

THE EFFECTS OF VIDEO MODELING ON TEACHING STUDENTS WITH  
INTELLECTUAL AND DEVELOPMENTAL DISABILITIES HOW TO REQUEST A  
WORKPLACE ACCOMMODATION

By

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## ABSTRACT

### THE EFFECTS OF VIDEO MODELING ON TEACHING STUDENTS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES HOW TO REQUEST A WORKPLACE ACCOMMODATION

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Individuals with intellectual and developmental disabilities (IDD) may not always be proficient with self-advocacy skills or be aware of the accommodation rights afforded to them through the Americans with Disabilities Act (ADA), potentially hindering their success for maintaining employment and succeeding in individual job tasks. This study was designed to provide proper knowledge and training to teach individuals with IDD how to effectively advocate for their right to necessary accommodations in a workplace setting. First, the effectiveness of an initial whole group PowerPoint training to teach eight individuals with IDD who attended a school-to-work transition program how to request a workplace accommodation was examined. Following the training, ability to appropriately request a workplace accommodation was assessed through role-play probes; six participants did not perform the skill accurately and required additional training. Using a multiple baseline across participants design, these six participants completed 1:1 video modeling training, involving videos and role plays depicting each participant's individualized requests. All participants increased their percentage of correct responding after the introduction of video modeling training and three of the eight participants generalized the skill to their workplace setting. The implications and directions for future research are discussed.

*Keywords:* teaching, self-advocacy, Americans with Disabilities Act, accommodations, behavior skills training, video modeling, workplace, role play

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## **Introduction**

Individuals with disabilities experience difficulties in gaining and retaining meaningful employment compared to individuals without disabilities. In 2021, the U.S. Department of Labor, Bureau of Labor Statistics estimated that about 8 in 10 individuals with a disability (e.g., any person with a physical or mental impairment that substantially limits one or more major life activities; Stone & Colella, 1996) were not in the labor force; compared to about 3 in 10 individuals without a disability. The U.S. Department of Labor, Bureau of Labor Statistics (2021) also estimated that 19.1 percent of persons with a disability were employed, compared to 63.7 percent of persons without a disability.

Regarding individuals with specific types of disabilities, only 34% of individuals with intellectual and developmental disabilities (IDD) are actively employed, compared to 83% of individuals without disabilities (Hananel, 2018.). The American Psychiatric Association defines an intellectual disability as an impairment involving difficulties in general mental abilities that can affect an individual's adaptive functioning (e.g., daily life skills, communication, independent living), and intellectual functioning (e.g., problem solving and judgement). Although there may be several reasons for the low rates and employment issues for individuals with IDD, stereotypes and attitudinal biases have potentially played a part of the problem. Individuals with IDD are more likely to be stigmatized by employers because employers may have biases related to the individual's intelligence level or they may assume the individual has possible deficits in adaptive functioning skills (Hernandez et al., 2008; Nota et al., 2014). Despite employer stigma, research continues to show that, when appropriate supports are available, individuals with IDD can be very successful within their careers and can even serve as role models for other people within their workplace (Noonan et al., 2004).

To help support the success in individuals with IDD, the Americans with Disabilities Act (ADA) of 1990 was a law created to protect individuals with disabilities against discrimination in all areas of public life, including jobs and the workforce. This law works to ensure that people with disabilities, including IDD, have the same opportunities as everyone else (ADA, 2008). Described in Title 1 of the ADA, people with disabilities are guaranteed access to equal employment benefits and employment opportunities that are available to people without disabilities. More importantly, the ADA (2008) states that employers are legally required by the ADA (2008) to provide reasonable accommodations in the workplace to individuals who disclose their disability to their employer, stating that it is important that a “qualified individual with disabilities” can perform the essential functions of the position with or without reasonable accommodations. Accommodations are changes that remove a barrier for learning or to complete a task, without changing the expectations or specific function of the job (Lee, 2020). Accommodations listed in the ADA can include modified work schedules, job restructuring, reassignment, leave, and modified workplace policies. Knowledge of the ADA and these individual rights to request accommodations is critically important to successful employment outcomes for individuals with IDD.

Despite each of these available supports through the ADA, it is the individual’s responsibility to advocate for themselves and speak on their behalf if they need accommodations or extra support in the workplace setting. However, individuals with IDD typically do not want to impose on others and, in return, are less likely to request or express their need for accommodations (Baldrige & Viega, 2006). Furthermore, individuals with disabilities are often unable to accurately describe their disability and the impact it has on their lives (Troiano, 2009; Summers et al., 2015). Although prevocational programs are available, students with disabilities

often leave school with little to no community-based vocational experience, resulting in individuals unprepared for employment in their community and knowledge of the accommodations they may need to be successfully employed (The Arc, 2021). Due to this lack in educational support before the real world, individuals with IDD may lack the education and self-advocacy skills to request accommodations, limiting their potential success in the workplace.

Self-advocacy allows individuals with IDD to exercise their rights as citizens by communicating and representing themselves for whatever supports that they need (The Arc, 2020). Through self-advocacy, individuals with IDD can have more impact on their own situations and public policies within their workplace setting. Providing these individuals with the important knowledge, experience, and skills they need to effectively advocate for accommodations is important to help them succeed and retain meaningful employment. Teaching individuals with IDD self-advocacy skills will help them be better equipped to direct their own lives and begin to decrease the amount of supports they need from others (Test et al., 2005). These adults will also be able to communicate their needs to their co-workers and employers at their jobs, ultimately allowing them to be more successful and likely to maintain their job positions (Ellenkamp et al., 2016).

Unfortunately, there has been very little research examining effective ways to teach individuals with IDD how to request workplace accommodations or how to specifically advocate for oneself. Some studies, however, have begun to provide evidence for effective ways to teach knowledge of individual rights and teaching self-advocacy skills. Price (2019) examined the effectiveness of a self-advocacy training to teach adults with IDD about their accommodation rights in an employment setting. This intervention consisted of a 5-day training, with groups of 2-3 participants, who were taught the five specific ADA accommodation rights, the criteria



necessary for a request to be approved, and ways to identify whether the denial of an accommodation request was a rights violation or not. Video models and verbal discussions presented with a PowerPoint presentation were used during intervention. Using a non-concurrent multiple baseline design, participants completed online video assessments to rate whether each video depicted a rights violation in a workplace setting. Specifically, each video depicted a role play scenario of an employee (researcher) requesting a workplace accommodation from their employer (confederate), with the supervisor giving the employee a neutral response. At the end of each video, it was stated whether the employer accepted or denied the accommodation request. The participant was then asked “*Did the employer violate the rights of the employee?*” and the participant was expected to select whether the scenario depicted a violation or non-violation. A flowchart and a worksheet were available for the participants to reference, if needed. Results indicated that 8 of 9 participants improved their knowledge of accommodation rights as evidence through their improved accuracy on identifying a rights violation. This study was one of the first to evaluate intervention procedures to teach individuals with IDD about their ADA rights. Price (2019) called for future research to continue teaching individual’s their rights and self-advocacy skills, while focusing on how to teach individuals with IDD how to request an accommodation.

Hall et al. (2020) used a literacy based behavioral intervention to teach three college students with intellectual disabilities in an inclusive postsecondary education (IPSE) program how to self-advocate for and request an academic accommodation. The goal of this study was to evaluate if a literacy based behavioral intervention (LBBI) would increase the acquisition of a self-advocacy skill-- students asking permission to use a free online tool to record and transcribe class lectures. To teach these skills, a task analysis was created that was comprised of 13 steps

that resulted in the request to record class using Otter Voice Notes software. The primary dependent variable was the number of correct steps completed within the task analysis. At baseline, students did not score above an 8%, meaning they could not independently request the accommodation. During training, a storybook intervention was implemented to teach the self-advocacy skill of requesting the academic accommodation. The storybook consisted of different prints and pictures paired with behavioral practices, such as rehearsals or practice for each step, serving as a type of training manual for each learner (Hall et al., 2020).

Following intervention, each student completed all 13 steps with 100% accuracy and maintained the skill during maintenance sessions. This study indicated that LBBIs and the use of using a task analysis to measure skill acquisition may be an effective approach in teaching and assessing self-advocacy skills in a classroom setting. Although this study showed success in teaching individuals with IDD how to request an academic accommodation and serves as an introductory point into further exploration of requesting accommodations, it fails to explore different integrated settings and interventions. In IPSE programs, the primary goal is often to increase inclusive employment opportunities in integrated settings for students with IDD (Miller et al., 2018), thus it is important that future research determines if accommodation skills can generalize or be taught within an employment setting.

Finally, Charlop & Milstein (1989) assessed the effects of video modeling on acquisition of conversation skills for three boys who attended an after-school program for children with autism. This study also targeted generalization of these skills, maintenance of treatment outcomes, and accompanying changes in the children's appropriate question asking and in spontaneous variations regarding their speech. Intervention included five scripted conversations on the topic of specific toys. Video models were created and used to depict two familiar adults

engaging in the target conversation. The video models were delivered three times to the child and performance on completing the conversation with the therapist was subsequently assessed.

Results of the study showed that conversational skills improved significantly following intervention. After exposure to the video modeling procedure, all 3 boys acquired conversational speech and generalized performance. Additionally, the maintenance of conversation skills at a 15-month follow-up showed an increase in question asking and spontaneous variation in responses. The success in teaching conversational skills using video modeling training and scripts serve as an effective way in increasing individual skills in communication.

Given the findings of previous research indicating the use of video modeling and scripting can lead to improved performance and task analysis can accurately assess acquisition of self-advocacy skills, the current study was designed to examine whether video modeling with individualized scripts was effective to teach students with IDD to request an accommodation in a workplace setting. Performance after a brief, group training that involved a PowerPoint presentation providing knowledge of accommodations and self-advocacy was first assessed. Then, the study assessed if video modeling training with scripts could further support acquisition of the self-advocacy skills of requesting a specific workplace accommodation.

## **Method**

### **Participants**

Participants included eight young adults with IDD (2 males and 6 females) between 21 and 28 years old who had a diagnosis of an IDD. Participants were enrolled in Project SEARCH, a school-to-work transition program, in a mid-Western state. During this 1-year transition program, students rotate through three 10-12-week internships at a community business partner and receive classroom instruction related to social, adaptive, and independent living skills (Daston et al., 2012; Wehman, 2012). A typical day for an intern was comprised of classroom instruction from 8:30 AM – 9:15 AM, internship experience at their designated job site from 9:30 AM – 2:30 PM, and classroom instruction from 2:30 PM – 3:00 PM. Interns consistently received constructive feedback during classroom instruction before and after work (via special educator) and within the job-site setting (via skills trainers or supervisors). Upon completion of Project SEARCH, interns are expected to enter paid community-based employment.

Inclusion criteria consisted of 1) enrollment in the Project SEARCH school-to-work transition program; 2) a diagnosis of IDD; and 3) consent and agreement to participate in the study. Jessica was a 23-year-old, Caucasian female, diagnosed with an intellectual disability. Courtney was a 28-year-old, Caucasian female, diagnosed with an intellectual disability, Down Syndrome, developmental delay, and a health condition. Kim was a 21-year-old, Caucasian female, diagnosed with autism spectrum disorder and epilepsy. Ray was a 21-year-old, Caucasian male, diagnosed with a developmental delay. Amanda was an African American female, diagnosed with a learning disability. Kelly was a 21-year-old Hispanic/Latino female, diagnosed with an intellectual disability and developmental delay.

## **Settings**

The study took place online, using a cloud-based video communications app, Zoom. The initial group trainings were conducted with participants sitting in two different classrooms with four participants in each room, and the researcher zooming in from a different location. Due to the limited space in response to COVID-19 precautions, training sessions and post-training probes were conducted with participants in the main Project SEARCH classroom where interns met every morning before traveling to their jobsites and the researcher zooming in from a different location. To avoid as many distractions as possible, each session was completed with the researcher and intern one at a time, as far away as possible from the main class group. During training, there were two instances that Project SEARCH was required to move to virtual instruction, requiring some sessions to be completed in the participant's home, over Zoom or the FaceTime app. One generalization probe was conducted at each participant's internship site with their assigned supervisor.

## **Materials**

A task analysis of the steps for requesting an accommodation was first created by reviewing the ADA and the National Center for Learning Disabilities to identify specific criteria for an individual to be successful in communicating an accommodation request. Four main steps were deemed necessary for each individual to appropriately request a workplace accommodation. These steps included 1) going to the site supervisor, 2) disclosing their disability, 3) stating the specific issue they have on the job, and 4) stating the requested accommodation (see Table 1). Printed copies of the four-step task analysis were used for data collection.

Table 1: Steps for Requesting a Workplace Accommodation and an Example Script

Step of Task Analysis	Example Part of Script for Each Step
1. Go to the site supervisor	<i>“Hi!”</i>
2. Disclose disability	<i>“I have autism.”</i>
3. State the specific issue on the job	<i>“I have trouble staying on task.”</i>
4. State the accommodation being requested	<i>“Can I have a checklist?”</i>

Two different PowerPoint presentations were created for the initial training sessions. The first PowerPoint included information with an overview of the ADA, what self-advocacy means, what an accommodation is, and examples of different workplace accommodations that could potentially be available in a workplace setting. The second PowerPoint presentation included a review of the material introduced in the first PowerPoint and then an explicit discussion of the four steps for requesting an accommodation. This PowerPoint also included the presentation of a script specific to each intern that followed the steps in the task analysis and would be used to request an accommodation. The script was created using an accommodation worksheet that was completed by each participant.

The accommodation worksheet was created and accessed through a Google Form. This accommodation worksheet included check boxes for participants to indicate different medical, physical, sensory, cognitive, psychological, or neurological limitations they experience. The accommodation worksheet also asked each participant to check each type of accommodation example they thought would be helpful for them at work. Using information from the accommodation worksheet, individualized scripts for each participant were created. Each participants’ individualized script, stated by the researcher in the video models, included

disclosing the participant's disability, the issue they were having on the job, and the accommodation they were requesting (see Table 1 for an example script in relation to the task analysis).

An example video model was created and presented during the second day of initial training sessions, which depicted the researcher performing a workplace accommodation request. The video showed the researcher approaching an employer (confederate) and performing the four steps within the task analysis, using a made up accommodation request. Six video models were also created to depict each participant's specific workplace accommodation request. Each video showed a scenario of an employee (researcher) communicating the individualized request to their employer (confederate). The researcher in each video model correctly follows all four steps from the task analysis.

Additional materials included a MacBook Pro computer, printed copies of the task analysis data sheets, pen or pencil, and the Zoom software program.

### **Dependent Variable**

The dependent variable was accurate performance of each step on the task analysis, as measured through a role play in which participants were given the instruction by the researcher "we're going to practice asking for an accommodation, I will act as your site supervisor, ask me for your accommodation". To determine performance on the role plays, the task analysis was used to score the number of steps completed correctly and independently. To accommodate individual processing and responding needs, no time restrictions were placed on the response provided by each intern. Performance on each of the four steps was scored as (+) correct response, or (-) incorrect response. The order in which the participant performed the steps was not used to determine correct or incorrect responding.

A step with a score of a correct response consisted of the participant completing the step correctly and independently. A step was scored as incorrect if it was left out completely by the participant or stated incorrectly. An example of this would be if the participant completed step #1 by going to their site supervisor, stated the specific issue they are having on the job (step #3), and requested their appropriate accommodation (step #4), but did not complete step #2 of disclosing their disability. Another example of an incorrect response would be if the participant did not state the correct accommodation request that had been determined during the group training (e.g., they requested access to using an alarm clock, when it was determined a checklist would be an appropriate accommodation for their issue on the job). A percentage of correct steps was calculated by dividing correct responses by four and multiplying by 100.

### **Interobserver Agreement**

Interobserver agreement (IOA) was collected during 20% of sessions for each participant across baseline, video modeling, and post-training probes. A trained observer watched the video recordings and marked the steps on the same task analysis as correct or incorrect for each of the four steps. During the generalization probes in the workplace, the teacher served as the primary observer while the researcher served as a secondary observer. Agreement was defined as the research and secondary observer recording the same data for each step. Disagreement was if the research and secondary observer recorded different data for each step. IOA was calculated by counting the number of agreements on the data sheet by both observers, dividing that number by the total number of opportunities, then multiplying by 100%. Jessica, Kelly, Courtney, and Katherine had IOA of 100% across all three conditions. Amanda's IOA was 80% across all three conditions, and Ray's IOA was 91% across all three conditions.



## **Experimental Design**

Two multiple-baseline-across-participants designs were used to evaluate the experimental control of the initial training and video modeling on the participants' ability to appropriately request an accommodation at work. The two sets of multiple-baseline designs contained three participants. A participant was moved from baseline to intervention once they participant displayed a low and stable baseline and the previous participant displayed a change in trend after intervention.

## **Procedures**

### ***Initial Training***

The intervention began with a two-day group training during which the researcher met with all of the participants over Zoom. Meetings occurred two days apart. The first day of group training lasted approximately 35 min, while the second group training lasted approximately one hour. At the end of this training, each participant was asked to complete the online accommodation worksheet, either independently or with help from their teacher or job coach, before the next training session. After participants completed the worksheet and before the second training, the researcher reviewed each participant's responses and identified an appropriate workplace accommodation for them to request. Using this information, the researcher then created an individualized script that followed the four steps in the task analysis for each participant to use when requesting a workplace accommodation.

The second day of group training began with the participants asking any questions they had and a review of the information from the first day of training. Then, one at a time, the researcher shared each participant's suggested accommodation and script, and discussed any changes they wanted to make. An example of this would be if the researcher created a script that

included a disability stated as an “intellectual disability,” but the participant had trouble pronouncing “intellectual”; after joint discussion, the script was adjusted to use the participant’s preferred term- “cognitive” disability. Once scripts were finalized for all participants, the researcher presented the task analysis for requesting a workplace accommodation, and explicitly explained each of the four steps. Finally, one at a time, the researcher displayed each participant’s individualized script on the screen and each participant completed a practice role play to request their workplace accommodation with the researcher acting as their site supervisor. Participants then had the opportunity to practice requesting the same accommodation again, without a visual prompt of their script. Participants only had access to these scripts during the second day of group training. These scripts were not physically provided throughout the rest of the study and were not used as a visual prompt during video modeling training.

### ***Baseline***

Following the two-day group trainings, three baseline probes were conducted in 1:1 sessions between the researcher and the participant over Zoom. The first probe occurred one day after the training and the other two probes were completed two days after the training, one in the morning, and one in the afternoon. During these meetings, the researcher presented a similar instruction of, “we’re going to practice asking for an accommodation, I will act as your site supervisor, ask me for your accommodation.” Without access to their script, the participants were each expected to perform all steps in the task analysis by stating their individualized accommodation request that was identified and practiced during the second day of group training. Each individual baseline probe ended when the participant verbally indicated they did not know how to perform the instruction, they did not respond, or when they completed their statement (correctly or incorrectly). No instruction, prompting, or feedback was provided to the

participant during baseline sessions. Neutral praise and attention were provided for completion of the role play, whether steps were scored as correct or incorrect responses.

Following each baseline probe, the participant's score was calculated and graphed. Due to the importance and legal requirements within the ADA law, mastery criteria consisted of scoring 100% (4 out of 4) across 3 baseline probes. If the participant scored 100% on all 3 baseline probes following the two-day training, they were considered to have mastered the skill, were not required to complete video modeling training, and no further data was collected. If the participant scored less than 100% on one or more probe, they were moved to the video modeling training condition.

### ***Video Modeling Training***

During video modeling training, the researcher met with each participant 1:1 and presented their individualized video model displaying an employee (researcher) requesting their accommodation from an employer (confederate) at a jobsite. After watching the video, the researcher presented the same instruction, "we're going to practice asking for an accommodation, I will act as your site supervisor, ask me for your accommodation." The participant was then expected to state their accommodation request. The researcher again referenced the task analysis, to score each individual step as (+) correct response or (-) incorrect response. The participant completed three trials per training session, watching the video model before each trial. A percentage of correct responding was calculated for each trial and graphed at the end of each session. The participant was considered to have met mastery criterion once they scored 100% (4 out of 4) on all three trials, across three consecutive sessions.

### ***Post-Training Probes***

Post-training probes were conducted similar to baseline and were conducted each time a participant met mastery criteria for video modeling training. Once all participants in the set mastered training, post-training probes were then conducted once a week until the participants were able to complete their generalization probe in their workplace.

### ***Booster Sessions***

If the participants did not score 100% (4 out of 4) on the post-training probe, they received a booster session. Booster sessions were conducted by the researcher and were identical to the video modeling trainings. During the 1:1 booster session, the researcher shared the same video model and then presented the same instruction, “we’re going to practice asking for an accommodation, I will act as your site supervisor, ask me for your accommodation.” Similar to training, the participant completed three trials per booster session. Mastery criteria consisted of scoring 100% or 4 out of 4 steps, across three trials during one booster session. If the participant scored less than 100% during the booster session, they continued receiving additional booster sessions until they were able to correctly and independently complete 100% or 4 out of 4 steps, across three trials during one booster session.

### ***Generalization***

To assess for generalization across settings and individuals, once all participants completed video modeling training and at least two post-training probes, each participant was asked to request an accommodation at their current internship placement. The Project SEARCH teacher recorded data for each generalization probe. Before requesting an accommodation, each participant independently requested time to talk to their supervisor about workplace accommodations. The site supervisor was not required to respond with anything specific after the

participant requested an accommodation or to provide a response. The probe ended when the participant verbally indicated they did not know how to perform the request, did not provide a response, or when the participant completed their statement (correctly or incorrectly).

The teacher observed each generalization probe and video recorded the interaction between each participant and supervisor while scoring their performance on each step as either (+) correct or (-) incorrect using the task analysis. The researcher then reviewed the videos and scores on the task analysis and calculated the percentage of correct responding.

### **Procedural Fidelity**

A checklist was created for each phase of the study, including both of the initial group trainings (Appendix A & Appendix B), video modeling sessions (Appendix C), and baseline and post-training probes (Appendix D). To ensure reliability and consistent administration, a trained observer reviewed the recordings and marked whether each step was completed. Procedural fidelity was collected during both initial group trainings, 20% of training sessions, and 20% baseline and post-training probes, and was calculated by adding the number of steps completed divided by the total number of steps in the task analysis. Procedural fidelity was 100% across all phases.

## **Results**

Two of the eight participants scored 100% on all three baseline probes and did not require additional training. Among those who completed video modeling, the first three participants, Jessica, Courtney, and Katherine are depicted in figure 1. The second three participants, Ray, Amanda, and Kelly are depicted in figure 2. All six participant's performance increased after the introduction of video modeling training. Jessica, Ray, and Katherine required additional booster sessions to maintain correct responding; Courtney, Amanda, and Kelly successfully maintained performance after individual video modeling training. During generalization in the workplace, three participants maintained 100% correct responding. Results for each participant are described below.

### **Set 1**

#### ***Jessica***

Following the initial training sessions and in the absence of teaching materials, Jessica scored a stable trend of 75% accuracy across all 3 baseline probes. During video modeling training, Jessica had an immediate and steady increase in scores, achieving 100% on all 3 trials, across 3 consecutive days. After meeting mastery criteria for video modeling training within three training sessions, Jessica maintained a 100% score for the first post-training probe; however, Jessica scored a 75% on the second post-training. Following this decrease, Jessica participated in one booster session, where she immediately achieved a score of 100% across all 3 trials. After the booster session, Jessica maintained a score of 100% across two final post-training probes. Jessica scored 100% on the generalization probe while performing her accommodation request with her workplace supervisor.

### ***Courtney***

Following the initial training sessions and in the absence of teaching materials, Courtney had an average score of 40% across 4 baseline probes. During the first session of video modeling training, Courtney responded with an average of 58% across three trials. Her performance then increased during the second video modeling training session, where Courtney scored an average of 92% across the three trials. Courtney met mastery criteria after her 5th training session by maintaining a stable score of 100% on all 3 trials, across 3 consecutive sessions. After intervention, Courtney scored 100% across four post-training probes. Courtney maintained 100% accuracy on the generalization probe while performing her accommodation request with her workplace supervisor.

### ***Katherine***

Following the initial training sessions and in the absence of teaching materials, Katherine responded with an average score of 45% accuracy across five baseline probes. During the first session of video model training, Katherine's scores remained low with an average of 58% across three trials. Her scores then increased and maintained at 100% across all 3 trials for training sessions 2 and 3; on the 4th day, however, Katherine scored 92% (she performed incorrect on one step during one trial). Katherine then scored 100% on all 3 trials, across 3 consecutive sessions (session 5, 6, & 7), meeting mastery criteria within seven training sessions. Following success in the training sessions, Katherine's post-training probe dropped to 25%. Within the booster session, Katherine achieved a score of 100%, across all 3 trials. During the post-booster session post-training probe, Katherine maintained her score of 100%. Katherine scored a 75% on the generalization probe while performing her accommodation request with her workplace supervisor.

## **Set 2**

### ***Ray***

Following the initial training sessions and in the absence of teaching materials, Ray responded with an average score of 67% accuracy on 3 baseline probes. Ray required twelve video modeling training sessions; Ray consistently missed step 2 in the task analysis (stating his disability). After reaching mastery criteria after 12 training sessions, Ray again missed step 2 in the task analysis on his first post-training probe, scoring 75%. He then required two booster sessions to reach mastery criterion again. Although Ray achieved 100% accuracy on the first post-training probe after the booster sessions, he was not able to maintain performance and again scored 75% on the final two post-training probes. Ray scored 75% on the generalization probe while performing his accommodation request with his workplace supervisor.

### ***Amanda***

Following the initial training sessions and in the absence of teaching materials, Amanda consistently performed with 50% accuracy across 4 baseline probes. During the first session of video modeling training, Amanda's average score was 83% across trials. Amanda then scored 100% on all 3 trials, across 3 consecutive sessions, reaching mastery criteria within 4 training sessions. Following training, Amanda's performance remained consistent, scoring 100% on all 3 post-training probes. Amanda scored 75% on the generalization probe while performing her accommodation request with her workplace supervisor.

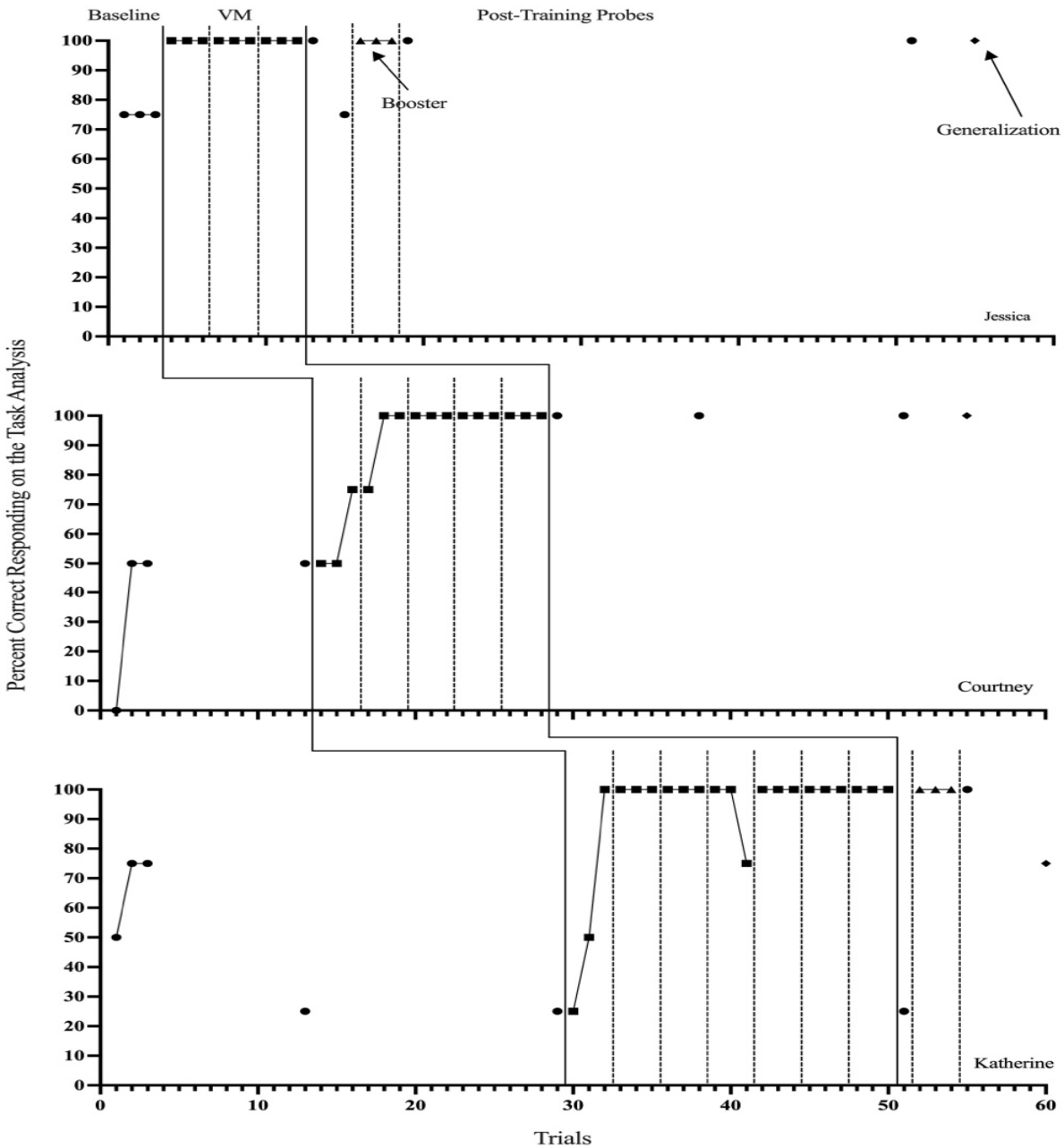
### ***Kelly***

Following the initial training sessions and in the absence of teaching materials, Kelly responded with an average score of 58% on her first three baseline probes, but then scored 100% on her fourth. Prior to intervention a fifth baseline probe was conducted and Kelly responded



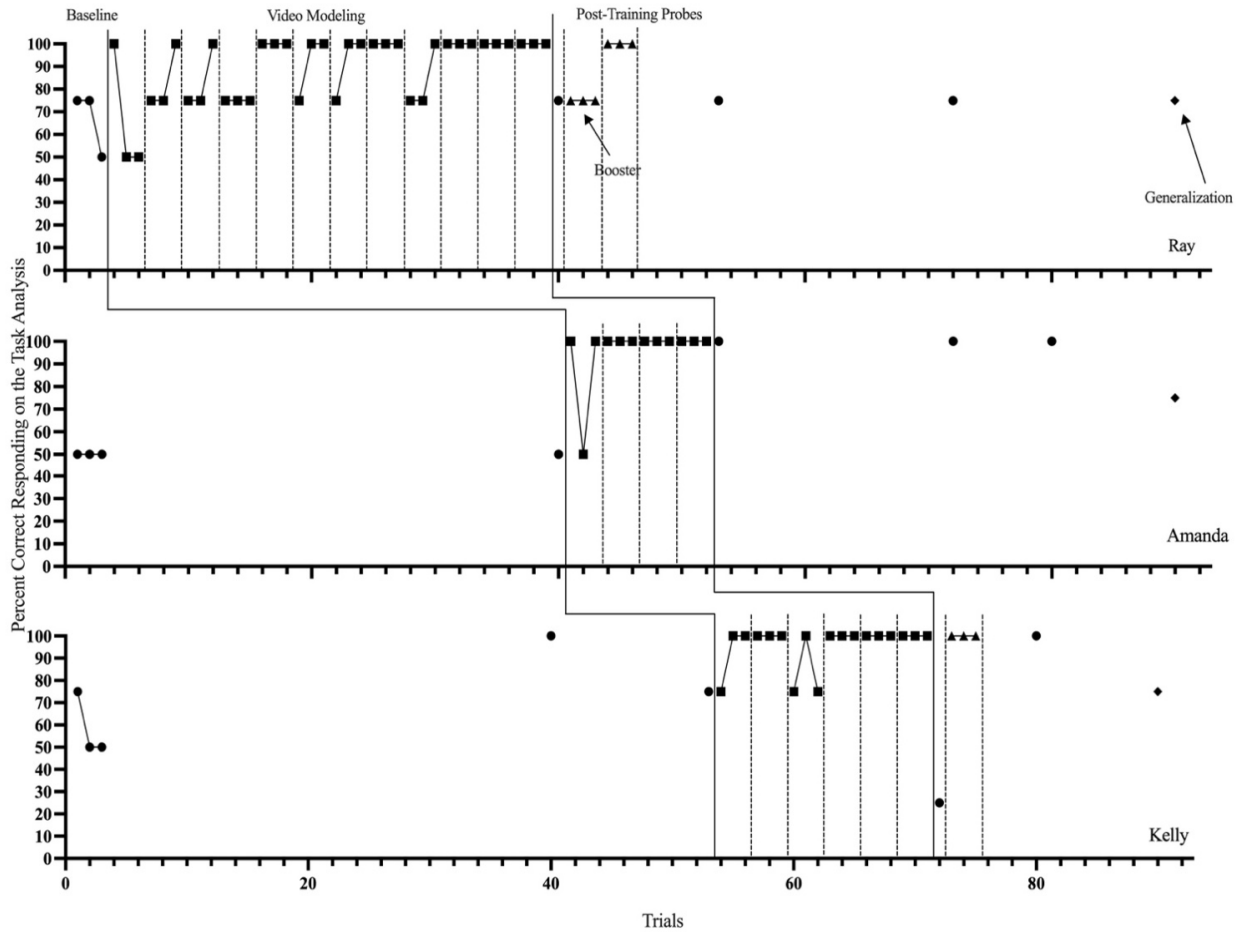
with a 75% accuracy, indicating video modeling training was necessary. Across the first three training sessions, Kelly scored an average of 92% across trials, then scored 100% on all 3 trials, across 3 consecutive days. After meeting mastery criteria within 6 training sessions, Kelly maintained a score of 100% on two post-training probes. Kelly scored 100% on the generalization probe while performing her accommodation request with her workplace supervisor.

Figure 1: Results for Jessica, Courtney, and Katherine



*Note.* Closed circles depict baseline and post-training probes. Closed squares depict performance on role play trials during video modeling sessions. Closed triangles depict role play trials during a booster session. Closed diamonds depict generalization probes conducted in the workplace. Solid lines depict a phase change. Dotted lines depict each video modeling or booster session.

Figure 2: Results for Ray, Amanda, and Kelly



*Note.* Closed circles depict baseline and post-training probes. Closed squares depict performance on role play trials during video modeling sessions. Closed triangles depict role play trials during a booster session. Close diamonds depict generalization probes conducted in the workplace. Solid lines depict a phase change. Dotted lines depict each video modeling or booster session.

## Discussion

The purpose of this study was to assess the effectiveness of scripted video modeling to teach young adults with IDD how to request a workplace accommodation. All six participants who received video modeling training increased their accuracy in independent and correct responding from baseline to the completion of intervention, showing a functional relationship between video modeling training and performance of the steps in the task analysis; three participants displayed generalization in their workplace setting. This study extended the research literature on the use of video modeling to teach self-advocacy in a workplace setting. Similar to previous investigations of video modeling training research, results of the study indicate that video modeling was associated with an increase in correct independent responding. These results and procedures are similar to those reported by Charlop & Milstein (1989), who also incorporated video modeling and scripted conversations in their intervention. Within the current study, the scripted video models of the accommodation requests were necessary to provide each participant with an appropriate and individualized script to use within the video modeling training sessions.

The overall results of the current study indicate that a brief ADA group training was not effective and did not lead to skill acquisition for most participants, indicating a need for more intensive training. Following the group training, video modeling was shown to be an effective intervention strategy for teaching self-advocacy skills within school-to-work transition programs. Most participants demonstrated an immediate upward trend in responding after the video modeling intervention was introduced; and all participants improved their performance of requesting a workplace accommodation. Three of the participants maintained their accuracy without the need for booster sessions or additional instruction. Although Jessica, Ray, and

Katherine all required additional booster sessions to maintain correct responding, booster sessions then led to improved and maintained performance.

A closer analysis of Ray and Katherine's performance highlight potential insight for their differential responding. Compared to an average of 5 sessions across other participants, Ray required 12 training sessions before reaching mastery criterion during video modeling training. Ray experienced continuous difficulty with step 2 of the task analysis, disclosing his disability. This difficulty may be a result of the individualized script that was created for Ray, which differed in complexity from the other participant's. Specifically, rather than stating the name of a disability, Ray chose to state a symptom that his disability causes—muscle weakness. Thus, during rehearsal and probes, Ray often stated “I have muscle weakness”, rather than stating “I have a disability that causes muscle weakness.” Because Ray did not explicitly state that he had a disability and it was unknown if a job supervisor would understand that Ray had a disability (as opposed to simply having weaker muscles or being fatigued that specific day), Ray's step of disclosing a disability was counted as incorrect if he did not include the full statement. Ray continuously missed this step during the video modeling trials. Even after achieving mastery criterion during intervention, he again missed this step during the post-training probe, requiring him to complete booster sessions and additional probes.

After multiple sessions confirming he was only missing the step where he explicitly stated “I have a disability”, it was determined that Ray's script may have been too difficult and affected response accuracy. Specifically, it is likely that the longer statement or combination of words may have been more difficult for Ray to remember. The variations in difficulty level for each participant's scripts was not considered when developing scripts. Future research should examine how level of script difficulty impacts participants' responding.

Further, due to Ray's difficulty in successfully vocally requesting his workplace accommodation, future research should explore alternative appropriate and effective ways to request a workplace accommodation. The ADA National Network (2022), indicates that requests for workplace accommodations can be provided using any method of communication, including writing a formal letter or email addressed to the employer. In fact, it may be beneficial for an individual to put the request in writing, so they have a paper trail in case there is a dispute about whether or when the accommodation was requested (ADA National Network, 2022). Thus, future research may compare the success of requesting an accommodation through verbal versus written modalities. Another option to address script difficulty would be to provide a written script for the individual to physically have when requesting an accommodation. This script could be available for the individual to review before requesting their accommodation or it may even be necessary for them to read directly from the written script when speaking with their employer. As there are many ways to approach requesting workplace accommodations, future research should consider including social validity data to evaluate the most effective and successful form of communication specific to each individual with IDD.

Katherine also displayed variable performance that may have been impacted by outside factors. During the last training session (conducted at home over the FaceTime app), Katherine's mother expressed concern about the way the script emphasized Katherine's disability and how it failed to include important points regarding her strengths. The researcher validated the mother's feelings, explained the approach to creating individualized scripts for this training, and discussed the importance of disclosing your disability when requesting a workplace accommodation. The researcher and Katherine's mother had a good conversation about her success, and the FaceTime call ended with understanding and agreement on both sides.

Following success in the video modeling training sessions and the conversation between the researcher and Katherine's mother, Katherine's score dropped to 25% on the post-training probe. After speaking with the teacher about the sudden decrease in correct responding, the teacher discovered that Katherine's mother had provided her with a written script, including extra points about her strengths, from which Katherine read directly during the post-training probe. Because of this drop in scores and use the script, the researcher decided it was best to conduct a booster session with Katherine. Before the booster session, Katherine's teacher explained to her why we would not use the script her mother provided and that she could save it for outside of the study when she is not meeting with the researcher. Katherine understood and achieved a high score of 100% during the first booster session. During the post-training probe that followed, again in the absence of the printed script, Katherine maintained a score of 100% correct responding.

Given the situation with Katherine's mother, it is clear that a discussion regarding parental or caregiver involvement is important to consider. Although parents and guardians were aware of the training, they were not involved in creating or confirming each participant's individualized script for requesting a workplace accommodation. By only involving the participants in the decision of choosing what to say when disclosing their disability and requesting their necessary accommodation, it exercises their right and success in autonomy, self-realization, and self-advocacy (Doren & Kang, 2016). Adults with IDD participate in school-to-work transition programs, like Project SEARCH, to target independence. However, although this is important knowledge for these individuals with IDD to gain, we also want to respect the parents' wish for involvement. Future research should explore the benefits and potential

necessity of caregiver's involvement when it comes to teaching important everyday living and self-advocacy skills to individuals with IDD.

Despite the positive results, there are limitations of this study that should be considered. First, this study was conducted during the COVID-19 pandemic, which required several modifications to the Project SEARCH program and classroom, as well as appropriate responding to potential COVID-19 exposures. During intervention, there were two nonconsecutive weeks in which the Project SEARCH classroom was closed and participants were required to stay home. Due to this, time between training sessions during those weeks was sometimes prolonged (e.g., training not conducted daily); further, to attempt to continue with training sessions and remain as consistent as possible, some sessions were conducted over Zoom and/or the FaceTime app at the participant's home.

Second, due to space limitations, training sessions were typically conducted in one room where whole class instruction was taking place as well. During 1:1 training sessions or role-plays, class instruction was going on in the background which sometimes made it hard for the participant or researcher to hear. During moments of excessive background noise, the researcher always made it a point to confirm the participant heard the video model during training and offered to play it back if necessary. During baseline and/or 1:1 trials, background noise was not an issue for the participant or the researcher.

Third, acquisition was only assessed following the video model presentations during the video modeling trainings. Future research should consider assessing performance prior to showing the video model at the start of each training session. This would allow for the assessment of independent performance throughout intervention rather than just post intervention.



Finally, the two participants who performed the skill with 100% accuracy following the group training did not continue in the study and no additional data was collected. However, the two participants were included in the workplace generalization probes, to assess if the skill did maintain across settings and people without additional training. One participant scored a 50% and the second participant scored a 75%. Future research could consider continuing to probe performance of those participants who mastered out of the video modeling training to explore if these individuals could maintain the skill, allowing them to be more successful in generalization probes at their workplace setting.

Despite these limitations, the results of the study have meaningful and important implications for research. This study demonstrated the effectiveness and success of video modeling training to teach self-advocacy skills to individuals with IDD and should serve as an introductory study to teach these individuals how to request accommodations in the workplace. It is important to note that this training should be considered as a first step in teaching individuals with IDD about their rights. The entire process of requesting workplace accommodations is far more complex. Individuals with IDD should be cognizant of the legal actions their employer is required to take in response to their accommodation request, in an event that they need to follow up with them. The ADA law states that an individual must disclose their disability and request an accommodation that does not cause undue hardship or change an essential job task. Although it is the employer's responsibility to consider those legal restrictions and determine next steps, the individual should be knowledgeable on how or when to follow up with their employer about their accommodation request, as it is also the employers job to identify other accommodations that will not pose such undue hardship if necessary (ADA National Network, 2022).

The ADA National Network also states that accommodation process is dynamic and ongoing. After an employer approves an employee's accommodation request, or identifies another effective accommodation to put into place, individuals with IDD must be prepared for ongoing communication with their employer. This ongoing communication process is important for reviewing the effectiveness of the accommodation in place and allowing adjustments to happen accordingly. Since the process for workplace accommodation requests can be extensive, future research should use the current study as a starting point and investigate other effective interventions to teach individuals with IDD the many different steps and processes within the ADA law.

Learning to appropriately advocate for necessary workplace accommodations may reduce workplace discrimination, stereotypes and attitudinal biases, and concerns and hesitations when hiring individuals with IDD. Capitalizing on effective interventions to teach self-advocacy and individual rights to individuals with IDD will increase the employment opportunities for individuals with IDD and help them live and maintain fulfilling lives.

## APPENDICES

APPENDIX A:

Procedural Fidelity Checklist: Group Training Day 1

Participant Initials: \_\_\_\_\_ Facilitator Initials: \_\_\_\_\_ Observed by Initials: \_\_\_\_\_

Date: \_\_\_\_\_

Procedural Steps	Yes	No	Correct steps out of 7	% Correct
1. The instructor ensures the participants are attending and ready to listen without any background distractions	Y	N		
2. Instructor will position themselves on screen for proper instruction and will be ready to conduct training without any background distractions	Y	N		
3. Instructor will share their screen and present the PowerPoint presentation, ensuring that the participant can see their screen	Y	N		
4. Instructor will go through the PowerPoint slides, talking through each slide, and allowing participants to ask questions when requested	Y	N		
5. Instructor will set aside time at the end of the presentation for participants to ask any additional questions they may have	Y	N		
6. Instructor will introduce the workplace accommodation form that each participant will need to fill out before the next meeting	Y	N		
7. Instructor will conclude the training session by thanking the participants for their time	Y	N		

APPENDIX B:

Procedural Fidelity Checklist: Group Training Day 2

Participant Initials: \_\_\_\_\_ Facilitator Initials: \_\_\_\_\_ Observed by Initials: \_\_\_\_\_

Date: \_\_\_\_\_

Procedural Steps	Yes	No	Correct steps out of 9	% Correct
1. The instructor ensures the participant is attending and ready to listen without any background distractions	Y	N		
2. Instructor will position themselves on screen for proper instruction and will be ready to conduct training without any background distractions	Y	N		
3. Instructor will share their screen and present the PowerPoint presentation, ensuring that the participants can see their screen.	Y	N		
4. Instructor will go through the PowerPoint slides, talking through each slide, and allowing participants to ask questions when requested	Y	N		
5. Instructor will explicitly walk the participant through the task analysis for requesting an accommodation in the workplace	Y	N		
6. Instructor will work with each participant to determine their specific and appropriate workplace accommodation script	Y	N		
7. Instructor will conduct a role play with each participant, practicing their specific script	Y	N		
8. Instructor provided each participant with explicit feedback after the participant stated their script and requested their workplace accommodation	Y	N		
9. Instructor will conclude the training session by thanking the participants for their time	Y	N		

## APPENDIX C:

### Procedural Fidelity Checklist: Video Modeling

Participant Initials: \_\_\_\_\_ Facilitator Initials: \_\_\_\_\_ Observed by Initials: \_\_\_\_\_

Date: \_\_\_\_\_

Procedural Steps	Yes	No	Correct steps out of 9	% Correct
1. The instructor ensures the participant is attending and ready to listen without any background distractions	Y	N		
2. Instructor will position themselves on screen for proper instruction and will be ready to conduct training without any background distractions	Y	N		
3. Instructor will share their screen and be ready to share the video model	Y	N		
4. Instructor will play the video model for the participant, checking in to make sure the participant could hear the video, if necessary	Y	N		
5. Instructor will conduct a role play following each video model	Y	N		
6. Instructor will score each role play on the data sheet while referencing the task analysis for request an accommodation in the workplace	Y	N		
7. Instructor provided each participant with explicit feedback after the participant engaged in the role play	Y	N		
8. Instructor will conclude the training session and end the training session	Y	N		

APPENDIX D:

Procedural Fidelity Checklist: Probes

Participant Initials: \_\_\_\_\_ Facilitator Initials: \_\_\_\_\_ Observed by Initials: \_\_\_\_\_

Date: \_\_\_\_\_

Procedural Steps	Yes	No	Correct steps out of 9	% Correct
1. The instructor ensures the participant is attending and ready to listen without any background distractions	Y	N		
2. Instructor will position themselves on screen for proper instruction and will be ready to conduct training without any background distractions	Y	N		
3. Instructor will initiate a role play with the participant to practice requesting an accommodation	Y	N		
4. Instructor will allow the participant to request their individualized accommodation	Y	N		
5. Instructor does not give feedback or offer prompting during the role play	Y	N		
6. Instructor provided each participant with neutral praise after the completion of the role play	Y	N		
7. Instructor will conclude the training session and end the training session	Y	N		

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## REFERENCES

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