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Teaching Vocational Skills: Use of Video Prompting for Young Adults with Intellectual Disabilities

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Abstract

The Individuals with Disabilities Education Act IDEA (2004) ensures students with disabilities are given a fair opportunity to receive an education that prepares them for employment and independent living. Gainful employment is a top priority in special education as it increases the likelihood of a better quality of life for individuals with disabilities. Vocational skill building is a core mandate of IDEA (2004) and is a common focus for young adult transitional student's in the 18-22 year age range. Furthermore, students diagnosed with moderate to severe intellectual disabilities are at a greater disadvantage as they require more intensive and explicit training as compared to students with mild to moderate disability diagnosis. However, there is a lack of researched based vocational teaching strategies for this population. Research suggests that video prompting (VP) is effective in teaching students with moderate disabilities (Cannella-Malone et al., 2006). This study used a multiple baseline AB single case design with 4 participants with moderate to severe disabilities to measure the impact of VP on the vocational task of washing windows. Results determined VP to be an effective teaching strategy for 3 of 4 participants. The findings of this study can be used in the discussion of vocational skill instructional strategies for the moderate to severe population.

Keywords: Video prompting, moderate to severe intellectual disabilities, vocational skill building, young adult transition 18-22.

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Literature Review

The Individuals with Disabilities Act of 2004 (IDEA, 2004) mandates that young adult students who have an Individualized Educational Plan (IEP), and have not graduated high school with a diploma, may continue to receive IEP related services until their twenty-second birthday. The IEP is a legal process that provides support services (e.g., speech and language, occupational therapy, mental health) accommodations and modifications to qualifying students. The IEP must include a transitional plan for student's beginning no later than the age of 16. Transitional plans are a designed set of activities and services (e.g., work internships, job coaching, community based instruction) purposed to improve post school outcomes through post-secondary, employment and vocational education. Transitional plans extend to young adult students in the eighteen to twenty-two-year age range. In California, special education student's including those in the eighteen to twenty-two-year age range generally fall under two categories used for academic program placement; mild to moderate or moderate to severe (State of California Commission on Teacher Credentialing, 2016).

The mild to moderate category refers to students with learning disabilities and health impairments whereas students in the moderate to severe category are classified by intellectual disabilities and diagnosis such as Autism, Down syndrome emotional disturbance, multiple disabilities and deaf-blindness. Individuals with intellectual disabilities often are not able to participate in general education settings or state assessments without intensive academic and adaptive modifications or alternative

methods of achievement (Browder, Wood, & Thompson 2014). Compared to mild to moderate populations, students with moderate to severe diagnosis may require more specialized instruction and services to meet both their academic and functional needs. Typically, when these student's reach eighteen they are not as prepared as their age like peers to enter adulthood or the workforce (Wehmeyer, 2014). Hence, transitional plans are expected to assist students with intellectual disabilities in becoming functioning members of society (Simonsen & Neubert, 2012). However, this population is largely underrepresented in the workforce as will be explained and often requires rigorous instruction in job training.

The aim of transition planning is to provide vocational education, post-secondary education, and life skills when necessary (Prince, Katsiyannis, & Farmer 2013). The goal is to assist students as they transition from youth into adulthood. Furthermore, IDEA (2004) ensures students with disabilities are given a fair opportunity to receive an education that prepares them for employment and independent living. Vocational education is a precursor to employment and employment is an intended outcome of IDEA's transition planning.

Defining transition and its necessity

The purpose of transition planning is to help students build skills that will allow them to enter the work force and/or continue their post-secondary education after turning twenty-two (IDEA, 2004). Transition plans are coordinated activities designed to meet the needs of individuals with disabilities. In addition, transition planning is results orientated, intended to improve students' academic and functional achievement levels. Student's strengths, interests and preferences are taken into account as a measure to

assemble the specific services to be implemented. Instruction and services generally include community experiences, development of employment and post-school life objectives, and when appropriate the acquisition of daily living skills (Prince, Katsiyannis, & Farmer 2013).

Transition plans are intended to improve post school outcomes (Turnbull et al., 2003). For example, transition services can improve a student's vocational skills, which will likely increase employment opportunities. The benefits of employment relate to boosting a student's self-esteem, and quality of life (Boeltzig, Timmons, & Butterworth, 2008). Additionally, Turnbull and colleagues (2003) asserted that the fundamental goal of the Federal Special Education Services is to support students and families in their pursuit of a greater quality of life. This directly applies to transition age young adults who are near the completion of their public education. That is to say, if student's receiving transition services learn skills which improve their employability; they may have greater opportunity to find success outside of school. Thus, advance their quality of life.

Vocation building as a requirement of transition programing

IDEA mandates the provision of transitional services as part of vocational education. Vocational education includes; job or work skills taught to prepare students for employment and which may allow for greater access to the workforce (Van Laarhoven, Winiarski, Blood, & Chan, 2012). Given that employment is a marker for post-school outcomes, it is accorded the highest priority in transition models (Butterworth, Migliore, Nord, & Gelb, 2012).

However, the fact remains that individuals with disabilities are highly unemployed. According to the National Report on Employment Services and Outcomes

of 2016 only 34% of people in the United States with any disability were reported to have employment (Winsor et al., 2016). In addition, students in the moderate to severe range are at an even higher disadvantage as they are reported to have only a 16% employment rate for working age adults. Wehmeyer (2014) postulated that students in the moderate to severe range have greater deficits in vocational skills and the likelihood of finding employment is much lower than other populations of students with mild disabilities. If students in the moderate to severe range cannot produce various vocational skills, they will struggle to gain any type of employment.

Areas of employment

With proper vocational training individuals with moderate to severe disabilities can find employment, typically in the service sector, which is a broad category of our nation's workforce (Carter, Austin, & Trainor, 2011). The types of employment obtained differ in regard to setting and income. Some of these employment settings include; regular full time or part time paid work, sheltered work, supported workshops and non-paid work such as in internship capacity or volunteer (Simonsen & Neubert, 2012). Furthermore, the tasks given to these individuals in the service sector commonly require manual labor. Carter and colleagues (2011) found students with disabilities enter the service sector workforce in the following areas: production, building, cleaning, grounds maintenance, food preparation or serving, office and administrative and supportive roles in retail and sales. However, many of the tasks required in the service sector are not tasks that the individuals with disabilities are experienced with. Therefore, students with moderate to severe disabilities require explicit vocational instruction in order to gain employment in these job areas.

Common vocational skills taught

There are a number of vocational curricula that provide instructional strategies to teach vocational skills to young adults with moderate to severe disabilities receiving transition services. There is, however, limited research that validates vocational skill instructional strategies used by educators in teaching this sensitive population. According to a comprehensive review of literature, Cannella-Malone and colleagues (2015) found that there is a lack of evidence which validates the vocational skills being taught in transitional programs. The authors note that manual labor service skills are two of the most common vocational skills being taught to students with moderate to severe disabilities. Vocational curriculums include a wide range of concepts but there is not a validated agreement in terms of core vocational skills for the moderate to severe young adult population. There is a sampling of research based strategies that show some promise, yet few relate to explicit strategies for teaching vocational skills (Spooner, McKissick, & Knight, 2017).

Lack of strategies used to teach vocational skills to moderate to severe

There are a variety of strategies to teach vocational skills used in practice but few are research based and explicitly built for young adult students with moderate to severe disabilities in the eighteen to twenty-two-year age range (Seaman, Cannella-Malone, Brock, & Dueker 2017). There is however teaching interventions generalized to transitional aged students as a whole. For example, Test, Bartholomew, and Bethune (2015) list video modeling and response prompting as strategies used to teach home maintenance living skills to students in transitional special education. Home maintenance living skills may include learning to un-bag groceries, sweeping a floor or cleaning a

table. These skills are similar to vocational skills needed for many manual labor service sector jobs. Due to their similarities, the methods used to teach home maintenance skills may cross over to vocational skill building but are not specifically designed as teaching interventions for vocational skills. Cannella-Malone and colleagues (2006) conducted a research study to teach home maintenance daily living skills to adults with developmental disabilities. The researchers found some success using a systematic and specialized instructional approach known as video prompting (VP).

Research in support of video prompting

There is a growing practice of teaching students with moderate to severe disabilities transitional service skills, through video presentation (Cannella-Malone et al., 2015). Video technology provides a consistent and systematic approach necessary in teaching moderate to severe students. As explained earlier students with moderate to severe disabilities require more systematic engagement with concepts and repeated instructional and performance trials. VP allows for this as it identifies the individual sub skills needed to complete a whole task and can be used as a method to both instruct students and measure their performance.

Cannella-Malone and colleagues (2006) compared VP with video modeling (VM) to teach home maintenance skills of table setting and putting away groceries, to six adults with disabilities. VM differs from VP as a whole task, such as setting the table, is filmed from a spectator viewpoint. VM generally has an individual modeling how a task is done with-out any breaks in the video presentation. Whereas, VP films each sub-step of a whole task and is presented in individual video clips, from the viewpoint of the subject (Cannella-Malone et al., 2006). In their study, Cannella-Malone and colleagues (2006)

found that VP was more effective than VM in teaching daily home living skills. In another study Cannella-Malone, Wheaton, Wu, Tullis, & Park (2012) compared the effectiveness of video prompting with and without correcting student errors. In Cannella-Malone and colleagues (2006) study, when showing research subjects VP clips of a task the researchers would correct the subject if the task was incorrect. This was done because each sub-step is reliant upon the previous sub-task. That is that the whole task cannot be completed correctly if one sub-step is incorrect. The Cannella-Malone and colleagues study of (2012) was carried out as a way to see which method was more effective in terms of a student with intellectual disabilities acquiring a new skill. That is to say that the results from this study indicated that VP with error correction was more effective then VP without error correction. VP is regarded as a learning application in which skills are broken down into smaller steps and may be referred to as video prompting of a whole task (Cannella Malone, 2006).

VP further explained

VP breaks whole tasks down into smaller tasks. VP allows for a consistent presentation of material because video technology provides an identical model of the instructional material presented, for each instructional period. VP films each task as a series of independent video clips. The skill itself can be filmed in a real life setting such as on a job. Furthermore, the material can be presented and practiced in a controlled environment such as a classroom. Research suggests that VP with error correction is effective in teaching adults with disabilities (Cannella-Malone et al., 2006). A research study that used VP to teach moderate to severe young adult transitional students with intellectual disabilities a specific service sector vocational skill such as window washing

has yet to be seen. This study was conducted in order to evaluate the effectiveness of VP for this vocational skill as it may increase the likelihood of employment for this population.

Method

Preliminary research suggests that VP is effective in teaching students with moderate disabilities (Cannella-Malone et al., 2006). However, there are no research studies that solely utilize VP to teach specific vocational skills to students with moderate to severe intellectual disabilities in the eighteen to twenty-two-year range. This study was done in order to evaluate the effectiveness of VP in teaching a specific vocational skill to students within this age range. The findings can be used in the discussion of vocational skill instructional strategies for the moderate to severe population.

Research Question

This study was driven by the following research question: Is video prompting, effective in teaching a specific vocational skill (i.e., window washing) to transition program special education young adults aged 18-22 with moderate to severe intellectual disabilities?

Hypothesis

Based off the research of Cannella-Malone and colleagues (2006), this researcher hypothesized that video prompting with error correction will increase the acquisition of a window washing vocational skill for moderate to severe transition students.

Research Design

This study used an AB multiple baseline single-case design with four participants. In a multiple baseline design each participant enters baseline (i.e., Phase A)

simultaneously. Each participant's initial skill level was measured prior to the intervention to determine the baseline. Once individual participants displayed consistent and stable baseline performance, they were individually and sequentially staggered into intervention (i.e., Phase B), one participant at a time. Each participant in the intervention phase had to show a therapeutic trend before a subsequent participant with stable data points in baseline was introduced to intervention (Phase B). That is, after participant 1 attained therapeutic trend in intervention, participant 2 was introduced to the intervention. After participant 2 achieved a therapeutic trend in intervention, participant 3 was introduced to intervention, and so on. During this process, the researchers continued collecting baseline data for participants who were yet to be introduced to Phase B.

During the baseline period (Phase A) data was collected on the number of steps participants correctly completed on a window cleaning vocational task analysis (TA). Teachers and trained staff used a 10-step TA checklist to measure participant's performance. Each participant was expected to attain a minimum of five stable data points prior to beginning the intervention. Stability was reached at +/- 3 correct steps within the range of the 10-step task analysis. Once a stable baseline (Phase A) was achieved, the intervention period (Phase B) began. During intervention (Phase B), participants were asked to watch a series of 10 video prompt clips that mirrored the 10 step (TA) of the window washing vocational skill. The students watched one video clip (prompt) at a time and completed the corresponding task step. They then repeated this process – watched and performed the next step and so on until all 10 steps of the task were completed in a one to one setting. Participant performance data was collected using the same 10-step task analysis checklist that was used during baseline. When a participant

in intervention displayed a therapeutic trend of 3 stable data a new participant from baseline was brought into intervention. The new participant could only be brought over if they had stable data points in baseline.

Independent variable. The independent variable in this study was a teaching method defined as video prompting (VP). VP is a step by step video recorded break down of a whole task shot from a first-person perspective (Cannella-Malone et al., 2006). The whole task is comprised of individual sub tasks filmed as short video clips roughly 10-45 seconds in duration. Each clip also consists of voice over narration stating the step of the task.

Dependent variable. The dependent variable in this study was the vocational skill acquisition of window washing. Individual student's acquisition of the specified vocational skill, window washing, was tracked through the use of a task analysis (TA). The TA evaluation followed the same 10-step format found in the Cannella-Malone and colleagues study (2006).

Setting & Participants

The research took place in a Young Adult Special Education Transition Program located in the Central Coast of California. This program is a special education service provided to students who are between the ages of 18-22 and did not graduate with a high school diploma. This program serves students of unincorporated areas. It is predominantly a farming community with a high percentage of English Language Learners and students of Chicano origin. There are approximately 1,124 students with 59 teachers at the high school in which the young adults program is located (SARC, 2016). The school is 84.8% Latino, 10.9% White, 1.2% Filipino, 1% Two or More Races, 0.6%

None Reported, 0.5% Asian, 0.4% Native Hawaiian or Pacific Islander 0.3% American Indian or Alaska Native, and 0.3% Black or African American (SARC, 2016). There are nearly 80.5% of students who are socioeconomically disadvantaged (SARC, 2016). There are approximately 129 students with special needs ranging from mild to severe disabilities (SARC, 2016). The Young Adults Program currently consists of 6 special education students with moderate to severe disabilities. Purposeful convenience sampling was used as the researcher is the teacher of record for the students of this class and the students all demonstrated a need for the intervention. Only 4 of the 6 students enrolled in this class were included in the study and have varying disabilities, ranging from Down syndrome, Autism and other intellectual learning disabilities.

Student 1. Jaime is a 21-year-old female in her last semester of her transition program. She is of Chicano descent and diagnosed with Autism. Jaime is generally able to be understood by her listening partners in a 1:1 or small group conversation. She has shown interest in finding a part-time job in a supported work environment upon exiting out of her transitional program.

Student 2. Paul is a 20-year old male of Chicano descent. He is a second year transition student holds a primary diagnosis of an intellectual learning disability and a secondary in speech impairment. Paul speaks using 1-3 word phrases but has strong receptive skills. He can express both his preferred and non-preferred wants/needs using simple phrases or by choosing items such as by pointing and other selective modalities. Paul has shown a strong interest in obtaining custodial like work in the service sector upon graduating.

Student 3. Georgina is a 21-year-old Chicano female diagnosed with Down syndrome. She is in her fourth year of her school's transition program. She was recently diagnosed with leukemia but has since gone into remission. She attempts new tasks as independently as possible and voices her needs when necessary. Georgina communicates using 1 to 5 word phrases. She has shown interest in finding part-time work in a supported work environment in the area of home cleaning services upon exiting out of her transitional program.

Student 4. John is a 19-year-old male with Autism. In additions to his diagnosis he also has a Behavior Intervention Plan as part of his IEP. John is in his 1st year of transition and is building a personal routine suitable for his age and needs. John speaks generally using 1 to 2 word phrases and has strong receptive skills. He sometimes does not take direction appropriately and can elope from class or a vocational setting.

Measures

To measure the effect that video prompting has on moderate severe young adult student vocational acquisition, this study utilized a TA tracking sheet (See Appendix A).

Task. The TA replicated the same 10-step format found in the Cannella-Malone and colleagues study (2006). The vocational skill being assessed (i.e., window washing) was broken down into steps and each step was included in the task analysis. The process to build the TA followed the National Professional Development Center on Autism Spectrum Disorders Task Analysis Implementation Guideline (2009). The tracking sheet replicated the TA and included two columns for the researchers to mark correct or incorrect responses next to each individual step. The students had thirty-seconds to initiate each step before being marked as incorrect.

Baseline. Students underwent a baseline trial period (i.e., Phase A) prior to the intervention to help the researchers understand their current level of skill understanding. During baseline, students were asked to complete the specified vocational skill without being given prior lessons on the task. In baseline, students were measured individually upon being given the materials needed to complete the task. Once stability was reached, the video prompt intervention followed (i.e., Phase B). The TA tracking sheet and time frame of step completion was used to examine their progress. Each session occurred in a one to one setting.

Intervention. The intervention began upon students correctly completing +/-3 within the range of the 10-steps provided in the TA. This was done for a minimum of 5 sessions before moving to intervention. The intervention consisted of students practicing each subtask of the window washing skill upon watching each individual video clip. This was done in a one to one setting where students worked in an individual work station. They were shown video prompt clips that mirror individual steps of the TA with voice over narration stating the specific step. The students watched the video clip then were given 30 seconds to initiate the task after the clip ended. The video clip was filmed from the perspective of the student and each clip was no more than 45 seconds to stay consistent with the Cannella-Malone and colleagues (2006) study.

Validity. To ensure internal validity the task analysis (i.e., measurement instrument) replicated the format of the TA conducted by Cannella-Malone and colleagues (2006). TA is an identified evidence based teaching practice in special education. The TA was constructed using the principles defined in National Professional Development Center on Autism Spectrum Disorders Task Analysis Implementation

Guideline (2009). The TA was very specific to the vocational skill being taught (i.e., washing windows). The same TA was used across students and phases of the experiment. To ensure external validity the study was conducted in the student's natural setting of their classroom, keeping all items constant.

Reliability. This study incorporated the use of the researcher and three additional independent observers who work on the school campus as special education paraprofessionals. The independent observers rated 20% of the sessions to achieve 80% inter rater reliability. Independent observers were trained to collect data using the TA tracking sheet and provided explanations on what constitutes a correct vs. incorrect response. Agreement between trainer and independent observer on the steps performed correctly will be calculated on a session by session basis using the formula agreements/agreement=disagreements x 100% (Cannella-Malone, 2006).

Procedures

Baseline began with students being asked to perform the window washing skill. Their performance was measured using a predefined TA tracking checklist based off the Cannella–Malone and colleagues study (2006). Students were then provided with the intervention of video-prompting. This happened in a one to one setting where data was collected on each of the individuals participating as to determine their overall skill acquisition.

Data collection. Data collected during the baseline phase took place in a one to one setting. Students were asked to complete the window washing task. The individual observer collecting data used a TA tracking sheet (See Appendix A) to record student performance in relation to each step of the TA. The tracking sheet consisted of 10 steps

and 2 columns for the raters to mark incorrect or correct next to each individual step. In order to move each participant into the intervention phase five stable data points had to be collected with +/-3 correct responses within the full range of 10 steps. The same process for data collection took place during the intervention period with the addition of the students being provided VP video prompts.

Fidelity. The data sheet used to collect both baseline and intervention data is identical which ensures reliability of the measure and overall fidelity of its implementation. A TA built off an implementation standard such as the National Professional Development Center on Autism Spectrum Disorders Task Analysis Implementation Guideline (2009) is a common and widely used practice in special education. Academic research as found in the Cannella-Malone and colleagues study (2006) is finding this method to be effective in teaching practices of special education. The data collected during each phase was taken by individuals trained specifically and uniformly for this research experiment. A fidelity checklist (see Appendix B) was used to ensure uniformity of the intervention implementation. The independent observers rated over 80% of the sessions to achieve 100% inter rater reliability between independent observers as a measure to ensure fidelity.

Social Validity

At the completion of the study the inter-raters completed a four-point Likert scale (i.e., *1 = strongly disagree to 4 = strongly agree*) social validity questionnaire (See Appendix C). The questionnaire, adapted from Berger, Manston, and Ingersoll (2016), consists of six questions designed to understand the perceived usefulness, significance and satisfaction with the implemented intervention (Kennedy, 2005). Participant

responses were kept confidential and responses displayed strong agreement in each of the six areas of the questionnaire. Three of the three respondents agreed or strongly agreed that this treatment was effective and should be used to improve the skills of other individuals.

Ethical Considerations

Some of the ethical considerations of this study were related to working with a sensitive population. Pseudonyms were assigned to each participant. In special education, confidentiality is of high importance and must be taken into account when conducting studies and presenting findings. The researchers own bias was also considered as an ethical consideration due to the nature of working as the teacher of record for the student participants.

Threats to Validity. One threat to the validity of this study was the researchers own bias. To counter balance the threat of bias, three paraprofessionals were used as inter-observers to record data. To maximize experimental control all the researchers assigned to providing the intervention followed a scripted lesson plan. Another potential threat to the validity is that some students may have previous experience with the vocational task of washing windows. To account for this, a simple interview asking if the students have in fact received instruction in this area was completed by the teacher with students/staff and student guardians.

Data Analyses

A visual analysis of the observation data compared the baseline intervention for each participant in this study, as well as the total number of responses and correct sub steps of the task analysis. In addition, the percentage of non-overlapping data (PND)

procedure described by Scruggs and colleagues (1987) was used. The guidelines recommended by Asaro-Saddler and Saddler (2010) were adopted. These guidelines state a PND score of 90 %, indicating the intervention points exceeding the extreme baseline value for a very effective treatment; 70-90 %, an effective treatment; 50-69 %, indicating some effect, and less than 50 %, a questionable treatment.

Results

Results have been graphed for each participant and are displayed in vertical alignment for visual comparison. Figure 1 displays the multiple baseline and intervention data for each participant. The x-axis is representative of each participant's session number and the y-axis measures individual participants' number of correct responses during each session. The black vertical and horizontal dotted line indicates when a phase change from baseline to intervention was introduced.

Jaime's data is depicted at the top of Figure 1. During baseline, she had an average of 0.2 correct responses with a range of 0-1. Once intervention was implemented, correct responding immediately increased to and maintained at 10 with no variability with a percentage of non-overlapping data (PND) of 100%. Jaime's mean score of correct responses was 10 after 10 intervention sessions.

Paul's data is charted in the second graph of Figure 1. Paul was in baseline for 8 sessions. While in baseline he had an average of 0.0 correct responses. Once stability in baseline was achieved for Paul and a therapeutic trend occurred with Jaime, intervention was then implemented for Paul. Correct responding immediately increased to 7 and after 3 sessions maintained at 10 with no variability with a PND of 100%. Paul had a mean score of correct responses of 9.2 after 10 intervention sessions.

The third graph shows the number of correct responses for Georgina. During baseline, she had an average of 0.0 correct responses. Once Paul displayed a therapeutic trend in intervention, Georgina's intervention immediately followed. Her correct responses increased to 5 in session 1 while in intervention and maintained at 10 by session 4 with no variability with a PND of 100%. Georgina's mean score after 7 sessions was 8.7 correct responses.

John's data is shown in the last graph of Figure 1. In the baseline phase John had an average of 0.0 correct responses with a range of 0. John did no sit through the first 2 interventions as he walked away from the work area after watching the first clip. In session 3 he stayed and attempted the first 4 tasks before walking away. He achieved 3 correct responses in session 3 with an overall PND of 25% before data collection for the study ended. In 4 intervention sessions John's mean was .75 correct responses.

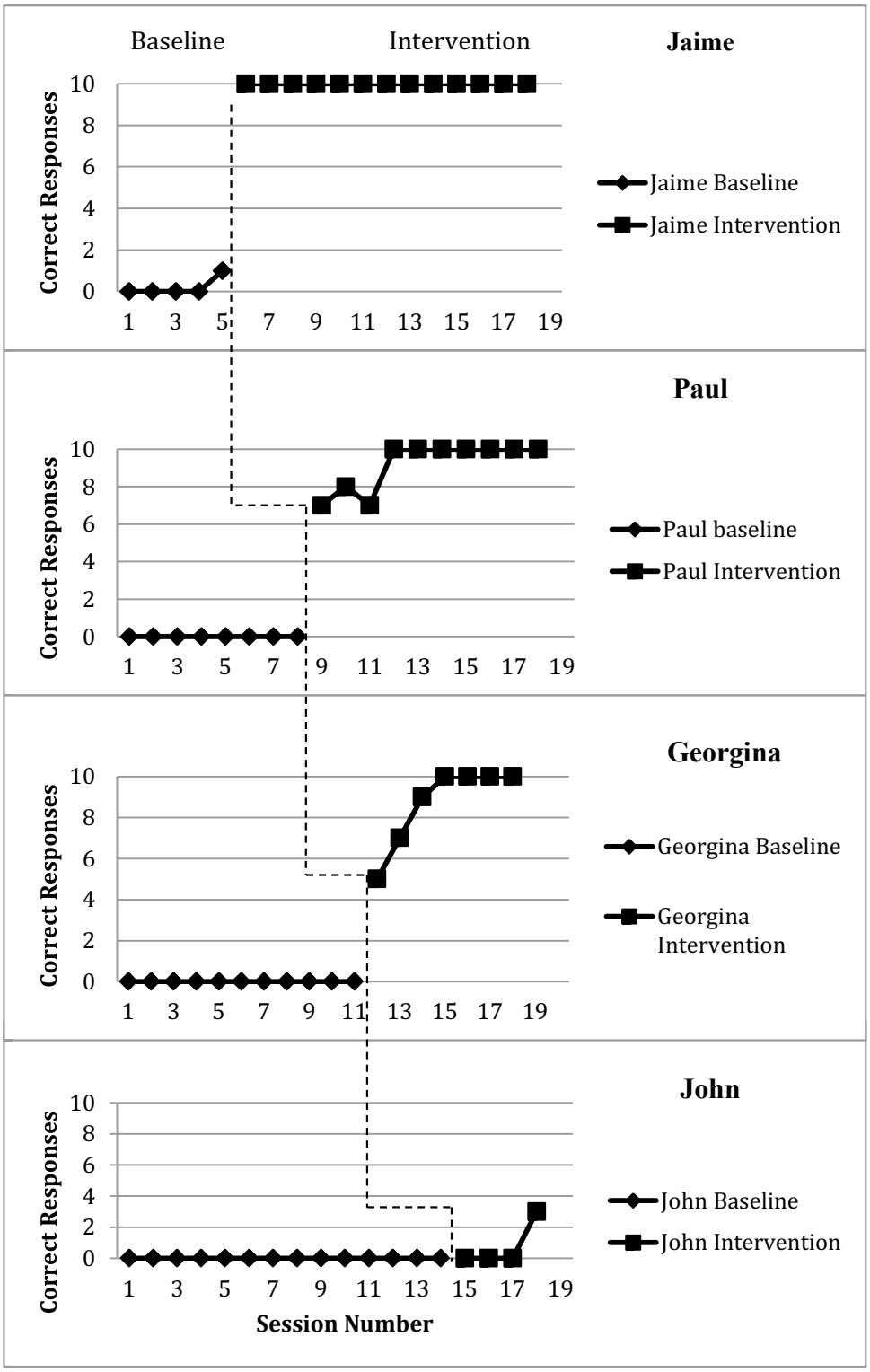

Figure 1. Number of correct responses achieved on window washing task analysis from baseline to intervention for all four participants.

Discussion

The purpose of this study was to examine the effectiveness of video prompting as a vocational teaching strategy for young adult transition students with intellectual disabilities. The results demonstrated by Jaime, Paul and Georgina suggest that video prompting may be effective in teaching individuals with similar disabilities using this method. Jaime, Paul and Georgina displayed an immediate increase in correct responses once the intervention was introduced and percentages of non-overlapping data of 100%. This demonstrates a highly effective intervention for these three participants. Furthermore, there is a functional relationship between the implementation of the video prompting and the number of correct responses of the window washing task analysis.

John entered the treatment intervention phase as the fourth participant and demonstrated an inconsistent increase in correct responses with a PND of 25%. John was the last to enter intervention and began showing a therapeutic trend before data collection for this study ended due to time constraints. The skill of window washing was new for each participant as evidenced by low baseline scores. An observation made by the researcher is that students in the early intervention stages may have benefited from more instruction on procedure and expectation of watching each video clip before attempting to complete the step themselves. Some of the early intervention session results may have been higher if the students had a better understanding of waiting for a clip to end before beginning the task. Each participant however, immediately displayed improved results upon the implementation of the video prompting intervention. These findings are similar to Cannella-Malone and colleagues (2006) which expressed that video prompting was effective in teaching life skills to adults with mild to moderate developmental delays.

This study adds to the research conducted by Canella-Malone and colleagues (2006) by extending it to young adults diagnosed with moderate to severe intellectual disabilities, suggesting that this treatment is effective in teaching a vocational skill.

Limitations and Future Research

There were a number of limitations and constraints attributed to participant availability and the overall duration of the study. Due to the sensitive nature of the target population absences were a frequent occurrence during the study. Participants could not receive intervention sessions everyday as a result of their absences which may have directly impacted their achievement level. Future research should attempt to present sessions on a regular and frequent time schedule.

Additionally, due to the nature of the multiple probe design with a limited time constraint not all participants had adequate time in intervention. Future research should determine a time frame adequate enough to include all participants in intervention until a therapeutic trend is determined. Also, this study had more potential participants, but because of the time constraint they were removed. Future research should have a larger sample size. If this study were replicated, it would be interesting to explore how video prompting with a continuous loop as found in Canella-Malone and colleagues (2015) compares to video prompting with error feedback in teaching a vocational skill to this population.

Conclusion

The findings from this study suggest that video prompting of a window washing vocational task may be effective in teaching young adult transition students diagnosed with moderate to severe intellectual disabilities. These findings are consistent with past

research in this area (Cannella-Malone 2006). Although, this treatment package was not effective for every participant it did have a positive impact on some. Furthermore, this study demonstrated elements effective for individuals with intellectual disabilities and may add to the growing body of research for this population. Further research is needed in the area of video promoting as a teaching strategy for moderate to severe intellectually disabled young adults to determine more effective instructional techniques that can be used to increase vocational skills as a path toward finding gainful employment and increasing quality of life.

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Appendix A

Task Analysis Tracking Sheet

Task: Window Washing	Student:	Date:	Time:	Observer:

Steps:	Correct	Incorrect	Notes
1. Wet wand			
2. Wet window w/wand			
3. put wand away			
4. Get squeegee			
5. Start squeegee at top left corner work across			
6. Dry squeegee after each pass			
7. Put squeegee back in tool bucket			
8. Get towel			
9. Wipe window sill using towel			
10. Put towel back in tool bucket			

Appendix B

Fidelity Checklist

Facility:	Observer:	Title:
Date:	Observer:	Title:
Time Session Began:	Trainer:	Title:
Time Session Ended:	Name:	

Fidelity Implementation guidelines:

Complete fidelity checklist every two sessions per student during intervention.

Item	Complete	Incomplete
1. Trainer prepares work station. Window washing tools, lap top open with video set at start.		
2. Trainer asks/assists student to work station		
3. Trainer confirms that student can see lap top		
4. Trainer states the following: "student" "You are going to watch a video on how to wash windows. First watch then do when the video stops."		
5. Trainer states that student will use the window washing tools on the table next to them. "Please use the window washing tools."		
6. Trainer says ready and presses play		

7. The trainer stops the video after the first clip ends and waits 30 seconds for the students to complete the task. *Do for all clips		
8. If student does not complete the task the trainer will complete it for them in order to move to the next step.		
9. Upon completion the trainer states the student has finished and will practice again soon and thanks them for their time.		

Appendix C

Social Validity Questionnaire

Questions:		1 Strongly disagree	2 Disagree	3 Agree	4 Strongly Agree
1	This treatment was effective				
2	I found this treatment acceptable for increasing the student's skills				
3	I think the student's skills would remain at an improved level even after the treatment ends				
4	This treatment quickly improved the student's skills				
5	I would be willing to carry out this treatment myself if I wanted to increase the student's skills				
6	I would suggest the use of this treatment to other individuals				