Teaching Café Waiter Skills to Adults with Intellectual Disability: A Real Setting Study

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Abstract: The purpose of the study was to examine effectiveness of the Café Waiter Education Program by providing the least prompting to three adult subjects with intellectual disability in a real-life setting. A multiple probe research design across subjects was used. Café waiter skills included five main tasks incorporating 125 skill steps. Task analysis was developed by a professional café waiter, the café manager, a doctoral student in special education, and the principal investigator. The skill steps were tested with a study sample. Ordering and dishing up menu items, serving, and cleaning up were taught through training and maintenance sessions. The research setting was a special training area in the café. Generalization and follow-up were studied in an actual café with paying customers. Generalization sessions were conducted at the end of the training sessions; generalization and follow up sessions were designed as probe sessions. For each probe session, data collection was accomplished with a single opportunity method. Correct responses were reinforced during all sessions. Incorrect responses resulted in error correction during training sessions and were ignored during probe, generalization and maintenance sessions. Findings suggested that the Café Waiter Education Program was effective when carried out using the least prompting in real settings for adults with intellectual disability.

The role of education in preparing people for employment is critical to independent living. One of the major goals of education is to prepare all students for careers and employment (Steere, Rose, & Cavaiuolo, 2007). Vocational training is an important part of general education and social life (Drew & Hardman, 2007).

This study was conducted in the Rainbow Café, which is called the Gokkusagi Kafe in Turkish. The café was built and is supported by the Tepebasi Municipality of Eskisehir, Turkey. The principal investigator would like to acknowledge to the mayor of Tepebasi Municipality, Ahmet Atac: “Thank you for your support and for offering your hand to people with disabilities and their families.” Thank you to the Rainbow Café managers; they are a special family, and thank you to other café staff members. Special thanks to Ayse Tunc, a doctoral student in the Department of Special Education at Anadolu University. Tunc assisted and observed at all stages of the study. Finally, this study would not have been completed without the super café waiters, Volkan, Eren, Cenk and Halil, and their families. Thank you for participating in the research. And many thanks to Rud Turnbull, Ann Turnbull and Ray Pence for their support in the editing process of this article. Correspondence concerning this manuscript should be addressed to Atilla Cavkaytar, Anadolu University, Faculty of Education, Department of Special Education, Eskisehir, 26470, TURKEY. E-mail: acavkayt@anadolu.edu.tr

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respect. Just as the educational aim of individuals without disabilities is preparation for independent lives, people with intellectual disability need education for acquiring independent life skills. Preparing for social life means full participation in social life. According to the classification system of ICF (World Health Organization (WHO), 2001), participation is defined as the performance by people of actual activities in social life domains, through interaction with others in contexts where they live. Consequently, preparing individuals for social life, family life, formal and informal education, meaningful activities, and paid employment is crucial (Verdonschot, Witte, De Reichrath, Buntinx, & Curfs, 2009). These skills are defined as independent life skills and are generally classified into four skill areas: basic development skills, foundations of adjustment, community adjustment skills, and prevocational and vocational skills (Close, Sowers, Halpern, & Bourbeau, 1985; Smith, Patton, & Ittenbach, 1994).

In Turkey, independent life skills training focuses on basic and self-help skills in early childhood and on vocational skills in later years. However, instead of training for jobs appropriate to the market, traditional training for jobs does not lead to individuals being employed after graduation. The results of Turkey’s disability research show that across all disability groups, 78% people with disabilities are unemployed (Ozurluler Idaresi Baskanligi (OZIDA), 2002).

Of the programs that prepare individuals with intellectual disability for careers, one of the most comprehensive in its implementation is life centered career education (LCCE) (Brolin & Lyod, 2004). According to Brolin (2004), career education is a high priority for exceptional children. LCCE is concerned with preparing for jobs gradually, from the beginning of the student’s life throughout school. There are also services for vocational consultancy, especially in adulthood. Adult service options include vocational rehabilitation, mental health/intellectual disability/developmental disabilities, independent living centers, and social security administration (Steere et al., 2007). Preparing for independent living requires a long period of time, starting with basic education to and continuing with training in vocational skills. In Turkey, individuals with special needs are trained during a period that begins with basic education and includes vocational training. Individuals without special needs undergo eight years of compulsory primary education. Vocational training for various occupations is implemented in grades nine through twelve. After four years of high school, these individuals find jobs and start vocational life or continue their education at universities. There is a different path in Turkish education for individuals with special needs. Inclusion is the primary schooling aim and individuals with mild intellectual disability are served in schools appropriate to their disabilities.

Individuals with mild intellectual disability are served in public schools as full time or part time inclusion students during their elementary education. There are special classes for children having difficulties in continuing their education in “normal” public school classes. There are also separate elementary schools for children who are not involved in public schools and the general curriculum. Individuals with moderate or severe intellectual disability are served in special classes in public schools. If these students do not benefit sufficiently from these classes, they may continue their education in separate special education schools for individuals with moderate and severe intellectual disability (Milli Egitim Bakanligi (MEB), 2006).

Individuals with intellectual disability continue their vocational education in separate job schools during their secondary school period. Those who have completed job schooling may be employed or may join vocational training centers to develop their vocational skills. These students can also benefit from courses held after school at public education centers, implemented by non-governmental organizations and civil society initiatives. However, these efforts are insufficient to address high levels of unemployment among people with disabilities in Turkey (Ozurluler Idaresi Baskanligi (OZIDA), 2002).

Individuals with intellectual disability are not employed because they are not trained to be ready for work. In a study by Baran and Cavkaytar (2007), employers stated that many individuals with intellectual disability who are working do not have employment skills. Employers also stated that these individuals grad-
uated with limited cooperation skills, which are difficult to acquire in work settings. Employers want employees to have self-management skills and prefer individuals who are punctual and follow rules. Generally, individuals with intellectual disability work as intermediate staff members on production of goods and in service provision. The findings show that employers are positive about hiring individuals with intellectual disability, so long as these employees have appropriate vocational skills.

There are different options in implementation of vocational training. Steere et al. (2007) supported an employment model provided in accordance with an individualized education plan. The supported employment model assists people with disabilities in competing for jobs in their communities and has four key functions: a) job development/placement, b) on-the-job instruction, c) ongoing assessment, and d) follow-along.

In Turkey, vocational training of individuals with intellectual disability can be categorized as taking place during one’s school period and after graduation. Training during the school period takes place only in the job school the individual attends, or in vocational training centers (Turkish Disability Act, 2005). Some vocational courses can be taken through the Turkish Employment Organization’s fund for the disabled; other courses are offered by local administrative and various voluntary agencies in the period of vocational training after schooling.

Gokkusagi Café (in English, Rainbow Café) was the site for conducting this study. The café is a vocational training project open to social interaction, located in a downtown area that both employees and customers can reach easily. The implementation of training at the Gokkusagi Café is a civil society initiative by local administration, aimed at socially integrating individuals with intellectual disability.

In the last decade, numerous studies have sought to bring vocational skills to individuals with developmental disabilities. These skills include wearing a WalkAround® mascot and entertaining customers in retail settings (e.g., Allen, Wallace, Renes, Bowen, & Burke, 2010), assisting office managers (e.g., Mechling & Ortega-Hurndon, 2007), cleaning public restrooms (e.g., Van Laarhoven, Johnson, Laarhoven-Myers, Grider, & Grider, 2009), and working in restaurant kitchens (e.g., Van Laarhoven, Laarhoven-Myers, & Zurita, 2007). In Turkey, a limited number of studies address efforts to train vocational skills in hotel housekeeping (e.g., Degirmenci, 2010), coloring patterns (e.g., Oz bey & Yikmis, 2006), washing cars (e.g., Topsakal, 2004), and photocop ying (e.g., Yucsesoy & Gursel, 2006).

There is no empirical research on local administrations that provide individuals with intellectual disability with occupations in Turkey. The authors of this study hoped to develop and extend a local administration’s implementation and decided to conduct this investigation. A real-life setting for a vocational program supported by a town municipality can be a useful solution to an employee’s work placement. The purpose of this study was to examine the effectiveness of the Café Waiter Education Program (CAWEP) on café waiter skills (CAWAS), when using the least prompting for adults with intellectual disability in a real setting.

The research questions addressed were:

1. Will CAWEP be effective at teaching students café waiter skills?
2. Will CAWEP provide students café waiter skills that can be generalized to varying numbers of customers and different types of supplies and orders in real settings?
3. Will participants, customers, employers and parents of study participants be satisfied with the CAWEP?

Method

Participants

Participants were involved at the care center on a daily basis in the social life center governed by Tepebasi Municipality. Adults with intellectual disability participated in care center activities, e.g., stringing beads, making jewelry, and drawing pictures. The municipality had announced the availability of a café where individuals with intellectual disability could work. The adults whose parents had volunteered them for participation in the study were invited to the café. Four male waiters
who were employed in June 2011 at Gokkusagi Cafe—also participated in this study. All participants and their families permitted the use of their real names in this study.

One participant, who was experienced in restaurant skills, was selected for the pilot study; the remaining three participants were selected for the experimental study. Prerequisite skills for this study were defined as a) self-help skills; b) basic communication skills; c) motor skills; d) personal hygiene skills; e) no behavior problems. Participant prerequisite skill levels were determined through interviews with participants’ parents and employers. The study was completed with three adults with mild intellectual disability. All participants attended special classes in inclusive schools for their elementary education.

Subject 1: Eren was a 20-year old male diagnosed at a local hospital with mild intellectual disability (IQ 65, WISC-R). He had expressive and receptive communication skills and was able to engage in conversation with peers, teachers, and other staff in the cafe. Eren had difficulty reading and calculating. He can commute independently.

Subject 2: Cenk, an 18-year old 11th grade male, had been diagnosed at a local hospital with mild intellectual disability (IQ 68, WISC-R). He had good expressive and receptive communication skills and was able to engage in conversation with peers, teachers, and other staff at the cafe. He was compliant to oral instruction and had no inappropriate social behavior. Cenk had basic reading and writing skills and could write his ideas in simple sentences. He is good at basic numerical processing skills. He can commute independently. Cenk was studying at a vocational school when he participated in the research.

Subject 3: Halil, 22 years old, male was diagnosed at a local hospital with intellectual disability (IQ 70, WISC-R). He was able to engage in conversation with peers, teachers, and other staff in the cafe, but had difficulty articulating some words. He had basic reading and writing skills and no difficulty in basic calculation. Halil can commute independently. He had supportive education from a private rehabilitation center.

The researcher conducted all treatment steps. Data were collected for independent and dependent variables by a trained observer for all baseline and instructional sessions. The observer was a doctoral student in special education. An independent observer observed and recorded all baseline and instructional sessions. The researcher informed the observer about the study’s aims and its record system before the study and during the pilot study.

Setting and Materials

The study was conducted at Gokkusagi Cafe, a real setting with restaurant supplies and paying customers. Gokkusagi Cafe was built in 2011 in Eskisehir by Tepebasi Municipality as a social responsibility project. In the first stages of research, the principal investigator was assigned as supervisor for the cafe by Tepebasi Municipality, which rented space for the cafe. Next, the cafe was designed to be a place where individuals with intellectual disability could receive vocational education while having paid jobs. At this stage, a family with a special needs child was named manager of the cafe. The family hired professional cooks, a custodian, and a cafe supervisor to make the cafe ready for breakfast, lunch and dinner service. All training sessions took place at the cafe’s education hall. Follow-up and generalization sessions took place in the real setting of Gokkusagi Cafe.

The study of teaching (CAWAS) to the individuals with intellectual disability took place in the Gokkusagi Cafe education hall, which was also designed as a real cafe setting. Ensuring that the training setting and the real setting were in the same building was important. Sessions took place at approximately the same time of day for each participant.

Materials used in probe and training sessions were a) menus, b) bills, c) supplies for serving meals to customers, d) supplies for serving drinks to customers, e) supplies for cleaning tables.

Research Design

As one method of single subject design, the multiple probe research design across subjects was used for determining effects of independent variables on the dependent variable. The study’s independent variable was CAWEP, which was developed by the principal investi-
The dependent variable was performance level of children on serving skills as a café waiter. Serving customer skills included all CAWAS, from the moment a customer entered the café to the moment he or she left the café.

The study’s target behaviors included all skills, starting with the customer’s entrance and continuing until he or she left the café, after the initial verbal task direction “It is time to serve the new customer.” Serving skills included five duties and 125 skill steps. Table 1 describes duty analysis.

**Cafe’ Waiter Education Program (CAWEP)**

CAWEP is a vocational education program aimed at helping adults with intellectual disability acquire CAWAS. The purpose of the program was to enable waiters to behave professionally. Table 2 depicts the competencies of this program.

CAWEP had four phases in the following order: a) pre-training, b) pre-vocational skills, c) training CAWAS, d) generalization and follow-up in real setting.

The first phase, titled pre-training, defines the waiter as an employee, specialties and functions, places where a waiter can work, and the settings. A two-hour presentation plan is prepared and provides information for participants through direct instruction.

The second phase, titled as prevocational skills, includes dressing appropriately for work, getting ready to work, and defining and preparing supplies for work. For these purposes, three hours of training are given. If participants cannot achieve the requirements, the process can be extended.

The third phase, titled as training CAWAS, aims at enabling participants to acquire the skills necessary for serving customers. The training of serving customers is given with the goal of teaching these skills. The training has five duties including 125 steps.

The fourth phase of the program consists of generalization and follow-up sessions, which are conducted with three different types of customers, orders and supplies. Generalization and follow-up sessions are conducted in real settings with real customers and are implementations of at least three real settings, observed by an expert.

In the program’s first and the second phases, acquisitions are evaluated by oral questions and answers. Acquisitions in the third and the fourth phases are evaluated by systematic teaching.

**Data Collection**

The data of baseline, probe, training, interobserver agreement, and procedural reliability were needed for defining participants’ lev-

### Table 1

<table>
<thead>
<tr>
<th>Duty Analysis of CAWAS</th>
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<tr>
<td>1. Take order from the customer</td>
<td>36 skill steps</td>
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<tr>
<td>2. Set the table</td>
<td>21 skill steps</td>
</tr>
<tr>
<td>3. Serve the customer</td>
<td>19 skill steps</td>
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<tr>
<td>4. Take the dishes from the table</td>
<td>23 skill steps</td>
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<tr>
<td>5. Clean the table and arrange the chairs</td>
<td>26 skill steps</td>
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<tr>
<td><strong>Total skill steps</strong></td>
<td>125 skill steps</td>
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### Table 2

<table>
<thead>
<tr>
<th>Competencies of the CAWEP</th>
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<tr>
<td>1. Defining characteristics of a waiter</td>
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<tr>
<td>a. Defines waiter</td>
<td></td>
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<tr>
<td>b. Describes where a waiter can work</td>
<td></td>
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<tr>
<td>c. Describes the duty of a waiter</td>
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<tr>
<td>d. Describes the duty of other staff in the café</td>
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<tr>
<td>2. Defining pre-vocational skills</td>
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<tr>
<td>a. Wearing a uniform</td>
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<tr>
<td>b. Ensuring personal hygiene</td>
<td></td>
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<tr>
<td>c. Tells names of objects used in the study</td>
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<tr>
<td>d. Shows correct places of objects used in the study</td>
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<tr>
<td>3. Serving a customer</td>
<td></td>
</tr>
<tr>
<td>a. Takes orders</td>
<td></td>
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<tr>
<td>b. Preparing the table</td>
<td></td>
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<tr>
<td>c. Serving</td>
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<tr>
<td>d. Clearing the table</td>
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<tr>
<td>e. Resetting tables and chairs</td>
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<tr>
<td>4. Serving in the real setting to at least three different customers with different orders and in at least three different settings</td>
<td></td>
</tr>
<tr>
<td>a. Serves a person/two persons/a group</td>
<td></td>
</tr>
<tr>
<td>b. Serves only drink/only food/both food and drink</td>
<td></td>
</tr>
<tr>
<td>c. Serves on second floor/in garden/inside the café</td>
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els of performing CAWAS. All session data and inter-observer agreement data were obtained with “Data Recording Form” (DRF). Procedural Reliability data were obtained with “Data Recording Form for Procedural Reliability” (DRFPA). All treatment data were collected by the principal investigator and a doctoral student as an independent observer. All sessions were videotaped for reliability data.

In this study, the participant’s baseline, training, probe, and follow up data concerning performance level of acquisition of participants on CAWAS were collected, according to the multiple probe design across subjects. Baseline and probe data were collected by the researcher using “Data Recording Form for Baseline and Probes” in accordance with the research model. All baseline probes and training sessions were video recorded. Training data were collected by the principal investigator and recorded by the independent observer using the “Data-Recording Form” (DRF).

A five-question social validity questionnaire was developed and was administered to families, customers, employers and participants after the study was completed. One question asked of customers was, “(Does) the waiter have the characteristics that a waiter should have, e.g., hygiene, friendliness...” The options were “yes,” “no,” or “not sure.” The questions asked of other persons were similar and the response choices were the same.

Procedure

Implementation included six phases: 1) pilot study; 2) collecting baseline data; 3) pre-training; 4) pre-vocational skills; 5) training CAWAS; 6) generalization and follow-up sessions in the real setting.

Phase 1: Pilot study. When CAWEP was developed, a pilot study was implemented with a participant. During that study, the independent observer recorded and observed all sessions. First, all arrangements in the instructional setting and its materials were controlled. In the first sessions, each step involved asking the participant and was controlled for if it was understood as intended. If there were skipped steps, these were added to duty analysis. The setting was designed for freedom of movement. Supplies that were not on the list were added to the list of materials.

After these implementations, baseline data were collected to determine if there were deficiencies. During training, maintenance sessions in the instructional setting and generalization and follow-up sessions in the real setting were videotaped and controlled if there were deficiencies in the program. There was compensation for these deficiencies. The participant Volkan, who had experience as a waiter, did not perform all skills in the duty analysis in baseline; he could perform all skills independently after training sessions. At the end of the pilot study, all of the videos were viewed and all preparation for the experimental study was completed.

Phase 2: Baseline. Baseline data were collected in an education setting that was designed to be similar to the real setting. The single opportunity method was used in data collection. According to this method, the first step was preparing the materials to be used and organizing the setting. Second, recording procedures were initiated by giving the individual discriminative stimuli. The skill steps carried out correctly by the individual were marked in the list as (+). When the student had no response within ten seconds, the application was stopped and all skill steps on the list were marked as (–). When the student had a correct response for one of the items, it was marked as (+); when the student had wrong responses for two consecutive items, the application was stopped and all skill steps on the list were marked as (–). When a student had a correct response for one item and a wrong response for the next item, the correct ones were marked as (+) and the skipped ones were marked as (–). No reinforcements or prompts were given. When there was consistency in the data for three consecutive responses, the baseline sessions were finished.

Phase 3: Pre-training. There was definition of training, of the waiter as an employee, specialties and functions, the places where waiters could work, and settings. With the goal of defining, a two-hour-presentation plan was prepared to provide information for participants. All participants sat around a table and listened to the experts’ explanations. Presentation took place through direct instruction.

Phase 4: Pre-vocational skills. Waitering, characteristics of waitering, places where wait-
ers can work, duties of waiters and other café staff and their duties were explained in sequence by examples. The condition of uniforms, pre-work preparations, personal cleanliness and hygiene, and the names and places of supplies waiters would use were explained in detail. Before training, parents of the participants were invited to the café, informed about the program, and asked for their written consent. Parents were requested to arrange their vacation schedules according to the study’s schedule and they all readily agreed.

Phase 5: Training CAWAS. Training of the first participant started as a necessity of the research design. When there was consistency in the data for three consecutive sessions with the first participant, probe data were taken from all participants simultaneously. Next, there was training for the second participant. The process continued with other participants, with the method using the least prompting. The criterion for completing the task was 90%. First, the elements of the educational setting were arranged and the instructional materials were controlled. A waiter who did not participate in the experimental study took a role as a customer. The target participant sat in a chair in a waiting area, behind the entrance door so that the target participant could not see him. When all arrangements were made, the researcher delivered an initial verbal task direction: “It is time to serve the entering customer.” For each step, the participant could perform the step correctly, incorrectly, or not respond. A correct response was defined as initiating a motor response in the correct sequence within three seconds of the previous step. When the participant performed the step correctly, he received the verbal praise “You are doing a good job” and waited to initiate the next step. If the participant performed all steps correctly, he received reinforcement in the form of an activity, drink, or food. The favorite activity reinforcements were taking photos and playing “patty cake,” or chatting with the researcher and observer while consuming drink and food. Incorrect responses were defined as initiating a step out of sequence or initiating a step in correct sequence but failing to correctly complete the step. No responses were defined as failure to initiate the next step within three seconds of the previous step’s completion. If a participant showed no response, a non-specific prompt was given. When a participant performed the step correctly with a non-specific prompt, he received verbal praise while waiting for initiation of the next step. If a participant performed the step incorrectly with non-specific prompts, the researcher delivered the next restrictive prompts. After each training session, participants were given information about the steps skipped or not performed. These steps received special reinforcement when performed correctly in the subsequent sessions. All responses were scored on DRF regardless of whether the step was performed independently or whether the prompt level was required to occasion a correct response if it did not occur independently. Maintenance data were collected during the three sessions after criterion was met.

Phase 6: Generalization and follow-up sessions in a real setting. Education in the real setting started after phase 5, the phase in which the real café setting was used. In this setting, generalization training was conducted in three sessions with all participants, with different customers at different times. In this real setting, with the customers placing orders and waiters serving different numbers of customers’ different type of orders, generalization were obtained naturally. The researcher gave the waiters no direct instruction in generalization and follow-up sessions, but accompanied them constantly; the researcher did give non-specific reminders. All follow-up sessions were videotaped. After the research process was complete, a DVD program with footage of the researcher’s performance including CAWAS as an example, footage of one session of the pilot study in which the performance was 100% correct, footage of one session of the participants performing 100% correctly, and photographs of the study were presented to participants as reinforcement. Participants were asked to watch the DVDs. At meetings after the study, participants said they had watched the DVDs and pointed out that this helped them see gaps in the duty analysis. They said that watching the DVDs enabled them to compensate for the skills they had forgotten during waitering.
Data Analysis

Baseline, training, maintenance, and generalization data were collected and analyzed in line charts. Satisfaction of the study data was collected from customers, parents, employers and participants. All sessions in the study were videotaped. However, implementation in the real setting was not videotaped lest it bother the customers. These sessions were recorded through direct observations by the researcher and independent observer. Effectiveness data were analyzed graphically.

Reliability

Reliability data were collected for independent and dependent variables by a trained observer for at least 30% of the total number of baseline and instructional sessions. The trained observer was a doctoral student in special education.

Dependent variables. Inter-observer agreement was obtained for a minimum of three, or one-third, of the sessions for each participant. Each session was recorded on videotape and viewed later by a trained observer for scoring purposes. Inter-observer agreement was calculated by dividing the total number of agreements for each step on the task analysis by the number of agreements plus disagreements, then multiplying the total by 100%, which yielded a percentage of agreements. Average inter-observer agreement across all sessions was 98.8% with a range between 98.6% and 99%.

Independent variables. Procedural reliability data were obtained for 30% of both baseline and training sessions for each participant. Procedural reliability was calculated by dividing the number of observed researcher behaviors by the number of planned researcher behaviors for each step of the instructional program and multiplying the result by 100. The measure points for procedure reliability were a) arranging setting; b) controlling instructional materials; c) using prompts to draw participants’ attention to training; d) delivering verbal task directions; e) waiting for responses; f) using prompts; g) delivering reinforcement. Procedural reliability across all participants was 100%.

Results

Data obtained from the study were analyzed graphically according to the research design. Line graphs were used to show participant performance levels. Data was analyzed in a linear graphic analysis technique.

As Figure 1 shows, Eren, the first target participant, could carry out two skill steps of CAWAS in the baseline phase. Eren reached the independence level after the eleventh session of the training phase. Follow-up data also indicated that Eren could carry out the skills he learned independently. In real setting implementation with Eren, non-specific prompts were used with paying customers. During real setting implementation, Eren had no difficulty completing skill steps, except for a few skill steps that he forgot to perform. He correctly completed real setting implementation approximately 97% of the time. This rate is very close to independence. Eren’s real setting follow-up data showed that he independently carried out CAWAS.

Data revealed that Cenk, the second target participant, could carry out only 3% of the skill steps in the baseline phase. However, Cenk reached independence level in the seventh session of the training phase and performed 100% of the skills independently in the follow-up phase. In Cenk’s real setting implementation, non-specific prompts were used in real setting with paying customers. During real setting implementation, Cenk had no problems completing skill steps, except for forgetting a few skill steps. He correctly completed real setting implementation approximately 97% of the time. This rate is very close to independence. Cenk’s real setting follow-up data showed that he carried out CAWAS independently.

Data also indicated that Halil, the third target participant, carried out 3% of the steps of the CAWAS in the baseline phase. After the seventh session of the training phase, Halil reached the independence level. His follow-up data revealed that Halil could carry out 100% of the CAWAS independently. In real settings implementation with Halil, non-specific prompts were used in the real setting with real customers. Halil completed real setting training independently and his real setting
follow up data showed that he carried out CAWAS independently.

The data obtained show that adults with intellectual disability could not carry out most steps of the CAWAS as a job at the baseline stage. However, significant progress was observed in CAWAS during instruction. All participants reached independence level at the
end of instruction. After completion of training sessions, generalization training started. In generalization training, cafe’ waiter participants completed skill steps independently with non-specific prompts. Participants also learned to carry out CAWAS independently in follow-up sessions after generalization training.

In data for three consecutive baseline sessions, general consistency was obtained for each participant. There were approximately nine training sessions. Training for all five duties, including 125 skill steps, were provided in each session. The shortest training session was nine minutes; the longest was 25 minutes. Sessions were approximately 20 minutes at the beginning of training; after two to three sessions, participants took approximately ten minutes to perform all skills in the duty analysis. Intensive training sessions were conducted in case participants could be influenced. Therefore, the study was completed in about thirty days and reviewed each day.

Satisfaction data were collected from families, customers, employers, and participants. According to social validity data, all participants were satisfied with implementation and all parents were satisfied with implementation their children received. Of the twenty customers served by participants in the real setting, 98% reported being satisfied with the service they received. The employers noted that participants served customers without delays and exhibited specialties expected of waiters. Employers also stated that they treated other cafe’ staff members the same as they treated the participants. Customers implied that participants needed to develop their waiting skills.

Discussion
Research and implementation strategies clearly show that people can work successfully if provided with appropriate and individualized supports (Odom, Horner, Snell, & Blacher, 2009). The current study’s results indicate that the CAWEP, when carried out in a real setting where the least to most prompting is used in training, is effective at teaching serving skills to adults with mild intellectual disability. The CAWEP is also effective at generalizing and maintaining such skills in real settings.

Results also revealed that local government initiatives can successfully provide paying jobs for adults with intellectual disability. Currently, there is wide knowledge of individuals with intellectual disability as voluntary workers. This approach provides a step toward paid employment and an alternative to being a paid worker (Trembath, Balandin, Stancliffe, & Togher, 2010). In the current study, participants started to work voluntarily because of ongoing CAWEP and eventually switched to working for pay. This implementation is appropriate to a supported employment model (Steere et al., 2007). This study intends to do more than teach vocational skills to individuals with intellectual disability. As defined by Steere, the study adopted a model supporting individuals with intellectual disability in their challenges to compete for jobs in their communities.

CAWEP served as the organizing principle in this study. Studies relevant to vocational education revealed that effectiveness of a program is best examined with a teaching method that provides task analysis of the target skill (Allen et al., 2010; Degirmenci, 2010; Mechling & Ortega-Hurndon, 2007; Ozbay, 2006; Topsakal, 2004; Van Laarhoven et al. 2009, 2007; Yucesoy & Gursel, 2006). By contrast, this study involved group training implemented in relation to proper customs and manners of waiters, communication with customers, and defining characteristics of waiter jobs. Group training implementations were also carried out for these topics crucial to work: preparing for one’s job, dressing appropriately, and maintaining personal hygiene. A key aspect of this study is its detailed introduction of the educational setting and materials and its explanation of activities. All topics were delivered through direct instruction, discussion and modeling. Many studies on vocational education of individuals with intellectual disability have focused on competence-based practices (Brolin, 2004). A competence-based program was developed in this study, representing the first effort in Turkey to develop and examine effectiveness of a vocational education program that addresses the necessities of a job for individuals with intellectual disability.

In Turkey, individuals with intellectual disability take eight years of compulsory educa-
tion followed by three years in vocational schooling (Milli Egitim Bakanligi (MEB), 2006). When they complete vocational school, these people are unemployed (Degirmenci, 2010). Moreover, their participation in social life can be difficult because Turkey provides no post-schooling support services for adults. This study is part of an effort to enable individuals with intellectual disability to receive vocational training in real settings, along with generalization and follow up for job skills. Training in real settings is crucial because it provides immediate and systematic feedback for individuals with intellectual disability.

Recent studies targeted training vocational skills with different strategies. Mechling and Ortega-Hurndon (2007) defined such strategies as a) peer delivered self-instruction; b) self-monitoring and reinforcement; c) response prompting systems with simultaneous prompting, constant time delay and a system of least prompts; d) self-instruction; e) the use of technology. In this study, effectiveness of CAWEP was examined by using the least prompting, which is a response prompting system. The study found that CAWEP was effective at teaching CAWAS to individuals with intellectual disability.

Several noteworthy observations emerged from this research. In the real setting, the participant sometimes warned other participants or waiters if he performed tasks incorrectly or skipped skill steps. Transitions from educational prompts to natural prompts without manipulation from the researcher were observed. For example, at the beginning of training the stimuli were prompts provided by the researcher, but when the participant carried out CAWAS at independence level, the participant could perform CAWAS in response to natural cues and without manipulation. In other words, at the beginning of training the participant needed the verbal prompt “It is time to serve the new customer” to initiate CAWAS, but by the end of training, the participant initiated CAWAS as soon as he saw a customer or customers entering through the café door.

The study does have limitations. First, participants’ speaking and social skills are limited. The investigators could not provide education to develop language and communication skills, but participants still had to communicate with customers at the beginning of the study. Investigators observed that participants developed their communication skills by using words such as “welcome,” “enjoy,” and by asking customers, “How are you today?” Target skills are also limited to “serving skills.” Participants did not prepare food, nor did they clean toilets or any other parts of the café, because good hygiene and personal appearance of wait staff were very important for customers. The café waiters were working only as café waiters as defined according to CAWEP. Those who held regular jobs in the café (café managers, kitchen workers and custodians) performed the café’s other daily duties.

Four adults with intellectual disability completed the CAWEP. These adults now have jobs and earn and save their money. Currently, their goals include continuing to save money, perhaps to one day purchase computers and computer games. They have started to improve their quality of life.

Future research should be conducted with other errorless teaching methods, employing video modeling or computed assisted as systematic instruction. Similar studies can be conducted train for other jobs in real settings such as restaurant waiters, kitchen staff, custodial staff, and supermarket workers. Young people and adults with a wide range of developmental disabilities will benefit from such research, as will their communities.

References


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