children with autism; natural language approach; milieu teaching; qualitative case study

1. Introduction

The main objective of language and communication teaching programs to child with autismren is to teach the child how to use the targeted communication response independently within natural environments and to answer by oneself (Koegel, Koegel & Parks, 1995; Warren & Yoder, 1994). In teaching programs based on the behaviourist approach, education is conducted under highly-controlled conditions and target skills are achieved in a short time (Hart, 1978). However, serious problems deriving from the nature of interpersonal interaction occur while generalizing target language and communication skills from the environments where education is conducted to natural environments (Erbaş, 2003; Girgin, 2003; Kaiser & Grim, 2005; Tüfekçioğlu, 2003). As a result, the "natural language approach" and "milieu teaching", based on teaching of communication skills in natural environments, have gained importance in recent years.

The natural language approach is based on social interactive theory, where the child acquires language as a result of interaction in social environments (Warren & Yoder, 1994). The natural language approach argues that language should be learnt via daily routines, activities and everyday games, rather than by suggesting

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special activities to the adults concerned with teaching of communication skills (Kaiser & Grim, 2005; Erbaş, 2003). Routine activities such as meeting personal needs, housework, news and celebrations allow interaction with children and ensure repeated use of language (Uzuner, 2001; Prizant, Schuler, Wetherby & Rydell, 1997). There is a direct proportion between experiences children are provided with and the factors of life experiences, life-related knowledge and language use. Therefore, it is important for language development that children interact with symbolic materials within one-to-one or group environments; they play imaginary and creative games; they do research and experiments; or they go on trips (Baykoç-Dönmez, 1997; Girgin, 2003; Uzuner, 2001; Weitzman, 1992). Adults are suggested to use certain interaction strategies such as expanding, adding, talking to oneself and parallel speaking to support children's language development (Güzel-Özmen, 2003; Lowenthal, 1995).

There are many reasons for favouring the natural language approach in teaching language and communication skills to child with autismren (Cole & Dale, 1996). Firstly, the approach teaches the skills of using language within social life and therefore enables the child to use language significantly, by taking part in social experiences. Secondly, the child is encouraged to gain independence in use of language by including continuously effective behavioural teaching methods when teaching new skills. Thirdly, it teaches language patterns as functional communication skills in natural environments, and involves repeated practice within different environments; and it allows an understanding of generalization in facial expressions and environments, which are very difficult for child with autismren (Bono, Daley & Sigman, 2004; Kaiser & Grim, 2005; Warren & Yoder, 1994).

Previous studies reveal evident differences in the quality of mother-child with autismren interactions in cases where the natural language approach is used (Doussard-Roosevelt, Claudia, Bazhenova, Porges, 2003). Previous studies also show mothers with child with autismren employ various strategies during their interactions with their children to increase interaction and ensure learning (Görgün-Çağlar, 2006). The results of these studies are important as they reveal and contribute to child with autismren's process of starting communication, using language and acquiring perception behaviors. Examining the features of language used by mothers is important in understanding the behaviors they display to interact with their child with autismren (Watson, 1998). Thus, studies of the natural language approach are important in illustrating and encouraging what a mother can do in home environment to increase language-use behaviours of a child with autism (Görgün-Çağlar, 2006; Warren & Yoder, 1994).

Milieu teaching is an integrative approach combining natural language approach with applied behavior analysis. Although this approach is based on behaviorist approach features, natural environments are needed in practice. Milieu teaching comprises modeling method, mand-model procedure, time delay procedure and incidental teaching procedure (Kaiser, 2000; Warren & Yoder, 1994). During milieu language teaching, six milieu arrangement techniques (designed in accordance with the interests of the children) are suggested to draw the attention of the children and to increase the possibility of them attempting to communicate in educational environments (Erbaş, 2003; Güzel-Özmen, 2003). These techniques include using attractive material, creating unreachable situations, using inadequate pieces, making selections, assistance and creating unexpected situations (Erbaş, 2003; Kaiser & Grim, 2005; Warrren & Yoder, 1994).

Literature review shows that the use of meaningful words increases among child with autismren following the application of education programs where the incidental teaching procedure, a milieu teaching

approach, is used (Mc Gree, Morrier, Daly, 1999). It was reported that a child with autism subjected to discrete trial teaching learns color adjectives more rapidly, but it is more frequent that a child with autism subjected to an incidental teaching procedure learns color adjectives by himself/herself (Mirenda-Linne & Melin, 1992); use of time delay procedure is successful in teaching request-making skill (Charlop & Trasowech, 1991); milieu teaching is effective in developing and varying communication functions among children displaying autistic characteristics (Güzel-Özmen, 2005); there is no evident difference between "Operant conditioning" and "incidental learning" methods in providing child wtih autismren with the skill of verbally expressing the time concepts "before" and "after" (Gümüşçü, 1990). The results of these studies emphasize language development of a child with autism can be ensured in natural environments, but through systematic steps (Mc Gree, Morrier & Daly, 1999).

It is necessary to enrich environmental stimuli and to increase language experiences to introduce language skills successfully to child with autismren. Considering that children in the pre-school period spend most of their time in the home environment, mothers are of vital importance in using this time most efficiently. A child's ability to use language by making sentences appropriate to the context depends on the variety of the experiences they are provided. Language acquisition process of the child accelerates in this period in relation to the richness of surrounding stimuli (Kaiser & Grim, 2005; Prizant, Schuler, Wetherby & Rydell, 1997; Rappaport, 1996; Weitzman, 1992; Susman, 1999). Therefore, examination of the activities used by a mother, which are likely to impact the language development of the child, is thought to contribute to the education of mothers of children with autism.

Within this framework, this study aimed to describe the strategies used by a mother of a child with autism, speaking by making one-word sentences, for developing her child's vocabulary during play activities.

2. Method

2.1 Design

The present study, a case study design method, which is a qualitative research design, is used so as to describe the strategies used by a mother to interact with her child with autism during play activities. Play is a social developmental based skill. This study is based on the theoretical stance that the development of play by rules, like all social learning, occurs and is best studied within the framework of natural, meaningful, social interaction. A qualitative research approach, which calls for observations to be contextually embedded, involves the observation of children as players in a manner compatible with this theoretical stance (Kuvshinoff, 1993).

2.2 Location

The study was conducted in the home environment where Cem and his family live. The family lives in a detached four-storey building with a garden, located in the Köseköy district of İzmit Province, Turkey. There is open space in front of the house and near the house; and there are one and two-storey houses behind the Suna family's house.

2.3 Participants

Criterion sampling is a purposeful method for determining research participants (Patton, 2002; Mason, 2002). The criteria used in determining the sample are detailed in the following section, titled "Process of Determining Research Participants". The case study participants in the present study were anonymized as "Mrs.

Suna" and her child "Cem", aged 3 years, who was diagnosed as autistic. The real names of the study participants were kept confidential.

2.3.1 Process of determining research participants

The mother and her child participating in the present study were determined following a study lasting for four months. This selection process comprised six stages.

(1) Determining the criteria to be considered: Examining the literature, it is seen that several studies determined "effective mother characteristics in developing language skills and vocabulary". These features include: (a) she provides the child with language acquisition in natural environments via games and activities; (b) she creates teaching environments in the home environment by utilizing experiences in order to introduce language skills; (c) she supplements what the child says and attributes new additional meanings by expanding what the child says, thereby providing the child with language inputs; (d) she uses natural rewards by giving the child objects or toys he/she is interested in when he/she uses the verbal language correctly; (e) she uses facial expressions and voice tones while talking with the child; (f) she makes use of all the opportunities available to create language experiences; (g) she designs the environment in such a way that objects and events draw the attention of the child (Erbaş, 2003; Girgin, 2003; Güzel-Özmen, 2003; Kaiser et al., 1992; Weitzman,1992; Topbaş, 2005). The present study intended to identify a mother, who used at least some, if not all, of these characteristics in her teaching strategies,

(2) Preparing the interview questions: A series of interview questions were prepared to determine the mothers meeting the criteria identified by the literature review. The interview structure consisted of 6 open-ended questions.

(3) Conducting the pilot studies: Pilot studies were conducted with four mothers in order to test the suitability of the prepared interview questions and the interview skills of the researcher; these interviews were recorded with the permission of the mothers. Following these interviews, the interview questions were revised so that questions could be understood better; and the main interviews were started.

(4) Conducting interviews: A total of five interviews were conducted with mothers who met the criteria of "having a child with autism speaking with one-word sentences in the pre-school period". Each interview was recorded and lasted for approximately one hour.

(5) Assessing the mothers: Following examination of the recorded interviews, it was determined that two of the mothers were a close match for the study criteria. The characteristics of both of these mothers were examined and it was decided to continue the studies with the mother referred to as "Mrs. Suna", because she had flexible working hours and she volunteered to open her home environment to conduct the research.

(6) Informed consent: In accordance with appropriate guidance on research ethics, Mrs. Suna was informed of the approximate duration, content and data collection instruments of the study and her written consent to the study was obtained.

2.3.2 Mother

The mother, referred to as "Mrs. Suna" is 33 years old. She is a chemical engineer working as an operating manager in a company.

2.3.3 Mother's opinion on contributing to language development of her child

During interviews and observations, it was apparent that the mother takes and conducts some measurements to assist her child in learning to speak. The mother states that she attaches importance to

naturalness, as follows:

> "... First of all, I want everything to be natural. That is because I am his mother. This is his house; I primarily try to make it entertaining..." (Interview#1; 13/3).

It was determined that the mother mostly conducts activities that attract the attention of her son, Cem, while interacting with him or choosing activities; when Cem shows interest in something, she turns to the same activity (Diary#20; 16/4).

During one of the semi-structured interviews conducted, the mother described what she does to create communication opportunities when interacting with her child, as follows:

> "... I give him the opportunity to do something by himself. Therefore, he has to communicate with me to want something from me...he especially likes playing in the bed. I try to make good use of these times. We play games when I go to wake him. I sing songs to him. We clap our hands together ..." (Interview#1; 13/3).

During an observation period, the mother mentioned that she does not only consider language development while planning games or activities with Cem, but also conducts activities relating to every field for which Cem feels a need. The mother stated that activities related to language development can be conducted even while practicing activities related to physical development, "... Jumping is something we know; but I try to include activities such as counting, singing and playing games while playing a jumping game. Then, the game becomes more purposeful; he does something he likes and learns some things. It is the same with the ball games; we both play ball, and we can also make other activities while playing a ball game ..." (Diary#20; 16/4).

During a semi-structured interview, the mother mentioned the impact of playing games using objects on Cem's language development,

> "... in fact, in the first place, my purpose was his learning how to play games. However, I also made an effort for him to speak unwittingly during the game. Then, these activities came to be effective for his speaking ..."

During her interaction with Cem, the mother frequently allocated space to language activities such as reading, looking at picture cards, and puppet plays (Diary#25; 2/5). The mother mentioned her opinions about these activities during semi-structured interviews, as follows:

> "Cem likes books very much, and he brings them to me to look at them together. I say the names of things, pictures we see, because Cem likes books. We acquire many words in that way. We learnt many things from the books. We learnt how to explain an event with two words. It is easy for me to work on books ..." (Interview#3; 23/6).

Mother was observed as using different movements and voices, especially in imitation games and story activities, and trying to make every activity entertaining by utilizing all the communication opportunities available. While explaining this, the mother stated that, in fact, her son directs her; she follows him and she repeats the things he likes (Diary#32; 15/5).

In addition to games, the mother uses daily routine events such as having breakfast and dressing to interact with her child during everyday life (Diary#29; 12/5)

> "... we prepare the table to have breakfast. I give breakfast foods to Cem by telling him their names, and Cem puts them on the table..." "...Now I just help him and talk about what he is doing while he is dressing or washing his hands. He both does his own work and learns the names of clothing" (Interview#1; 13/3).

2.3.4 Child: Cem

Cem is 3 years old; he has black hair, brown eyes and fair skin. He is relatively tall for his age. When Cem was two years old, his mother noted that he was not interested in his environment, did not communicate with other children, and did not look when called. Mrs. Suna initially took Cem to a pediatrician and then to the Department of Child Psychiatry of a hospital. After the psychiatric examinations conducted in the hospital, Mrs. Suna was told that Cem displayed autistic symptoms.

2.4 Role of the Researcher

The researcher entered the study environment as a "participant observer" to collect qualitative data. In the present study, the mother assigned the "teacher" role to the researcher. That the mother assigned the researcher the role of teacher, even though the researcher provided no education to the mother or child, can be explained by the fact that the researcher also works as a teacher in an institution. While the mother was introducing the child to the researcher on the first visit to the house, she stated "let's call you teacher, as you are an educator".

2.5 Data Collection

From the start of the study, the researchers used various data collection techniques: diaries, field notes, detailed observations, physical data, semi-structured and unstructured interviews, and video recordings of play activities. The type, date, duration and number of pages of collected data are shown in Table 1.

Table 1 Data Collection Techniques and Amount of Data Collected

Type	Piece	Duration	Number of Pages
Diary		560'	65
Field Notes		315'	112
Detailed Observation	20	1300'	192
Semi-Structured Interviews	11	630'	231
Physical Data	2	150'	64
Video Recording	1	30'10"	50
Total	48	2985'10"	724

During the study, a triangulation method was used in order to relate data obtained by different methods such as field notes, interviews so on. In writing the study findings, physical data were utilized for physical descriptions relating to home and game environment; detailed observation data were utilized for descriptions relating to individuals and how the game is played; semi-structured interviews and diaries, in which unstructured interviews are noted, were utilized for the opinions and views of the people and the data obtained from video recordings were utilized in analyzing interactions during the games.

2.6 Stages of Focusing on the Activity

Focusing took place in six stages. Information about these stages is given in Table 2 below.

Table 2 Stages of Focusing

Stages	Duration	Purpose	Method/Technique
1st Stage	2 days	Description of environment and individuals	Unstructured-Interview, Observation
2nd Stage	7 weeks	Determination of activities of mother and child	Observation, voice recording Field notes
3rd Stage	1 week	Making selections between the determined activities	
4th Stage	1 day	Video shooting	Video recording
5th Stage	1 week	Preparation of video master tape	
6th Stage		Video analysis	

2.6.1 Description of environment and people

The initial observations, conducted during the first two days of the study, had two main purposes: (1), for the researcher, to get accustomed to the environment and, for the mother and child, to get accustomed to the presence of the researcher in the environment and (2) to make observations related to physical features of the environment and features of the participants.

2.6.2 Determination of activities of mother and child

In this stage, detailed observations were made for seven weeks to determine the activities of the mother and child. Detailed observations are objective data, in which whatever takes place in the field is described in detail (Bogdan and Biklen, 1998). A total of 20 observations, lasting for 1300 minutes, were made over the course of seven weeks. Observations lasted between 20 minutes and 120 minutes. As a result, 192 pages of detailed observation data were obtained. These observations covered activities made by the mother and child in the home and garden environment; observations were tape-recorded and field notes were taken. The types and frequency distributions of the activities that the mother and child made together are shown in Table 3.

Table 3 Number and Percentage Distribution of Types of Activities of Mother and Child

Type of Activity	Number	Percentage
Routine Activities	10	20.8
Imaginary Games	9	18.7
Practical Activities	7	14.5
Story Activities	7	14.5
Open-air Games	6	12.8
Games Played by Using Objects	6	12.5
Trip Activities	2	4.1
Games Played in the Car	1	2.0
TOTAL	48	100

Examining Table 3, it is seen that routine activities such as eating fruit, dressing, having breakfast (20%) occur most frequently. These are followed by activities such as imitating a car, going down the stairs by imitating an animal, imaginary games like a tunnel game (18.7%); practical activities such as painting, playing with pulp (14.5%); story activities such as reading, looking at picture cards and puppet games (14.5%); open-air games such as tagging (12.8%); games played by using objects, such as playing with toy blocks, cars or ball (12.5%); trip activities (4.1%); and games played in the car (2%).

2.6.3 Making selections among the determined activities

During the stage of making selections between the activities of the mother and child, it was found that none of the activities were performed particularly frequently compared with the others. "Trip activities" and "open-air games" in Table 3 were not favoured, because they take place outside the home, and interactions between mother and child are limited during these activities. "Handwork activities" and "games played in the car" were not preferred, because these activities are generally related to developing the physical skills of the child. "Routine activities", "imaginary games", "games played by using objects" and "story activities" were chosen, as they occur within the house and are thought to support the language development of the child. In an unstructured interview during the stage of making selections between the activities, the Mother stated: "... in fact, the purpose of all the games I conduct is for him to speak; but now, thinking specifically, I think the

activities related to speaking are the use of books or picture cards. That is because we work solely on developing language in these activities ..." This choice is verified by comments made by the mother during another interview, in relation to the effect of games that incorporate objects on Cem's language development "...there are some games. For example, toy blocks; in the first place I wanted him to learn how to play with it, but then I also made an effort for him to speak. Then, these activities came to be very effective for him to speak ..." For that reason, four activities with similar frequencies "routine activities, imaginary games, games played by using objects, and story activities" were chosen as the study focus, instead of just one activity. Another reason for choosing these activities is that it was observed during these activities that there was an intense interaction between mother and child, and opportunities arose for language usage by the child during these activities.

2.6.4 Video shoot

A 30'10"-long video shoot was conducted. The activities and activity categories observed in these video shoots are shown in Table 4.

Table 4 Activities in Video Shooting and Their Categories

Activity	Category
Having breakfast Drinking coke	Routine activities
Squeezing water with water gun Tunnel game Game of firing	Imaginary games
Drawing picture on the whiteboard Looking at the cover of watercolor Jumping Looking at the picture on the combed cotton Bomb game	Games played with an object
Looking at the picture book Looking at the picture cards	Story activities

2.6.5 Preparation of master tape

A 12-minute and 4-seconds master tape was developed by considering the order and duration of the activities in the video recording of 30 minutes 10 seconds.

2.6.6 Video-analysis

The prepared master tape was analyzed using micro-ethnographic analysis techniques. According to this analysis, a transcript of the verbal mother-child interactions in the master-tape was taken. When examining the video tape, essentially we were trying to answer "What are the strategies that the mother uses in order to develop her child's vocabulary?" question. As a result of this examination, it was determined that the mother uses some verbal and non-verbal strategies so as to develop her child's vocabulary. The researcher names the strategies that the mother uses, taking the names used in the literature. Video recordings were watched with the mother and her approval was received so as to determine the convenience of these strategies' names. Thus, a code key was created and interaction templates in the video recordings were codified accordingly. Table 5 shows the coding categories for mother's communication strategies.

Table 5 Coding Categories for Mother's Communication Strategies

Verbal Communication Strategies	Non-Verbal Communication Strategies
Expanding	Using attractive materials
Adding	Creating unreachable situation
Parallel speaking	Using inadequate pieces
Talking to herself	
Modeling	
Awarding	
Approving	
Asking questions	
Waiting for him to answer	
Making selections	
Giving feedback	
Giving instructions	

2.7 Reliability

In qualitative studies, it is important to determine how data is understood by the individuals in the environment so that the study has validity and reliability (Bogdan & Biklen, 1998; Mehan, 1978). By watching video recordings together with the individual in that environment, the researcher finds the opportunity to compare her interpretations with those of other individuals (Mehan, 1978). For this reason, the researcher watched video recordings with the mother. During this period, we asked the mother questions such as, "What are you doing now?" or "Why are you doing this?" The researcher wanted to name and interpret the strategies she used. Thus, the appropriateness between the naming and interpreting behaviours of the mother and those of the researcher were examined. This technique is considered to have increased the reliability of the study.

3. Findings and Comments

Master tape images showed that the mother uses twelve different verbal communication strategies in their interactions during play activity. Verbal communication strategies used by the mother and their frequencies are as follows: expanding (5), adding (1), parallel speaking (3), talking to herself (4), modeling (4), awarding (4), approving (8), asking questions (8), waiting for him to answer (8), making selections (1), giving feedback (9), giving instructions (4). Non-verbal communication strategies used by the mother and their frequencies are as follows: using attractive materials (4), creating unreachable situation (2) and using inadequate pieces (1).

The way how the mother uses verbal and non-verbal communication strategies is as important as the kinds of strategies used and how often she uses these strategies. Examination of the methods of using these strategies during the activities showed that there are four different interaction patterns showing some similarities.

3.1 First Type Interaction Pattern: "Modeling Method"

Video recordings showed that the mother has similar ways of using verbal and non-verbal strategies in interaction examples during the activities termed "having breakfast", "bomb game" and "looking at the picture book". The activity "looking at the picture book" is given as an example of the 1st Type of interaction pattern, below. During the activity "Looking at the picture book", the mother and child sit on the ground in Cem's room.

> The mother showed a cat picture in the book and looked at Cem's face (waiting for him to answer). "What does cat have in its hand?" (asking question). Cem looked at the picture. The mother looked at Cem's face and said "What does cat have in its hand?" Cem looked at the picture book. The mother said "Buc-ket" (modeling) and then Cem said "Bucket".

He bit the cake once while he was looking towards the picture. The mother shook her head down and up once and said "Yes, she has bucket. (Expanding-giving feedback-approving) She turned the page and showed the picture of horse by touching "What is this Cem?"

During this activity, the mother became a model by attracting Cem's attention; she approved when Cem gave a correct answer, and gave feedback by expanding the word. The mother used the "*modelling method*" by utilizing these strategies together.

3.2 Second Type Interaction Pattern: "Mand-Model Procedure"

Examination of the video recordings revealed that the mother-child interaction when having breakfast differs from interaction during other routine activities. "Having breakfast" is given as an example of the 2nd Type of interaction pattern, below. During "having breakfast" activity, mother and child sit around the kitchen table.

The mother took the bread bag on the table and took out the slice of bread on the top. She held the slice of bread towards the eye level of Cem and looked at Cem. (Waiting for him to answer) "Shall the mother give bread to you?" (Asking question). Cem looked towards slice of bread. The mother looked at the face of Cem and said "Mother, give me bread. Say it." (Modeling–giving instructions-talking to herself) (Waiting for him to give answer) Cem looked towards slice of bread and said "Give bread". The mother said "Okey, mother will give you bread" (approving). While putting the slice of bread in her right hand, she showed jam in front of Cem and chocolate box with forefinger of her right hand (use of attractive materials). She asked "Which one do you want first? Jam or chocolate?" (Asking question for making selection). He looked at firstly jam and then chocolate. Finally, he looked at the chocolate again and said "Chocolate". She took some chocolate from the chocolate box in front of Cem with the knife. She spread it on the piece of bread. While spreading chocolate on bread, she looked at Cem and she smiled while shaking her head. (Awarding by giving right to reach the object wanted). Chocolate (giving feedback) well, do ciki ciki. Say ciki ciki. Shake your head also, ciki ciki (adding).

During this activity, mother addressed a question to child by drawing his attention to a particular point; after waiting for a while and seeing that child gave no answer, she asked questions in which child can make a choice according to his interests. Mother rewarded her child when he gave correct answers, expanded what child said by approving it and gave feedback. Mother used the "mand-model procedure" of milieu teaching by utilizing these strategies together.

3.3 Third Type Interaction Pattern: "Time Delay Procedure"

Examination of video tape recordings showed mother's ways of using verbal and non-verbal strategies in the interaction examples of "water squeeze game with water gun", "drawing picture on the chalkboard", "drawing picture on the small chalkboard" and "looking at picture cards" are similar. The activity of "drawing picture on the chalkboard" is given as an example of the 3rd Type of interaction pattern, below. During this activity, mother and child stand in front of the whiteboard in the kitchen.

The mother drew a picture of sun and Cem erased it immediately. Then she drew a big one and said "But, you deleted it immediately. Let's look at it again. Let's do its eyes" (parallel speaking– Talking to herself). Cem looked at the picture. She looked at Cem's face. (Waiting for him to answer) and said "What is this?" (Asking question). Cem said "Sun" and stood up and erased the picture of sun with the eraser (Awarding by Giving Right to Reach the Object Wanted). The mother "Sun" (approving-giving feedback).

It was seen that during this activity, the mother arranges the environment to draw Cem's attention to a particular point; she waits for him to give a verbal reaction; she asks questions likely to provide a hint when he does not give any reaction; she rewards him when he gives correct answers; she expands what he says by approving and she gives feedback. The Mother used the "*time delay procedure*" of milieu teaching by utilizing

these strategies together.

3.4 Fourth Type Interaction Pattern: "Incidental Teaching Procedure"

Examination of the video recordings indicated mother's ways of using verbal and non-verbal strategies in interaction examples of "drinking soda" and "water squeeze game with water gun" are similar. The activity of "water squeeze game with water gun" is given as an example of the 4th Type of interaction pattern. During this activity, mother and child are sitting around the dinner table in the kitchen.

> Cem took the water gun on the table in his hand. He started to squeeze water. The mother bent towards Cem and showed the clown that stood in front of the window. She said "Look, the clown is there. Squeeze water there. (Giving instruction) Say FIRE IT GOT WET. The clown says HELP!" (Parallel speaking). He started to squeeze water towards window with water gun and said "It got wet". While the mother was looking at Cem's eyes, she said "Did the clown get wet?" (Expanding-giving feedback-approving-asking question). Cem went on squeezing water towards window with water gun and said "Its head." The mother she reached and took the clown in front of the window. She put it against Cem. She bent down to the level of Cem. She looked at the clown and showed its nose with forefinger of her right hand. She said "Did you hit its head? Yes its head. Come on; let's fire at nose of the clown, yes its nose". While Cem was squeezing water at nose of the clown with the gun, he said "Nose of clown". The mother took the gun in Cem's hand and put it on the table. She touched the eye of clown with her forefinger twice by looking at the clown, and then she looked at Cem (waiting for him to answer). She said "Okey, now. Tell me" (giving instruction-asking question-waiting for him to answer) "Which part of clown is this?" (Giving instruction-asking question). Cem said "eye" and she said "Yes, eye" (giving feedback-approving).

Examination of the example revealed mother immediately interacts with her child when he deals with any activity or object, she creates opportunities for him to want something by himself, she rewards him when he gives a correct reaction, and she expands what he says by approving it and giving feedbacks. Mother used "incidental teaching procedure" of milieu teaching by utilizing these strategies together.

4. Discussion and Recommendations

Data obtained from long-term observations, semi-structured and unstructured interviews made with the mother, and video recordings were all utilized in the research findings and evaluation. It was seen that mother established interaction with her child in four different ways. These are, "modeling method", "mand-model procedure", "time delay procedure", and "incidental teaching procedure".

Modeling method is one of the milieu teaching methods used to indicate when a child gives the correct answer (Hart, 1978). It was observed that, during the activities, mother becomes the model for word and sentence patterns which child does not know. Examining the literature, it was determined that mothers' becoming a model for children to learn new words makes important contributions to the language development of the children. Modeling to develop language in child with autismren who are able to speak using one or two words helps children name the events and acquire new words (Görgün-Çağlar, 2006). In addition, teaching language to child with autismren using a modelling method makes important contributions to the development of the meaning dimension of language and increase of communication behaviours. Moreover, the fact that arrangements are made for development of non-verbal involvements and that the modelling method is used enables the child to develop in all the components of language and non-verbal involvements (Güzel-Özmen, 2003). By modelling to the child in the game environment, adults can teach children how to make the sounds and words used by adults and to establish sentences (Rappaport, 1996; Susman, 1999).

The fact that mother always draws the attention of child, allows him to speak, and becomes a model to him, when necessary, during the activities she uses in order to establish communication with him. This enables the child to speak independently, which is her main objective for her child. When mothers verbally explain what their children do and the events taking place, they start the process of language acquisition of their children (Watson, 1998).

The Mand-model procedure is a method enabling a child to determine his choice by forming real questions and choices emerging in real environments (Kaiser, 2000). During interactions with their children, mothers ask questions in order for the child to mention what he expresses. What mothers expect with these questions is for their children to express their wishes by continuing interaction with them during the activities. It is observed that this positively impacts language development in the children and increases the interaction between mother and child (Watson, 1998). Görgün-Çağlar (2006) also reported that the mother's questioning during her interactions with the child with autismis of importance for the child to acquire the behaviours of answering, continuing to speak and taking turn. In addition, it was observed that the use of the mand-model procedure in teaching language to child with autismren makes important contributions to the development of the meaning dimension of language in increasing communication behaviours (Güzel-Özmen, 2003).

When mothers offer a choice to their children in the game environment, children will use their verbal language in order to indicate their choices (Kaiser, 2000). It was seen in video recordings that mother offers a choice to her child by asking questions during the activity of having breakfast. Examining the literature, it is seen that asking children questions during activities, in order to prompt their choices, makes language acquisition easier for the child (Rappaport, 1996). In this way, mothers remind children what they want to express, draw their attention, and interact with children by asking questions of them. This also increases the interaction between mother and child (Görgün-Çağlar, 2006).

Time delay procedure is one of the milieu teaching methods in which an adult manifests via his/her expressions that he/she awaits a demand for communication from the child (Kaiser, Yoder and Keetz, 1992). It is of importance that milieu arrangement is allocated space while time delay procedure is applied. Using attractive materials, which is one of the milieu arrangement techniques, is of importance for providing an appropriate environment for communication of the child to start (Warren and Yoder, 1994; Hart, 1978). In addition, placing attractive materials within sight of the child but difficult for the child to reach, enables the child to demand to reach the materials (Wetherby and Prizant, 1994).

Examining the literature, it was observed that the fact that mother awaits an answer by looking at the child wtih autismren and provides child with an opportunity during the dialogues is of importance for the children with autismto acquire the behaviour of participating in dialogues and taking a turn (Görgün-Çağlar, 2006). Charlop and Trasowech (1991) reported that allocating space to time delay procedure in the language education of child wtih autismren is effective for the child with autismto use significant words in language development and to transfer what he learns to daily life.

It was seen in the images obtained in the present study that the mother gives positive reactions to verbal communication by her child during activities. Examining the literature, it is seen that giving positive reactions to behaviours is effective in increasing the frequency of this behaviour in the future. The fact that mothers reward what their children do and say encourages children to participate in the communication (Charlop and Trasowech, 1991).

The Incidental teaching procedure is a milieu teaching method used when a child makes a request and demands an object verbally or non-verbally (Kaiser, 2000). It shows similarity with time delay procedure in terms of the use of milieu arrangement techniques. In addition, it is of importance in the sense that it is a method in which the mother can provide language inputs by making good use of the opportunities available. It was observed from video data that the mother turns to whatever object and activity the child is interested in. While conducting these activities with her child, the mother also tried to expand what her child said. Examining the literature, it is seen that mothers' adding new words to the words used by the child is important in expanding the child's vocabulary, as it accelerates language acquisition (Weitzman, 1992).

Mirenda, Linne and Melin (1992) reported that incidental teaching makes positive contributions to language developments of child with autismren and reported an increase in these children's rates of using language by themselves following the application of programs including incidental teaching. Mc Gree, Morrier and Daly (1999) stated that incidental teaching enables the use of meaningful words and increases generalization and continuance in acquisition of language skills.

It was observed in the present study that teaching strategies such as modeling and time delay procedure are used by the participant mother in her attempts to establish interaction with her child with autism. However, there are many more methods suggested by both the natural language approach and milieu teaching methods. This study is of importance in exemplifying that these methods can be used in the daily lives of mother and child; however, it would be beneficial to examine the interactions between mother and child in cases where the mother acquires skill in using various additional interaction strategies and to examine their contributions to the language development of the child.

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