



Effectiveness of Mother Delivered Simultaneous Prompting Taught by Visual Support on Teaching Chained Skills to Their Children with Autism *

E. Sema Batu ¹, Funda Bozkurt Aksoy ², Nuray Öncül ³

Abstract

Only teaching in schools is not enough for individuals with developmental disabilities for them to be independent in the society. For this reason, the present study has four purposes(a) Can the mothers implement simultaneous prompting reliably which was taught to them via visual supports?, (b)Can children with developmental disabilities acquire the target skills which were taught by their mothers?, (c) Can mothers and children with developmental disabilities maintain and generalize the acquired skills during the study?, and (d) What are the opinions of mothers regarding the teaching method and the study? In order to reach these purposes, a multiple probe design across participants was used in the study with four children and their mothers. After conducting the study at the homes of the participants, it was seen that mothers reliably implemented simultaneous prompting which was taught via a training CD, besides, children with developmental disabilities acquired the target skills which were taught by their mothers in the study.

Keywords

Parent training
Simultaneous prompting
Developmental disabilities
Visual support

Article Info

Received: 10.18.2012
Accepted: 06.13.2014
Online Published: 08.06.2014

DOI: 10.15390/EB.2014.2367

Introduction

In order to be independent in the community, education and training only in schools is not sufficient for children with developmental disabilities. Besides the educational programs at school, systematical parent training programs for individuals with developmental disabilities which will be provided by their parents at home are essentially needed. With these implementations, individuals with developmental disabilities will be easily a part of independent lives in the community as a part of the community (Batu, 2008; Cavkaytar, 2007).

There are several studies conducted with the purpose of parents to help their children by teaching them new skills and concepts. In these studies, parents or caregivers taught home-skills (Batu, 2008), self-help skills (Cavkaytar, 2007), spare time activities (Wall & Gast, 1997b), toilet skills (Özcan & Cavkaytar, 2009; Sönmez & Aykut, 2011), laundry skills (Morrow & Bates, 1987), community-based skills (Tekin-İftar, 2008), language and communication skills (Seung, Ashwell, Elder & Valcante, 2006; Tait, Sigafos, Woodyatt, O'reilly & Lancioni, 2004), shopping skills (DiPipi-Hoy &

* This study was a part of a project supported by Anadolu University with the Project number 1006E124.

¹ Anadolu University, Research Institute for the Handicapped, Turkey, esbatu@anadolu.edu.tr

² Anadolu University, Faculty of Education, Department of Special Education, Turkey, fbozkurt@anadolu.edu.tr

³ Anadolu University, Faculty of Education, Department of Special Education, Turkey, noncul@anadolu.edu.tr

Jitendra, 2004), etc. to their children with developmental disabilities. According to these studies, parents and caregivers were provided systematic training about using teaching methods and techniques and they were able to teach target skills to their children by using those methods and techniques.

In our regulations parents are suggested to take active part in their children's education programs from assessment of their children through preparing the teaching program and evaluating the implemented program (Özel Eğitim Hizmetleri Yönetmeliği, 2000). It is also reported that parents are usually out of the process or they do not know how to take part in the process or they are very seldomly in the process (Keçeli-Kaysılı, 2008). This is partly because, professionals usually see parents as the people to collect information or give information about their children (Sucuoğlu & Kargın, 2006). Moving from this point, parent training programs which will be provided through distance education can be seen as an effective way of the solution (Batu, 2008; Cavkaytar, 2007).

Simultaneous prompting is one of the teaching methods which parents use effectively for teaching skills to their children with developmental disabilities. Simultaneous prompting is a teaching method which was used in their research studies due to its being easy to use and effective in teaching new skills. When the literature is reviewed, several studies can be found in which simultaneous prompting was used with individuals with developmental disabilities (Akmanoğlu & Batu, 2004; Akmanoğlu-Uludağ & Batu, 2005; Doğan & Tekin-İftar, 2002; Griffen, Schuster & Morse, 1998; Johnson, Schuster & Bell, 1996; Morse & Schuster, 2004; Palmer, Collins & Schuster, 1999; Singleton, Schuster, Morse & Collins, 1999; Tekin-İftar, 2003; 2008; Tekin & Kırcaali-İftar, 2002; Wolery, Ault & Doyle, 1992 etc.).

In the studies which were conducted from 2000 up to now, many research studies were conducted for teaching sight words (Waugh, Alberto & Fredrick, 2011), naming colors (Dere-Çiftçi & Temel, 2010), matching letters with sounds and combining letters with pre-learned words (Waugh, Fredrick & Alberto, 2009), showing cities, rivers and neighbour countries on the map and naming symbols in maths (Gürsel, Tekin-İftar & Bozkurt, 2006), naming relatives (Akmanoğlu-Uludağ & Batu, 2005), pointing to the numerals from 1 to 9 (Akmanoğlu & Batu, 2004), pointing to the named job picture (Doğan & Tekin-İftar, 2002) to individuals with developmental disabilities. In all these studies, simultaneous prompting was provided by either researchers or trainers in 1:1 or small group activities, and was found to be effective in teaching various target behaviors.

In order to maintain the skills which were taught in schools in the natural environments of children with developmental disabilities, parents' or care-givers' taking roles in education of their children is essential. Reviewing the literature, many research studies were found which parents or care-givers taught new skills to their children. For example, Ozcan and Cavkaytar (2009) aimed to train three mothers by using a parent training program in order to teach toilet skills to their children with developmental disabilities. In another study Tekin-İftar (2008) taught three mothers and a grandmother to use simultaneous prompting for them to teach shopping which is a community based skill to their children with developmental disabilities. Batu (2008), similar to Tekin-İftar (2008) taught three mothers and a grandmother to use simultaneous prompting for them to teach home skills in their homes to their children. In another study, Cavkaytar (2007) worked with three children with developmental disabilities, their mothers and classroom teachers. Researcher examined the effectiveness of a parent training program on mothers' and teachers' teaching self-help and home skills to children with developmental disabilities. On the other hand, Tait, Sigafos, Woodyatt, O'Reilly and Lancioni (2004) worked with six children with developmental disabilities and physical disabilities and their parents. Researchers determined the pre-language skills which their children already have and functional communication skills that parents want their children to acquire during the study. Authors conducted the study in order to enlarge the pre-language skills with functional communication skills. At the end of the study, it was seen that mothers managed to teach the target functional communication skills to their children.

Reviewing the research studies both related with the mothers and care-givers and also with conducting simultaneous prompting, it can be seen that there is a large number of studies been conducted. Although there are so many studies, a study examining the mother provided simultaneous prompting which was taught through distance learning, and also examining the reliability of mothers' conducting the process for teaching new skills to their children with developmental disabilities could not be seen in the literature. Simultaneous prompting teaching method which will be taught through visual supports to the parents or care-givers will provide the parents to be independent since they will not need to go to school to learn the teaching method. Besides, this will help parents and caregivers to teach new target skills at their own homes to their children with developmental disabilities. Moving from this point of view, the present study was planned with the following four purposes: (a) Can the mothers implement simultaneous prompting reliably which was taught to them via visual supports?, (b) Can children with developmental disabilities acquire the target skills which were taught by their mothers?, (c) Can mothers and children with developmental disabilities maintain and generalize the acquired skills during the study?, and (d) What are the opinions of mothers regarding the teaching method and the study?

Method

Participants

Participants of the study are children with developmental disabilities and their mothers:

(a) Participant mothers: Four mothers participated in the study. Two of the mothers were high school graduates and two were faculty graduates. One of the mothers was 33 years old, and other mothers were in the range of 35-40 years old. All mothers were housewives and from medium socio-economic status. All participant mothers were volunteers for the study. At the beginning of the study, mothers were told about the purpose of the study, also that the study would be conducted in their own houses during the days and hours which are available for themselves and the researchers. Besides, they were also told that they would record the study by a handy-cam, and during reporting the study, pseudonyms would be used for both mothers and their children. They were also told that they would leave the study whenever they want and they were asked to sign a confirmation letter including all the information mentioned above.

(b) Participant children: Four children with developmental disabilities participated in the study. All participant children had a diagnosis of autism from governmental hospitals and were all seven years old children. Except Cagdas, all participants were attending a university unit small group education since two years. Cagdas has attended to 1:1 training for two days of the week for one hour each day at the same unit for two years. During the implementation of the present study, Cagdas was attending to a Rehabilitation Center for two days of the week for one hour each day in 1:1 arrangement and also a school for children with autism in a small group arrangement. In Figure 1 mother-child diads and target skills for children participants can be seen.

Prerequisite behaviors for the participant children were (i) understanding simple verbal directions (i.e. “button up”), (ii) being able to imitate simple behaviors (i.e. after providing the model of putting down the toy on the table, the child does the same), (iii) being able to participate in an activity for 4-5 minutes, and (iv) having a parent of care-giver who will take place willingly in the study.

Table 1. Participant Mother-Child Diads and the Target Skills Taught to Children Participants

Mother name	Child name	Target skill	Generalization skills
Reyhan	Serdar	Button up	Tooth brushing
İnci	Erdal	Button up	Tooth brushing
İmren	Enes	Button up	Cleaning mouth with a napkin
Aynur	Çağdaş	Tooth brushing	Hand washing

On Table1, participant children and their mothers diads and their target skills can be seen. As seen on the figure, target skill of three participants is button up whereas target skill of Çağdaş is hand washing.

Setting

Probe, training, and maintenance sessions were conducted at the houses of the participants. Training settings were selected depending on the target skills of children (e.g. tooth brushing was conducted in the bathroom).

Generalization data were collected in different settings for mothers, and with different materials in different settings for children participants. Generalization sessions were conducted in the university unit with mothers. Participant children’s generalization sessions were conducted in related settings with the target skills (e.g. tooth brushing was conducted in the bathroom of the house during training sessions whereas generalization was conducted in the sink of the toilets of the university unit).

Materials

During the study, training CD, a laptop, CD player, materials necessary for the target skills, reinforcers, skill analysis of the target skills, and data collection forms were used. In the training CD, use of simultaneous prompting was taught. One of the authors told simultaneous prompting orally and after every step told orally, sample trainings were shown by a special education teacher and a typically developing child while teaching different chained skills. Besides, there were oral presentation and visual samples of probe sessions as well. Filling out the data collection forms were also taught in the training CD.

Design

A multiple probe design across participants was used in the study. Regarding this design, while collecting baseline data from the first participant, baseline data were collected with the second, third, and fourth participants during only the first session of the baseline. When a consistency was met with the first participant in the baseline sessions, training was started with the first participant mother. When training was started with the first participant mother, baseline data was collected from the second participant and probe data was collected with the third participant mother. When the criterion was met with the first participant during training, training sessions of the second participant mother was started, and baseline data were collected from the third participant mother. When the criterion was met with the second participant, training was started with the third participant. This process was replicated until the fourth participant mother met the criterion in the study. During the process, probe data were collected from the participants (Kırcaali-İftar & Tekin, 1997).

Dependent Variable

The study has two dependent variables. First dependent variable is the implementation of simultaneous prompting by the participant mothers, and the second dependent variable is children participants' learning their target skills. While mothers were conducting simultaneous prompting treatment reliability data were collected. Children's learning their target skills was examined via the number of steps correctly presented by target children regarding the skill analysis.

Independent Variable

Independent variable of the study is the simultaneous prompting teaching method which was taught through visual supports to the mothers. The method was taught via training CD to the participant mothers. Mothers were expected to teach target skills to their children by using the teaching method that they learned from the training CD.

General Procedure

Experimental Procedure: Experimental procedure consisted of training of mothers, probe (daily probe and full probe sessions), training, maintenance, and generalization sessions. All sessions were conducted by the mothers.

Probe Sessions: Two types of probe sessions were conducted in the study: (a) full probe sessions and (b) daily probe sessions.

(a) *Full Probe Sessions*: Full probe sessions were conducted by mothers of children participants with the supervision of the researchers. First full probe session (baseline) was conducted before training was started, second, third, and fourth probe sessions were conducted after each participant child met the criterion on their own target skills for at least three consecutive sessions.

Full probe sessions were conducted as follows: Participant mother provided the attentional cue (e.g. "Now we are going to button up. Are you ready?"). If the child mentions that he is ready to work orally or by pointing, mother praised the child and provided the skill direction (e.g. Great, now button up."). Afterwords, mother waited for 4 sec. for the child's response. During the sessions, the session was ended with the first "-" (minus) step of the skill analysis, and the rest of the steps were not conducted and coded as incorrect responses on the data collection forms. During the probe sessions, correct responses of the participant children were praised by verbal and social reinforcers by their mothers by using continuous reinforcement schedule. Incorrect responses were ignored. Cooperation of the child during the sessions were praised with verbal (e.g. "good boy, well done"), social (e.g. "give me five") and tangible (e.g. toy car, crayolas, etc.) reinforcers by their mothers.

Behaviors which were expected from the mother participants during the full probe sessions were: (i) Controlling the necessary materials for target skill, (ii) providing the attentional cue (e.g. Now we are going to button up. Are you ready?), (iii) providing the skill direction (e.g. "button up."), (iv) providing correct responses for the child's responses (praising correct responses by social and verbal praises, ignoring incorrect responses, and verbal praises at the end of each session). Mothers collected data regarding the responses of their children and also regarding their own use of simultaneous prompting as the treatment reliability data.

(b) *Daily Probe Sessions*: Daily probe sessions were conducted after every three training sessions for the mothers' ease of use. Mothers conducted the Daily probe sessions after conducting three consecutive training sessions with their children and checked the correct responses of their children regarding the target skill.

Training Sessions: Training sessions were also conducted in the houses of the participants. Training sessions were consisted of two different trainings: (a) mothers' training, and (b) training sessions conducted for teaching target skills to the participant children.

(a) *Mothers' Training Sessions*: Mothers' training was realized via the training CD which was prepared by the authors previously. Participants were asked to watch the Cd two-three times and let the authors know when they were ready to implement at their homes meeting with one of the

researchers. During these meetings, participant mothers implemented an example session including one session of probe and one session of training with the researcher. During this implementation, the participant and the researcher filled in the treatment reliability forms. After the sessions were completed, they compared the reliability forms and discussed about the incorrect behaviors while filling in the forms. They also watched the Cd again and again in order to realize the incorrect steps conducted by the participant mothers and make the treatment reliability between 90-100% for the real implementations. After they acquired 90-100% treatment reliability, participant mothers started to teach target skills to their children.

At the same meeting sessions, to conduct the probe sessions was also an aim for the mothers. Mothers conducted an example session for probe implementations as well as treatment implementations during the meeting and until they acquire the probe session skills with 90-100% reliability, they were asked to watch the training Cd again and again. As soon as they conducted the probe session with 90-100% reliability, they were asked to start teaching target skills to their children.

(b) *Teaching Target Skills to Children*: Target skills were determined by asking their mothers. Mothers were asked which skill they would want their child to learn during the study and the skills they mentioned were analyzed by the researchers. Using the skill analysis the performance levels of target children were examined by the researchers. After the researchers were sure about the target skills were not known by the children, these skills were determined as the target skills of the participant children. Training sessions were planned to be conducted three times a week when the mothers and their children were available for the study. During the training sessions, mothers taught the target skill using simultaneous prompting to their children. Children were provided with social or verbal praises during the sessions, and at the end of each session they were praised by tangible or activity reinforcers.

The skills to be performed by participant mothers during the training sessions were as follows: (i) Checking the necessary materials for teaching the target skills, (ii) providing the attentional cue (i.e., "We are going to start buttoning, are you ready to work with me?"), (iii) providing the task direction (i.e. "Button up."), (iv) providing the controlling prompt (i.e. Now we hold the button with one hand and the hole with the other hand."), (v) providing correct responses to the child's behaviors (i.e. providing social and verbal praises to correct responses, ignoring incorrect responses, providing verbal praises at the end of the sessions). After mothers finish to record the data for their children, they recorded their own performances. Mothers used full physical prompt as the controlling prompt during the training sessions.

Maintenance Sessions: Maintenance sessions were conducted after completing the training sessions in order to see if the participant mothers maintained using simultaneous prompting procedure and if the children maintained the target skills. The maintenance sessions were conducted at the homes of the participants. Maintenance sessions were conducted the same as the probe sessions of the study.

Generalization Sessions: Generalization sessions were conducted immediately after the baseline data were collected from the children regarding the target behaviors, and after the children met the criterion with the target behaviors as a pre and post-test implementation. The generalization sessions for the participant children were planned as conducting the target behavior in different setting with different materials. Generalization sessions for the participant mothers were planned as using simultaneous prompting teaching procedure for teaching different skill to their children, using the procedure in a different setting, and conducting probe sessions for teaching different skill to their children. Generalization sessions for children participants were conducted the same as the probe sessions. Generalization sessions for mothers were conducted the same as the training and probe sessions during the study.

Data Collection

Four types of data were collected during the study including effectiveness, maintenance, generalization, social validity and reliability data. Effectiveness, maintenance and generalization data were collected via recording the data of children's correct and incorrect responses for the target behavior and calculated the percentage of correct responses. These data were collected by the mothers and recorded on the data collection forms.

Treatment reliability data were collected from the probe (Daily and full probe), training, maintenance and generalization sessions. 30% of all sessions were used to calculate the reliability data of the study.

In order to collect social validity data open ended questions were prepared. For asking the opinions of mothers regarding the study six questions were addressed to the mothers. Mothers were asked to write the answers of the questions under the questions. Social validity forms were delivered in closed envelopes to the mothers and they were asked to reply and send the answers back in closed envelopes to the researchers.

Data Analysis

Effectiveness, maintenance, and generalization data were collected from children participants by their mothers regarding their correct and incorrect responses. Correct response percentage was calculated from these data. The results at the end of the study were transferred to graphical analysis.

In order to analyse the treatment reliability data, "observed trainer behavior/planned trainer behavior X 100" formule was used (Tekin-İftar & Kırcaali-İftar, 2004).

Social validity data were collected via open ended questions from the mother participants. Answers of these questions were analyzed descriptively.

Results

Treatment Reliability Results Regarding Mothers' Using Simultaneous Prompting Teaching Procedure

Reliability data were collected and analyzed in order to determine how mothers used the simultaneous prompting teaching procedure. Regarding this aim, probe, treatment, maintenance, and generalization sessions were observed. 30% of all sessions were analyzed regarding the treatment reliability of the study.

Two types of generalization were conducted for mother participants. In the first generalization type, mothers were observed in the sessions which were conducted after teaching the target skills to their children. In the second generalization type, mothers were expected to perform a probe and a training session for teaching a different skill to their children by using simultaneous prompting teaching procedure. For this generalization implementation, mothers selected to teach tooth brushing to Serdar and Erdal, cleaning his mouth to Enes, and hand washing to Cagdas. Generalization sessions were conducted in a pre and post-test design. All generalization data for both mothers and children participants were 0% correct response.

Mother Reyhan implemented simultaneous prompting teaching procedure with an average of 84,6% (r= 67-100%) in training sessions, with an average of 96,75% (r= 87-100%) in probe sessions and with an average of 100% in the maintenance sessions.

Mother Inci implemented simultaneous prompting teaching procedure with an average of 67,8% (r= 33-100%) in training sessions, with an average of 97,25% (r= 89-100%) in probe and maintenance sessions and with an average of 97,25% (r= 89-100%) in the generalization sessions.

Mother Imren implemented simultaneous prompting teaching procedure with an average of 93,8% (r= 80-100%) in training sessions, with an average of 100% in probe and maintenance sessions and with an average of 100% in the generalization sessions.

Mother Aynur implemented simultaneous prompting teaching procedure with an average of 97,4% (r= 87-100%) in training sessions, with an average of 100% in probe and maintenance sessions and with an average of 97,6% (r= 88-100%) in the generalization sessions.

Results Regarding Effectiveness of Simultaneous Prompting

Graphs of mothers' using simultaneous prompting for teaching chained skills to their children can be seen in Figure 1. In the figure, correct response percentages of probe, treatment, and maintenance were pointed.

In Figure 1, correct response percentages of children participants regarding the target skills they were taught by their mothers can be seen. In the figure it is pointed that, Serdar, Erdal and Enes acquired their target skills in 3-4 sessions whereas Cagdas still did not meet the criterion in eight sessions. Therefore, training of Cagdas was completed in the 8th training session and maintenance and generalization data were not collected from Cagdas.

Generalization Results

Generalization data were collected from both mother and children participants of the study. Generalization sessions were conducted with different materials in different settings with the target skills of each child participant. Since the children could not perform the skill steps in the pre-test session, the correct response percentage was pointed as 0% for the pre-test session. Except Cagdas, participant children performed their target skills with an accuracy of 100% during the post-test session of generalization. Since Cagdas could not acquire his target skill during training, generalization data were not collected from Cagdas during the post-test sessions. In Figure 2, generalization results of children participants with different materials and in different settings can be seen. As pointed in the figure, children participants performed 0% accuracy in the pre-test session, and 100% accuracy in the post-test session.

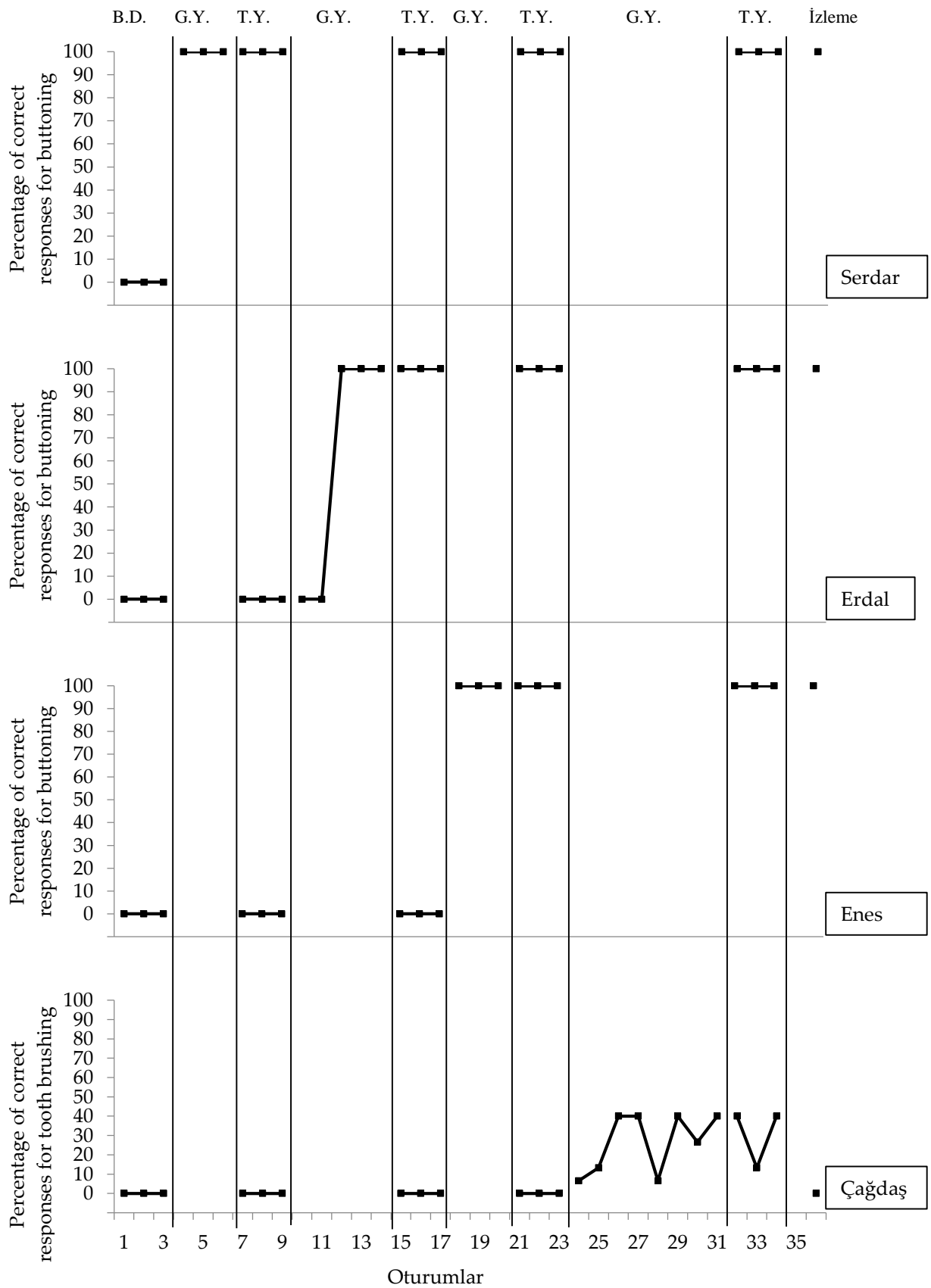


Figure 1. Percentage of Correct Responses of Children Participants during the Probe, Training, and Maintenance Sessions

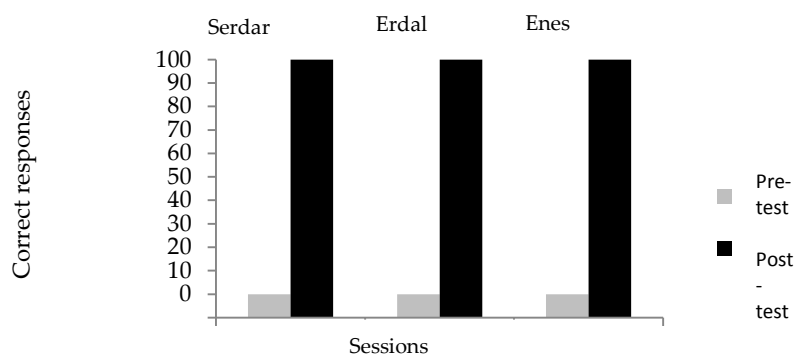


Figure 2. Percentage of Correct Responses of Children Participants during the Generalization Sessions

Social Validity Results

Six questions were asked to mother participants in order to collect the social validity data of the study. In the first question, mothers were asked how many times they have watched the training Cd of the study. All mothers mentioned that they watched the Cd three times.

In the second question, mothers were asked what their opinions were regarding the benefits of teaching new skills to their children on their own. Mothers mentioned that they would be able to teach new skills to their children by using effective teaching methods by using the training Cd. Besides, they realized that they would be able to teach new skills more quickly by effective methods.

In the third question, mothers were asked what kind of differences might be done in the training Cd for better implementations. Three of the mother participants mentioned that the Cd might be used as it was used in their study, whereas the fourth participant suggested to use a child with development in one example and one child with developmental disability in another example for the example training videos in the training Cd.

In the fourth question mothers were asked if simultaneous prompting teaching procedure was usable for teaching different skills to their children and the reason for that. Mothers told that training Cd was with example videos and very usable therefore, easily implemented. Besides, they added that they would easily use the teaching procedure for teaching different skills to their children.

Fifth question in the social validity form was the most approved part of the study by the mother participants. Mothers mentioned that the teaching procedure was told in depth and in an understandable format, so that it was easy to use for them. A mother also told that she learned to use prompts to teach new skills for her child and she thought that it was really important for her.

The last question was about the parts that they disliked in the study. Mothers mentioned that there was not any part they disliked in the study.

Discussion

The present study had four purposes: (i) Can mothers use simultaneous prompting which was taught via visual supports reliably?, (ii) Can children with developmental disabilities acquire the chained skills taught by their mothers?, (iii) What were the opinions of mothers regarding the study?, and (iv) Can mothers and children participants maintain and generalize the acquired skills?

Results of the study revealed that simultaneous prompting which was taught to mothers of children with developmental disabilities via visual supports was effective on teaching target skills to their children. Besides, results showed that participants were successful in maintaining and generalizing the skills they acquired during the study. Social validity results revealed that, mother participants were happy about learning a new teaching method for teaching new skills to their children.

When the results of the present study were compared with other studies' results, similar results can be seen in the related literature (Maciag et al., 2000; Parrot et al., 2000; Riesen et al., 2003; Tekin-Iftar, 2008). In the mentioned research studies, simultaneous prompting was provided in structured teaching environments with systematic implementations, and found to be effective. In the present study, simultaneous prompting was implemented by mothers in their homes where less structured environments were set, and acquired skills were maintained both mother and children participants of the study.

Results of the present study reveals that mothers could use simultaneous prompting reliably for teaching target skills to their children. This finding was also similar with the studies in which simultaneous prompting was provided by people other than teachers and trainers (Batu, 2008; Tekin-Iftar, 2008; 2003; Tekin & Kircaali-Iftar, 2002). Although there are studies in which simultaneous prompting was provided by people other than teachers and trainers, this is the first study which taught simultaneous prompting to parents via visual supports.

Some important points should be considered while reading this study. The first point was, during the study mothers should call the researchers for asking questions and also for planning the next step of the research implementation, but sometimes they neglected this. In these situations, researchers called the mother participants and asked how their implementations were going and when they would be able to meet with the researchers. This point can be considered as a negative effect on mother directed part of the study.

Second point to be mentioned was that mother participants forgot to provide task direction from time to time during the training sessions. This resulted with decreased treatment reliability percentage of mothers' using simultaneous prompting during the study. Although mothers sometimes forgot to provide the task direction, with the attentional cue provided (e.g. "Now we are going to button up, are you ready to work with me?"), children understood the skill and started to perform the target skill. Besides, since the controlling prompt of the study was full physical prompting, children started to perform the skill with the prompt as well. By saying this, it can be assumed that although treatment reliability of the study was decreased because of this point, it was not a barrier for the children to perform their target skills.

Another important point to be mentioned was that although they did not mention in the social validity forms, mother participants told the researchers verbally that they had difficulties in recording the data. Mother participants were expected to fill the data collection forms for their children's acquiring the target skill, and the treatment reliability form for their own using simultaneous prompting for teaching the target skill to their children. Although they had difficulties, they told that they filled the forms because they promised the researchers to do so.

Regarding the results of the present study, some suggestions can be emerged for future research studies and implementation. In the present study, mothers of children with autism participated. It can be suggested to conduct studies with mothers of children with different developmental disabilities and the effectiveness of the training Cd could be examined with these mothers. Training Cd can be used with teachers who did not have the training of using simultaneous prompting before and the effectiveness could be examined with those teachers. New training Cds could be prepared for teaching constant time delay teaching procedure or most to least prompting and the effectiveness of these Cds can be examined. For implementation, the visual records of parents using simultaneous prompting with their children can be added to the training Cd.

References

- Akmanoğlu, N. & Batu, S. (2004). Teaching pointing to numerals to individuals with autism using simultaneous prompting. *Education and Training in Developmental Disabilities, 39*, 326-336.
- Akmanoğlu-Uludağ, N. & Batu, S. (2005). Teaching relative names to children with autism using simultaneous prompting. *Education and Training in Developmental Disabilities, 40*, 401-410.
- Batu, S. (2008). Caregiver-delivered home-based instruction using simultaneous prompting for teaching home skills to individuals with developmental disabilities. *Education and Training in Developmental Disabilities, 43*, 541-555.
- Cavkaytar, A. (2007). Turkish parents as teachers: Teaching parents how to teach self-care and domestic skills to their children with mental retardation. *Education and Training in Developmental Disabilities, 42*, 85-93.
- Dere-Çiftçi, H. & Temel, Z.F. (2010). A comparison of individual and small group instruction with simultaneous prompting for teaching the concept of color to children with a mental disability. *Social Behavior and Personality, 38*, 479-484.
- DiPipi-Hoy, C. & Jitendra, A. (2004). A parent-delivered intervention to teach purchasing skills to young adults with disabilities. *The Journal of Special Education, 38*, 144-157.
- Dogan, O. S. & Tekin-Iftar, E. (2002). The effects of simultaneous prompting on teaching receptively identifying occupations from picture cards. *Research in Developmental Disabilities, 23*, 237-252.
- Griffen, A. K., Schuster, J. W. & Morse, T. E. (1998). The acquisition of instructive feedback: A comparison versus intermittent presentation schedules. *Education and Training in Mental Retardation and Developmental Disabilities, 33*, 42-61.
- Gürsel, O., Tekin-Iftar, E. & Bozkurt, F. (2006). Effectiveness of simultaneous prompting in small group: The opportunity of acquiring non-target skills through observational learning and instructive feedback. *Education and Training in Developmental Disabilities, 41*, 225-243.
- Johnson, P., Schuster, J. W. & Bell, J. K. (1996). Comparison of simultaneous prompting with and without error correction in teaching science vocabulary words to high school students with mild disabilities. *Journal of Behavioral Education, 6*, 437-458.
- Keçeli-Kaysılı, B. (2008). Akademik başarının artırılmasında aile katılımı (Parent participation in decreasing academic success). *Özel Eğitim Dergisi, 9(1)*, 69-83.
- Maciag, K. G., Schuster, J. W., Collins, B. C., & Cooper, J. T. (2000). Training adults with moderate and severe mental retardation in a vocational skill using a simultaneous prompting procedure. *Education and Training in Mental Retardation and Developmental Disabilities, 35*, 306-316.
- Morrow, S. A. & Bates, P. E. (1987). The effectiveness of three sets of school-based instructional materials and community training on the acquisition and generalization of community laundry skills by students with severe handicaps. *Research in Developmental Disabilities, 8*, 113-136.
- Morse, T. E. & Schuster, J. W. (2004). Simultaneous prompting: A review of the literature. *Education and Training in Developmental Disabilities, 39*, 153-168.
- Özcan, N. & Cavkaytar, A. (2009). Parents as teachers: Teaching parents how to teach toilet skills to their children with autism and mental retardation. *Education and Training in Developmental Disabilities, 44*, 237-243.
- Palmer, T., Collins, B. C. & Schuster, J. W. (1999). The use of a simultaneous prompting procedure to teach receptive manual sign identification to adults with disabilities. *Journal of Developmental and Physical Disabilities, 11*, 179-191.
- Parrott, K. A., Schuster, J. W., Collins, B. C., & Gassaway, L. J. (2000). Simultaneous prompting and instructive feedback when teaching chained tasks. *Journal of Behavioral Education, 10*, 3-19.
- Riesen, T., McDonnell, J., Johnson, J. W., Polychronis, S., & Jameson, M. (2003). A comparison of constant time delay and simultaneous prompting within embedded instruction in general

- education classes with students with moderate to severe disabilities. *Journal of Behavioral Education, 12*, 241-259.
- Seung, H. K., Ashwell, S., Elder, J. H. & Valcante, G. (2006). Verbal communication outcomes in children with autism after in home father training. *Journal of Intellectual Disability Research, 50*, 139-150.
- Singleton, D. K., Schuster, J. W., Morse, T. E. & Collins, B. C. (1999). A comparison of antecedent prompt and test and simultaneous prompting procedures in teaching grocery words to adolescents with mental retardation. *Education and Training in Mental Retardation and Developmental Disabilities, 34*, 182-199.
- Sucuoğlu, B. ve Kargın, T. (2006). *İlköğretimde kaynaştırma: Yaklaşımlar, yöntemler, teknikler (Inclusion in primary school: Approaches, methods, techniques)*. İstanbul: Morpa Yayınları.
- Tait, K., Sigafos, J., Woodyat, G., O'Reilly, M. & Lancioni, G. (2004). Evaluating parent use of functional communication training to replace and enhance prelinguistic behaviors in six children with developmental disabilities. *Disability and Rehabilitation, 26*, 1241-1254.
- Tekin-İftar, E. (2008). Parent-delivered community-based instruction with simultaneous prompting for teaching community skills to children with developmental disabilities. *Education and Training in Developmental Disabilities, 43*, 249-265.
- Tekin-İftar, E. (2003). Effectiveness of peer delivered simultaneous prompting on teaching community signs to students with developmental disabilities. *Education and Training in Developmental Disabilities, 38*, 77-94.
- Tekin, E. & Kircaali-Iftar, G. (2001). *Özel eğitimde yanlışsız öğretim yöntemleri (Errorless teaching in special education)*. Ankara, Turkey: Nobel Yayınevi.
- Wall, M. E. & Gast, D. L. (1997a). Caregivers as teachers: Using constant time delay to teach adults how to use constant time delay. *Education and Training in Mental Retardation and Developmental Disabilities, 32*, 213-228.
- Wall, M. E. & Gast, D. L. (1997b). Caregivers' use of constant time delay to teach leisure skills to adolescents or young adults with moderate or severe intellectual disabilities. *Education and Training in Mental Retardation and Developmental Disabilities, 32*, 340-356.
- Waugh, E.R., Alberto, P.A. & Fredrick, L.D. (2011). Effects of error correction during assessment probes on the acquisition of sight words for students with moderate intellectual disabilities. *Research in Developmental Disabilities, 32*, 47-57.
- Waugh, E.R., Fredrick, L.D. & Alberto, P.A. (2009). Using simultaneous prompting to teach sounds and blending skills to students with moderate intellectual disabilities. *Research in Developmental Disabilities, 30*, 1435-1447.
- Wolery, M., Ault, M. J. & Doyle, P. M. (1992). *Teaching students with moderate and severe handicaps: Use of response prompting strategies*. New York: Longman.