On-the-job Training of Special Education Staff: Teaching the Simultaneous Prompting Strategies

Sezgin VURAN[a]
Anadolu University

Seray OLÇAY GÜL
İlk Emek Special Education and
Rehabilitation Center

Abstract

The aim of this study is to analyze the effectiveness of staff training on discrete-trial teaching (DTT). Multiple baseline design across subjects was used in order to analyze the effect of the training program on the educators' performance on probing and intervention implementation. For teaching these two skills, presentation of an information manual, live model and error correction including feedback giving through video were used. The results showed that the percentage of correct response related to probing and training skills through simultaneous prompting was 100% among all participants. Students who were instructed by these educators also reached 80-100% correct responding level in terms of the skill taught. Follow-up data was collected 4-8 weeks after the completion of the process and it was seen that the participants partially maintained the skills acquired. Social validity data was collected in order to assess opinions of the participants about the survey.

Key Words

Staff Training, Simultaneous Promptings, Discrete-Trial Teaching, Individuals with Developmental Disabilities.

The success of individuals with developmental disabilities depends on the effective and proper use of appropriate teaching methods as well as the changes and adaptations of the attitudes of the people who play active roles in the child's education, such as peers, staff and parents. Staff members are individuals who interact with children with developmental disabilities and provide services to them (Sturmey, 2008). Considering this relationship, the effectiveness and significance of training these staff members have become an important current issue.

a   **Sezgin VURAN, Ph.D.**, is currently department chair at the Department of Special Education at Anadolu University. Her research interests include applied behavior analysis, social skills training, educating special education teacher, invdividualized education program. Correspondence: Assist. Prof. Sezgin Vuran, Anadolu University, Faculty of Education, Eskişehir/Turkey. E-mail: svuran@anadolu.edu.tr Phone: +90 222 3350581.

Staff Training: A Review of the Literature

In the existing literature, there are many studies on the effects of staff member training on a staff's performance and the performances of the individuals with developmental disabilities to whom the staff provides service. Most of the studies aim to teach discrete-trial teaching, an evidence-based practice, to staff members working with children who suffer from developmental disabilities (Belfiore, Fritts, & Herman, 2008; Dib & Sturmey, 2007; Fazzio, Martin, Arnal, & Yu, 2009; Koegel, Russo, & Rincover, 1977; LeBlanc, Ricciardi, & Luiselli, 2005; Ryan & Hemmes, 2005; Sarokoff & Sturmey, 2004, 2008; Thiessen et al., 2009). The findings of these studies indicate that staff members, who have undergone this training, enjoy a distinct increase in the accurate usage of this method. In another studies on staff training, teaching through daily routines (Lavie & Sturmey, 2002), and the evaluation of stimu-

lus preferences (Lavie & Sturmey), have been conducted to gain information and skills to staff member.

In staff training, there are four main methods: *the handbook,* which presents related information through a trainer's written notes; *modeling,* which trains the staff via live performances or videos; *rehearsal,* which encourages trainees to apply their skills; and *feedback,* which is the trainer's explanations of the staff's performance through written, oral or graphic accounts (Sturmey, 2008).

In most of the studies investigating the effectiveness of staff training methods, at least two of these methods were used together (Dib & Sturmey, 2007; Koegel et al., 1977; Lavie & Sturmey, 2002; Leblanc et al., 2005; Ryan & Hemmes, 2005; Sarokoff & Sturmey, 2004, 2008; Schepis, Reid, Ownbey, & Parsons, 2001), yet in only one study was the effectiveness of self video modeling (in which the participants watch themselves) examined (Belfiore et al., 2008). The teaching methods in staff training play a significant role in creating the desired effects on the staff and the individuals taught by the staff. In addition, these methods are expected to be efficient in terms of time and effort. These features are involved in the desired characteristics of staff training (Sturmey, 2008).

In Turkey, the discrete-trial approach was applied in various studies. The approach was conducted using errorless teaching methods, which are based on the idea that students learn skills and concepts more easily from their correct responses and exercises rather than the errors through teaching (Tekin-İftar &Kırcaali-İftar, 2004). Simultaneous prompting is one such teaching method. Researchers themselves employ this method in the studies applying simultaneous prompting (Çelik, 2007; Doğan, 2001; Fetko, Schuster, Harley, & Collins, 1999; Gibson & Schuster, 1992; MacFarland-Smith, Schuster, & Stevens, 1993; Parker & Schuster, 2002; Parrot, Schuster, Collins, & Gassaway, 2000; Schuster & Griffen, 1993; Sewell, Collins, Hemmeter, & Schuster, 1998; Singleton, Schuster, Morse, & Collins, 1999; Toper, 2006; Yücesoy, 2002). Only in one study was the intervention conducted with siblings without developmental disabilities (Tekin & Kırcaali-İftar, 2002).

Teaching through simultaneous prompting requires the trainers to carry out such steps as defining the stimulus to be tested on an individual, identifying the controlling prompting, through which teacher ensures that student performs the target behavior, besides, planning simultaneous prompting trial sessions, defining the response interval, identifying the individual's response, determining the data recording method, and making other necessary changes in the process (Tekin-İftar & Kırcaali-İftar, 2004). Additionally, probing sessions are also conducted to test whether or not learning occurs because the individual does not have the opportunity to react independently during the teaching through simultaneous prompting process (Morse & Schuster, 2004). Therefore, probing becomes as important for the trainer as teaching through simultaneous prompting.

Although there has been an increase in the number of studies employing errorless teaching methods so far, in practice, these methods are not used as accurately and as often as required by educators, who mostly prefer to use traditional methods. This practice affects children who cannot learn through traditional methods, the teachers teaching such children and the parents who cannot realize the expected changes in their children's development. However, the use of these methods can become widespread by educating many instructors about the knowledge and skill required of different teaching methods by implementing systematic staff training programs.

This study differs from other staff training research within the existing literature in that it is the first study on the effectiveness of such staff training in Turkey. In addition, it aims to teach the educators who work with individuals suffering from developmental disabilities, the skill of using simultaneous prompting (SP) within the form of discrete-trial teaching (DTT). Thus, this study intends to analyze the effectiveness of staff training by considering the performances of individuals taught by these trained staff members. Moreover, in this study, as an error correction method, comparing in vivo modeling and self video modeling are used as different from traditional methods.

Purpose

The aim of this study is to analyze the effectiveness of the staff's training, which taught three educators working at a special education and rehabilitation center the teaching through SP within the form of DTT. In accordance with this aim, the following research questions were addressed:

-Is the applied training method effective at teaching the three educators the skills of probing and teaching through SP within the form of DTT?

-If the skills of probing and teaching through SP within the form of DTT can be taught to three educators, will these skills continue four and eight weeks later after the initial implementation?

-Is the applied staff training effective at aiding the students' learning?

-What are the educators' opinions about the training?

Method

Participants

In this study, two groups of participants were involved. The first group consisted of three educators working at the center where this study was conducted, while the second group involved three students with developmental disabilities taught by said educators. The participants in the first group volunteered for the study after a meeting presenting the aim and scope of the study with all the educators at the center. In addition, as a secondary criterion for selection, those who did not have any knowledge and experience about teaching through simultaneous prompting were selected using interviews. In these interviews, all of the participants explained that they generally use the direct teaching method and that they have difficulty with controlling any behavioral problems during teaching. Furthermore, they confirmed that they did not have any knowledge or experience regarding errorless teaching methods.

The three selected volunteer educators working as pedagogues and educationists in the center have the following features. All three participants are women, 26 years old and graduated from Hacettepe University, Department of Child Development and Education in 2008. They have worked for approximately two years in the special education and rehabilitation center as educators. All of the participants have taught and worked with children diagnosed with pervasive developmental disorders, mental retardation, physical retardation and specific learning disabilities.

The participants in the second group are the students who were taught by the selected educators and who could not know the names of the objects in the shown pictures. The profiles of these students are as follows:

Bulent was nine years old and diagnosed as suffering from moderate mental retardation. This diagnosis was established at Sami Ulus Child Hospital. Bulent has been taking support education for four years at special education and rehabilitation centers. Metin was seven years old and had received special education and support services since he was two years old. He had been diagnosed as suffering from moderate mental retardation at Başkent University Hospital. Hasan was seven years old and diagnosed as suffering from moderate mental retardation at Sami Ulus Child Hospital. He has been training at special education and rehabilitation centers for about three years.

All of the students in the study could react when they were called by name, show their attention to the speaker with gestures, mimic movements, identify the named object among other pictures, obey single- or two-staged instructions, make sentences consist of only one word, and express their needs with such sentences. However, they were limited in their ability to name objects or the pictures of object, use motion verbs and make sentences with two or more words. The target behaviors to be studied with the students were chosen after examining the students' Individualized Education Programs and discussing with their parents and educators. Afterwards, "Student will identify the name of object in the shown picture" was selected as the primary target behavior to be taught to the students.

Research Design

To examine the effectiveness of the staff training on the educators' probing and teaching, multiple probe designs derived from multiple baseline designs were adapted in this study. Multiple probe designs are preferred if the participants cannot perform the target behavior and changing the student's environment after collecting the baseline data would have no effect or if collecting the baseline data for the second and third dependent variables over a long period of time is impossible. Following this method, potential problems during research can be minimized (Horner & Baer, 1978). In this study, multiple probe design across subjects in which probing data is collected intermittently (Richards, Taylor, Ramasamy, & Richards, 1999) was selected to avoid making any changes to both the educators' and the students' course schedules at the center.

Dependent and Independent Variables

There are two dependent and two independent variables under investigation. One dependent

variable was the educators' ability to execute the probing and teaching process for three consecutive sessions at a 95% or greater accuracy level. The other dependent variable was the students' ability to name the correct picture among three different pictures within five seconds.

The first independent variable of the study was the staff training the educators had undergone to gain the ability to teach process using SP within the form of DTT. The staff training consisted of a multi-stage process involving the presentation of the information manual, error correction such as in vivo modeling and video feedback. The staff training was conducted by first researcher who had doctorate and graduate degrees with over 25 years of general teaching experience and over 20 years of teaching applied behavior analysis courses at the undergraduate and graduate level. The second independent variable was the teaching process using SP within the form of DTT.

Definitions of Target Behaviors

The target behaviors expected from the educators at the probing sessions included the following:

- Preparing equipment
- Presenting attention-grabbing prompts to draw an individual's attention before teaching
- Providing skills instruction to teach the individuals the skills needed to react appropriately to the stimuli
- Waiting for the individual's reaction for three-five seconds
- After the first trial, recording both correct and incorrect reactions
- Waiting for 2 seconds between trials
- Passing to another trial
- Ending the session when the decided probing trials are completed
- Reinforcing the individual's participation

  The target behaviors expected from the educators at the teaching sessions through simultaneous prompting include the following:

- Preparing equipment for teaching
- Presenting special attention–grabbing prompts to draw the student's attention to the study before starting the teaching process
- Providing skills instruction to teach the individuals the skills needed to react appropriately to the stimuli

- Presenting controlling prompting right after the target stimuli
- Presenting 12 trials for each stimuli with a waiting time of 0 seconds
- Waiting for the student's reaction for three-five seconds
- Reinforcing the individual's correct reactions
- Ignoring the individual's incorrect or absent reactions
- Repeating the trial once more
- Recording the individual's reaction
- Waiting for two seconds between the trials
- Ending the session 12 trials are completed
- Reinforcing the individual's participation
- Enacting a probing session before starting another session

Meanwhile, the students were expected to identify the correct picture of three different pictures shown within five seconds. For Hasan, "fork, spoon, and plate" were determined to be the target behaviors; for Bulent, "horse, elephant, and monkey." For Metin, "fork, spoon, and plate" were initially targeted, but Metin reached the target at the end of baseline phase in which the educator received the summary information. As a result, "pomegranate, apple, pear" were determined as target behaviors for Metin for the stage in which the information manual was presented to the educator.

Setting

The study was conducted in a special education and rehabilitation center in which a total of 288 students were diagnosed with developmental disabilities, pervasive developmental disorder, specific learning disability, and mental and physical retardation. Every student attending the center received either two-hour individual tutoring sessions and one-hour group learning sessions or two-hour individual tutoring sessions only. There are fourteen educators, three psychologists, five physical therapists and nine support staff members in the center.

The study was conducted in one of the individual education classes at the center. In this class, there was a table, two chairs, one coffee table, one cupboard and a camera. In addition, the equipment necessary for implementation was also in the class. During the implementation, 20x20 cm-sized flash-

cards depicted the pictures of the objects to be taught, and pencils and data recording charts prepared the students for learning the picture-identification skills that were to be utilized during the probing and teaching sessions.

Research Process

The research process consists of a baseline, intervention and following phases, as explained in the following paragraphs.

Baseline Phase for the Educators

At the baseline phase, data for two different skills were collected: the skill of probing and the skill of presenting SP within the form of DTT. In the interviews before implementation, the educators explained that they did not know anything about teaching through SP within the form of DTT. Thus, at the baseline phase, the educators were first given summary information explaining how to carry out probing sessions (App. A). After reading this summary, the educators were asked to collect probing data related to their students' picture-identification skills during the three consecutive sessions. After a one-hour break, the same implementation process was repeated for teaching through SP within the form of DTT. The summary information used in this process is presented in Appendix B. The educators were expected to perform a total of 12 trials, wherein they were to collect data regarding each target behavior four times per session during the probing and teaching process. The baseline sessions continued until at least three continuous and consistent data sets were collected. Through summary information, we were able to observe the effects of this information on the educators' performance.

Baseline Phase for the Students

The data that was collected by the educators at the sessions conducted after the information manual (the sessions in which high -at least 70%- treatment reliability was ensured) was accepted as the baseline data with respect to the skills to be taught to the students.

Intervention Phase (Staff Training Process)

At the intervention sessions, each educator was taught individually but was taught probing and

teaching through SP within the form of DTT together. To that end, information manual, which included detailed explanations and examples on how to probe and teach through SP within the form of DTT, was distributed to the educators. Afterwards, the educators were asked to read the manuals, and the interventionist explained the difficult sections of the manual. The educators were given time to revise the manual, and when they felt ready, they were asked to teach picture-identification skills to the students using their newfound methods.

The educators were asked to perform three sessions with respect to picture-identification skills at a time, as one probing and one teaching session, and at each session, they were to teach three target behaviors. In sum, they performed a total of 12 trials, with four trials per target behavior. A one-hour break was given between each session. At manual phase, the educators were expected to reach at least 95% accuracy of correct responses levels for three consecutive sessions. Since the first and second educators could not satisfy this criterion, they proceeded to the error correction phases in which in vivo modeling and video feedback were presented. Although the third educator reached the criterion, she was allowed to participate in the error correction phase because she was the last participant and wanted to see her errors.

During the video feedback process, we watched the videos of the educators' performances, and after selecting the best performances, we watched them with the educators. Afterwards, in vivo modeling with respect to the probing and teaching process were presented. During this time, an adult accompanied the first researcher and posed as a model for all scenarios likely to be encountered during the probing and teaching process. The educators were then asked to compare the self video model and the in vivo model, find their errors and offer suggestions to correct these errors. This process was repeated until the educators achieved responding levels of 95% accuracy.

Follow-up

The follow-up sessions were carried out four and eight weeks after implementation was completed. These sessions were conducted like the baseline sessions, but the summary information was not given this time. In the follow-up phase, the educators performed one probing and teaching session per target behavior.

Interobserver Reliability

The data for interobserver reliability was collected from 25% of all of the sessions. The video recordings for all of the sessions were given numbers, and through random assigning, the videos to be watched were selected. Then the data for interobserver reliability was collected from the first and second researchers by watching the videos independently. While calculating the coefficient of interobserver reliability, the formula of [Agreement/ (Agreement + Disagreement)] x 100 was used. The data for interobserver reliability is presented in Table 1.

Treatment Reliability

In this study, two different treatment reliability data sets regarding the first researcher and educators' training sessions were collected. To check to what extent the first researcher's training complied with the plan, reliability data was collected from 20% of all of the sessions. These sessions provided data stability. For this purpose, the behaviors expected from the interventionist during the prepared implementation plan were determined, and the observers were informed about these behaviors. To calculate the treatment reliability coefficient, the formula of [Observed practitioner behavior / Planned practitioner behavior] x 100 was used. As a result, treatment reliability was calculated to be 100%.

However, to evaluate to what extent the educators carried out teaching through SP within the form of DTT per the plan, the reliability data on the probing and teaching sessions conducted by the educators was collected after considering all the sessions in baseline and intervention phases. The obtained data is presented in Table 2.

Social Validity

To evaluate the social validity of the study, right after the first follow-up session, the educators were asked, "What are your opinions about the training process presented to you?" Their answers were submitted in an envelope to the center's secretary. Thus, by analyzing the anecdotes taken from the educators' opinions and the diaries kept by the second researcher during the implementation process, the social validity data were collected.

Findings

Effectiveness Data on Trained Staff

Since the educators in this study explained that they did not have any knowledge or experience about teaching through SP within the form of DTT, summary information was presented to them at the baseline phase, at which point the baseline data was gathered. At the baseline phase, mean correct response percentages on both probing and teaching skills were determined. These averages are given in Table 3.

According to the data, all educators showed progress in both probing and teaching through simultaneous prompting after the presentation of the information manual. However, after error correction, all participants reached 100 % correct response levels for at least one session of both probing and teaching. Even during follow-up sessions four-eight weeks later, we were able to detect that they had kept 98-100% of their acquired skills. The participants' progress throughout each phase of the probing and teaching process is illustrated in Figure 1.

Table 1.
The Data for Interobserver Reliability

Türkan		Sevil		Çağla	
Probing (%)	**Intervention (%)**	**Probing (%)**	**Intervention (%)**	**Probing (%)**	**Intervention (%)**
99	99	93	94	100	99
99	100	100	95	100	100
100	95	94	97	98	100
-	-	99	99	93	98
99	98	97	96	98	97

Table 2.
The Data of Treatment Reliability

Türkan (Bülent)		Sevil (Metin)		Çağla (Hasan)	
Probing (%)	**Intervention (%)**	**Probing (%)**	**Intervention (%)**	**Probing (%)**	**Intervention (%)**
74	72	85	85	78	85
Mean: 73		85		82	

The baseline data for the students' picture-identification skills was collected during the sessions following the presentation of the information manual to the educators. With regard to the students' picture-identification skills, we observed that the first student progressed from 2,6% to 47%, the second student progressed from 36% to 83%, and the third student progressed from 80% to 100%. However, at the follow-up sessions conducted four-eight weeks later, we realized that Bulent could not retain his skills, as he achieved only a 25% correct performance. But we also observed that Metin continued to average around 79%, and that Hasan averaged around 91%. In other words, both students had permanently learned the picture-identification skill. The students' performances are illustrated in Figure 2.

Findings on Social Validity

The findings on social validity were obtained by analyzing the data from the educators' opinions about the process and the second researcher's research diaries. Once the educators' opinions were examined, we realized that they had expressed fewer opinions about the process and more opinions about the methods. The educators generally believed the following: they had benefited a lot from training; they reached successful results more quickly thanks to this method; and they had improved in their ability to monitor the students' performances. Moreover, they explained that they could allocate more time to teaching because they now followed a definite plan. They also realized the significance of reinforcement during the teaching process, and they became accustomed to keeping records. However, with regard to the training process, the educators emphasized that the error correction was the phase where they had received the most benefit. Furthermore, the educators claimed that they "could evaluate their performances better and realize their mistakes" after in vivo modeling.
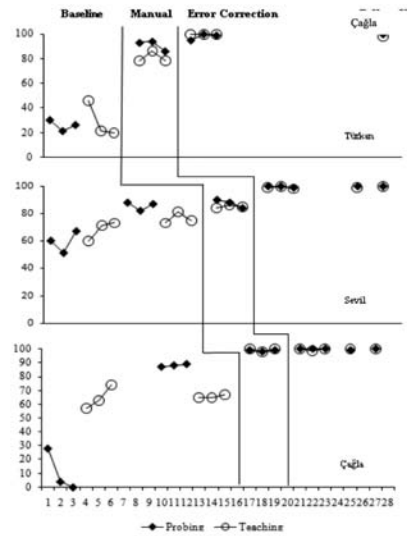
Figure 1.

Figure on the Participants' Skills of Probing and Teaching through Prompting

When the second researcher's diaries were examined, we saw that two of the educators used expressions such as, "I did not know what to do. I panicked," at the phase during which summary information was presented. In addition, they looked quite worried during the first implementation process (in which baseline data was collected). However, after the presentation of the information manual, they felt more relaxed and became more confident during the implementation process. One of the educators articulated her opinion about this phase by saying, "OK, now everything is clear. I became relaxed". The second researcher worked at the same center as the educators. After the implementation process, the educators sometimes discussed other students with whom they had carried out teaching through simultaneous prompting. For example, Sena asked the second researcher to observe her lesson, during which she conducted teaching through simultaneous prompting to a student with Williams syndrome. The second observer accepted

Table 3.
Correct Response Percentages on both Probing and Teaching Skills

	Probing		Intervention	
	Baseline Phase	After Information Manual	Baseline Phase	After Information Manual
Türkan	26	91	29	81
Sevil	59	86	72	85
Çağla	49	99	66	99

her offer and recorded her lesson. As a result, it was found that she had performed the method at a 90% accuracy level.
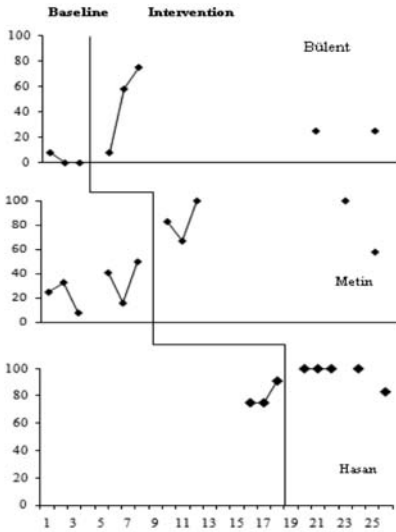

Figure 2.

Figure on the Students' Skill of Naming Shown Picture

Conclusions and Discussion

This study examined the effectiveness of staff training given to educators on teaching through SP within the form of DTT as well as the effect of this teaching process on the children's performances. The findings of the study indicated that educators could meet the criteria for teaching through SP within the form of DTT through staff training. In addition, the children, who were taught by these trained educators, were also able to acquire the target behaviors. These findings are consistent with the results of the studies, in which the staff members acquired the skill of presenting discrete-trial teaching and the effects of their teachings on the children's performances were examined (Dib & Sturmey, 2007; Sarokoff & Sturmey, 2008).

While teaching through simultaneous prompting, individuals do not have the opportunity to react independently. Thus, probing sessions are enacted in order to test whether learning occurred or not (Morse & Schuster, 2004). To that regard, in this study, probing and teaching through simultaneous prompting were handled as two different skills. Data regarding the educators' performances (probing for three sessions and then teaching through simultaneous prompting for three sessions at the

baseline) was collected. We aimed to teach the educators the necessity of enacting probing sessions during teaching through simultaneous prompting while also monitoring clearly the children's progress.

Although there was no change in the educators' performances for teaching through simultaneous prompting at the baseline, the baseline data for probing indicated that the second participant progressed from 60% to 86%, and the third participant progressed from 15% to 88%. This increase could be due to the probing and teaching trials having similar steps; also, there is a transfer effect for similar steps explained in the summaries of both skills. In addition, there are fewer and less complicated steps during the probing process, the participants had teaching skills and multiple testing also had an effect. Although all of these factors contributed to learning probing skills, they did not help the educators reach the target criterion in the study. This study indicated that the target criterion could be reached with less effort through staff training, where the information manual and the error correction methods were presented. In contrast to traditional methods, the use of in vivo modeling and self video modeling practices helped the educators to evaluate their own performances and to realize their errors more easily. With this method, the educators gained awareness about their own implementation flaws, which averted the need for other people to point out the errors. Thus, the educators were able to reach the 95% correct response criterion for three consecutive sessions.

In the existing literature, the studies on staff training generally adopted traditional methods, yet video modeling practices were used only in Belfiore et al. (2008) study. In that study, video modeling practices such as self video modeling were used during staff training, and the findings similarly showed that the educators had acquired the skill of using discrete-trial teaching at the criterion level. Furthermore, in the present study, we observed that the students who had been taught by the educators utilizing teaching through simultaneous prompting had shown progress. Two students reached 100% correct response levels and kept their acquired skills after the implementation process. One student (Bulent) reached a 75% correct response level at the end of the sessions. However, this student experienced only six sessions with high treatment reliability because his educator performed at a very low level before the presentation of the information manual, which was well below the nine teaching sessions required to learn the target skill. If

more sessions with high treatment reliability could have been conducted, the student could have reached the 100% correct response level and acquired the skill permanently. Another student, Metin, performed the first target behavior at 100% in the first six sessions because his educator had been teaching at over 70% treatment reliability level during the baseline sessions prior to the presentation of summary information. At the end of the following six sessions, Metin performed the target behavior at 100% and acquired his skill permanently. The educator working with Hasan taught nine sessions at 65% and over treatment reliability level during the baseline sessions; at the end, Hasan reached 100% correct response level and later continued to achieve a 91% accuracy level. These findings indicate that the students who had been taught with high treatment reliability learned better and acquired their skills permanently.

In sum, the staff training program, which included the information manual, in vivo modeling and self video modeling, was effective at both improving the educators' teaching skills through SP within the form of DTT and at teaching the students the target behaviors.

Suggestions

In further studies,

- the effectiveness of implementation can be examined by giving more detailed summary information
- the effectiveness of in vivo modeling and self video modeling can be compared
- training educators on different teaching methods can be attempted
- staff members working at different positions can be trained
- a study with small groups can be designed.

On the other hand, in further applications, through widespread staff training, larger population can be reached.

Appendix A.

Identifying the children's performances with regard to the picture-identification skill (for testing trials)

Because children do not have the opportunity to react independently during teaching sessions, probing sessions can test whether children learn or not, i.e., their performances. There are three pictures in the attached envelope. After putting these pictures on the table, you will evaluate whether or not the child knows the names of the objects on the picture. Be sure not to give prompting, and after each reaction, mark the correct and independent reactions on the data recording form. Record the reactions given as a result of prompts as wrong reactions.

During each probing session:

1. Ensure that the child pays attention.
2. Present the correct materials.
3. Give the appropriate instructions for the child's correct reaction.
4. Wait for the child's reaction.
5. Continue until the 12 teaching trials are completed.
6. Mark the results on the evaluation table.
7. Inform us when you complete the trials.
8. End the session when the trials are completed.
9. Reinforce the participation.

Appendix B.

Teaching the picture-identification skill through SP within the form of DTT

You will teach the children with developmental disabilities the picture-identification skill through SP within the form of DTT. There are three pictures in the attached envelope. After putting these pictures on the table, you will teach the child the names of the objects on the picture. You will name one of the pictures. Try to teach the names of three pictures according to the following steps:

Summary of the steps

Arrange the necessary materials

Decide on the results followed with wrong and correct reactions

At each trial:

1. Ensure that the child pays attention.
2. Present the material.
3. Provide accurate teaching.
4. Provide the prompting at the same time as the instruction.

5. Once the child reacts correctly, give the previously determined feedback or reward for the correct reaction.

6. After wrong reactions, teach once more.

7. Continue until 12 teaching trials are completed.

8. Mark the results on the evaluation table.

9. Inform us when you complete the trials.

10. This study will take 10-15 minutes.

References/Kaynakça

Belfiore, P. J., Fritts, K. M., & Herman, B. C. (2008). The role of procedural integrity: Using self-monitoring to enhance discrete trial instruction (DTI). *Focus on Autism and Other Developmental Disabilities, 23*, 95–102.

Çelik, S. (2007). *Zihinsel yetersizlik gösteren çocuklara kavram öğretiminde doğrudan öğretim ve eşzamanlı ipucuyla öğretimin etkililik ve verimliliklerinin karşılaştırılması.* Yayımlanmamış yüksek lisans tezi, Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Eskişehir.

Dib, N., & Sturmey, P. (2007). Reducing student stereotypy by improving teachers' implementation of discrete-trial teaching. *Journal of Applied Behavior Analysis, 40*, 339–343.

Doğan, O. S. (2001). *Zihin özürlü çocuklara adı söylenen mesleğe ait resmi seçme becerisinin öğretiminde eşzamanlı ipucuyla öğretimin etkililiği.* Yayımlanmamış yüksek lisans tezi, Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Eskişehir.

Fazzio, D., Martin, G. L., Arnal, L., & Yu, C. T. (2009). Instructing university students to conduct discrete-trials teaching with children with autism. *Research in Autism Spectrum Disorders, 3*, 57-66.

Fetko, K. S., Schuster, J. W., Harley, D. A., & Collins, B. C. (1999). Using of simultaneous prompting to teach a chained vocational task to young adults with severe intellectual disabilities. *Education and Training in Mental Retardation and Developmental Disabilities, 34* (3), 318-329.

Gibson, A. N., & Schuster, J. W. (1992). The use of simultaneous prompting for teaching expressive word recognition to preschool children. *Topics in Early Childhood Special Education, 12*(2), 247-267.

Horner, R. D., & Baer, D. M. (1978). Multiple-probe technigue: A variation on the multiple baseline design. *Journal Applied Behavior Analysis*, *11*, 189-196.

Koegel, R. L., Russo, D. C., & Rincover, A. (1977). Assessing and training teachers in the generalized use of behavior modification with autistic children. *Journal of Applied Behavior Analysis, 10*, 197–205.

Lavie, T., & Sturmey, P. (2002). Training staff to conduct a paired-stimulus preference assessment. *Journal of Applied Behavior Analysis, 35*, 209-211.

LeBlanc, M. P., Ricciardi, J.N., & Luiselli, J.K. (2005). İmproving discrete trial instruction by paraprofessional staff through an abbreviated performance feedback intervention. *Education and Treatment of Children, 28*, 76-82.

MacFarland-Smith, J., Schuster J. W., & Stevens, K. B. (1993). Using simultaneous prompting to teach expressive object indentification to preschoolers with developmental delays. *Journal of Early Intervention, 17*, 50-60.

Morse, T. E., & Schuster, J. W. (2004). Simultaneous prompting: A review of literature. *Education and Training in Developmental Disabilities, 39*, 153-168.

Parker, M. A., & Schuster, J. W. (2002). Effectiveness of simultaneous prompting on the acquisition of observational and instructive feedback stimuli when teaching a heterogeneous group of high school students. *Education and Training in Mental Retardation and Developmental Disabilities, 37*, 89-104.

Parrot, K. A., Schuster, J. W., Collins, B. C., & Gassaway, L. J. (2000). Simultaneous prompting and instructive feedback when teaching tasks. *Journal of Behavioural Education, 10*, 3-19.

Richards, S. B., & Taylor, R. L., Ramasamy, R., & Richards, R. Y. (1999). *Single subject research: Application in Educational and clinical settings.* Wadsworth: Thompson Learning.

Ryan, C. S., & Hemmes, N. S. (2005). Post-training discrete trial teaching performance by instructors of young children with autism in early intensive behavioral intervention. *The Behavior Analyst Today, 6* (1), 1-12.

Sarokoff, R. A., & Sturmey, P. (2004). The effects of behavioral skills training on staff implementation of discrete-trial teaching. *Journal of Applied Behavior Analysis, 37*, 535–538.

Sarokoff, R. A., & Sturmey, P. (2008). The effects of instructions, rehearsal, modeling, and feedback on acquisition and generalization of staff use of discrete trial teaching and student correct responses. *Research in Autism Spectrum Disorders, 2* (1), 125-136.

Schepis, M. M., Reid, D. H., Ownbey, J., & Parsons, M. B. (2001). Training support staff to embed teaching within natural routines of young children with disabilities in an inclusive preschool. *Journal of Applied Behavior Analysis, 34*, 313-327.

Schuster, J. W., & Griffen, A. K. (1993). Teaching a chained task with a simultaneous prompting procedure. *Journal of Behavioural Education, 3*, 299-315.

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.

Sturmey, P. (2008). Best practice methods in staff training. In J.K. Luiselli, D.C. Russo, W.P. Christian & S. M. Wilczynski (Eds.), *Effective practices for children with autism* (pp. 159-178). USA: Oxford University Press.

Swell, T. J, Collins, B. C., Hemmeter, M. L., & Schuster, J. W. (1998). Using simultaneous prompting within an activity-based format to teach dressing skills to preschoolers with developmental delays. *Journal of Early Intervention, 21* (2), 132-145.

Tekin, E., & Kırcaali-İftar, G. (2002). Comparison of effectiveness and efficiency of two response prompting procedures delivered by sibling tutors. *Education and Training in Mental Retardation and Developmental Disabilities, 37*, 283-299.

Tekin-İftar, E., & Kırcaali-İftar, G.(2004). *Özel eğitimde yanlışsız öğretim yöntemleri* (2. bs). Ankara: Nobel Yayınevi.

Thiessen, C., Fazzio, D., Arnal, L., Martin, G. L., Yu, C. T., & Keilback, L. (2009). Evaluation of a self-instructional manual for conducting discrete-trials teaching with children with autism. *Behavior Modification, 33*, 360-373.

Toper, Ö. (2006). *Hafif düzeyde zihinsel yetersizliği olan öğrencilere renk isimlerinin öğretiminde eşzamanlı ipucuyla öğretimin etkililiği.* Yayımlanmamış yüksek lisans tezi, Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Eskişehir.

Yücesoy, Ş. (2001). *Zihin özürlü öğrencilere fotokopi çekme becerisinin öğretiminde eşzamanlı ipucuyla öğretimin etkililiği.* Yayımlanmamış yüksek lisans tezi, Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Eskişehir.