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Video-Based Instruction to Promote Employment-Related Social Behaviors for High School Students With Intellectual Disability

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Abstract

The disappointing employment outcomes of students with intellectual disability (ID) can often be exacerbated by the social-related challenges they experience. Within high school transition programs, interventions targeting employment-related social behaviors and inclusive practices should emphasize individualization, self-regulation, and generalization. We used a multiple-probe-across-participants, single-case experimental design to examine the effects of video-based instruction on the individualized employment-related social behaviors (ERSB) of 5 high school students with ID with severe levels of impairment. For all participants, the intervention increased ERSB, sustained task engagement in the school setting, and maintained over time. Students and educators considered the intervention beneficial and enjoyable. We offer implications for supporting social skills development within secondary schools to prepare students for future inclusive employment opportunities.

Key Words: *video-based instruction; video modeling; employment skills; social skills; intellectual disability, transition*

One of the paramount goals of special education is to prepare students with disabilities for life after high school through transition planning and development of relevant employment skills (Individuals With Disabilities Education Improvement Act, 2004). However, the nature of employment training in most secondary programs is limited and often focuses narrowly on teaching technical skills in a classroom-based setting to the neglect of soft skills (e.g., interpersonal skills such as communication and listening) needed to navigate inclusive employment settings successfully (Guy, Sitlington, Larsen, & Frank, 2009). This restricted focus on technical skills development is incongruent with the broader expectations future employers hold for young adults with disabilities (Agran, Hughes, Thoma, & Scott, 2016). Employers expect new hires to enter with "job-ready" social skills repertoires (e.g., interacting with customers and co-workers, requesting and providing assistance, responding appropriately to feedback; Carter & Wehby, 2003). Social skills are integral in helping new employees adapt to the dynamic nature of community-based work. Fluency in social skills also allows on-the-job training to emphasize the acquisition of technical skills specific to the workplace. Young adults with intellectual disability (ID) often experience challenges navigating social interactions and relationships effectively (Lyons, Huber, Carter, Chen, & Asmus, 2016). Moreover, the failure to meet the social expectations of employers is one of the primary reasons why employees with ID lose their jobs (Chadsey, 2007).

High school is a logical venue to teach these much-needed skills to prepare students for the workforce. Gilson, Carter, and Biggs (2017) conducted a systematic review of 56 school-based studies focusing on employment skills instruction for secondary students with ID or autism. Almost half of studies (42.8%) included a social component (i.e., defined by an opportu-

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nity to interact with others) in their dependent measures. To adequately prepare students for both job retention *and* job acquisition in inclusive settings, high school transition programs need to emphasize both task independence and social integration (i.e., employment-related social behaviors). Employment-related social behaviors align with the skills comprising "vocational social skills" as defined by the National Technical Assistance Center on Transition (2018) as an evidence-based practice for student development in employment skills. These skills are comprised of task-related and non-task-related behaviors requiring social interactions in the workplace. Task-related behaviors include following directions, accepting criticism, staying engaged independently, and requesting assistance when needed. Non-task related behaviors include using social amenities (e.g., please, thank you), using appropriate conversational behaviors (e.g., making eye contact, appropriate volume), and maintaining appropriate personal appearance (Carter & Wehby, 2003). Effective interventions reviewed by Gilson et al. tended to incorporate three key elements: (a) individualization, (b) self-regulation, and (c) generalization.

First, individualization is needed within the expansive swath of skills known as "social skills," which can be defined broadly as any behavior resulting in positive social interactions, encompassing both verbal and nonverbal behaviors necessary for effective interpersonal communication (Rao, Beidel, & Murray, 2008). However, given the wide array of social-related strengths and deficits students with ID may possess, broadly focused social skills training programs may not be effective. To ensure social skills instruction is targeting each student's most relevant growth areas, interventions should be tailored to an individual's needs and designed with personal goals in mind.

Second, self-regulation affects students' learning and achievement (Bandura, 1997). Self-regulation refers to self-generated thoughts, feelings, and actions that are systematically designed to affect one's learning of knowledge and skills. Specifically, self-regulation consists of three phases: forethought, performance control, and self-reflection. The forethought phase prepares students through goal-setting or modeling; the performance control phase involves processes such as feedback or prompting; and the self-reflection phase has students evaluating their goal progress and adjusting strategies as needed (Bandura, 1997). When learning a social skill, students may benefit from observing model demonstrations, which can lead to the emulative level when students approximate the model's behaviors. Repeated exposure to models helps students develop patterns, eventually forming an internalized representation of the skill that can be adapted to fit new contexts (Schunk & Zimmerman, 2007).

Third, social skills training should be designed to facilitate skill generalization outside of the instructional setting (Rao et al., 2008). This is especially critical when preparing students for inclusive employment in the future, as students need to have opportunities to practice these skills with unfamiliar people in new settings. One avenue to assess generalization of skills when teaching employment skills is through community-based vocational instruction, which is a component of many high school transition programs for students with ID.

High school transition educators can be equipped to deliver interventions targeting employment-related social behaviors in ways that support individualization, self-regulation, and generalization. In many transition programs, teachers and paraprofessionals provide proximal support during instruction. These techniques mirror typical job coaching strategies used in supported employment settings (e.g., task analysis, prompting, fading, verbal instruction, physical demonstration, performance feedback). Often missing from the support staff's responsibilities is an emphasis on promoting social skills associated with job fluency and workplace integration (Bennett, Brady, Scott, Dukes, & Frain, 2010). That is, the proximity of the support staff member can inadvertently hinder interactions in school, community, or employment contexts (Carter, Sisco, Brown, Brickham, & Al-Khabbaz, 2008). However, reducing or removing the coach entirely can jeopardize the extent to which students receive needed task-related supports. Introducing a ubiquitous technology support could help redefine the role of the coach as that of a facilitator, emphasizing individualization, self-regulation, and generalization through a mobile platform. Prior research highlights several uses of technology to teach and support secondary students with ID or autism when acquiring employment skills. Video-based instruction (VBI) has been well supported to teach social skills to students with ID (e.g., Mechling, Ayres, Bryant, & Foster 2014) as well as employment skills (e.g., Bereznak et al.,

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2012). VBI incorporates video modeling or video prompting, both of which teach skills using prerecorded videos (Spriggs, Mims, van Dijk, & Knight, 2016). VBI often combines different forms of demonstrative and responsive supports, such as antecedent cues through prompting or modeling and performance feedback, including praise and error correction. These supports include video modeling, in which a student is expected to complete the task after watching the entire video, and video prompting, in which students watch a portion of the video and complete one step before moving on to the next step.

Although prior research supports the effectiveness of VBI, only two studies addressed on-the-job social behaviors as primary dependent measures. Malouf and colleagues (1986) developed a videotape-based curriculum in which the experimental group of students with ID was assisted by an instructor through interactive scenes of employment settings with embedded lessons about understanding feedback, responding to criticism, and asking for help. The experimental group significantly outperformed the control group on measures of social skill development at posttest. Similarly, Van Laarhoven and colleagues (2014) compared the effects of video modeling with video feedback when teaching four students with intellectual and developmental disabilities to include social interactions with staff and peers in their school-based jobs (i.e., office assistant). Three out of four participants demonstrated more substantial gains with feedback than video modeling. Although both studies addressed employment-related social behaviors, they lack a focus on students with significant cognitive impairments as well as three critical components for effective social skills instruction: (a) individualization, (b) self-regulation, and (c) generalization.

The present study focused on increasing an individualized set of employment-related social behaviors for students with ID through the use of VBI delivered from a mobile app on an iPad. The VBI entailed a sequence of instruction and self-regulation in which high school students first watched three videos demonstrating their individualized target behaviors, performed the task uninterrupted, re-watched the videos, and reflected on their performance. This study addressed the following research questions:

1. Does the use of VBI increase the occurrence of employment-related social behaviors of high school students with intellectual disability in school settings?
2. Does task engagement remain high when the educator's proximity is reduced?
3. Do students generalize the employment-related social behaviors learned in a school-based work setting to a community-based work setting?

Method

Participants

Student participants. Five high school students with ID participated in the study. To be included in the study, students must have: (a) had a primary special education category of autism or intellectual disability; (b) met eligibility for the state's alternate assessment as a student with a significant cognitive impairment; (c) been between the ages of 18 to 21 at the start of the school year; (d) attended the transition program daily with community-based vocational instruction (CBVI) at least once per week; and (e) received parental consent and provided verbal assent. All students had a transition goal in their individualized education program (IEP) addressing social skills and pursuing inclusive employment in the community.

Calli was a 20-year-old, White female with ID. Calli's most recent assessments included the Adaptive Behavior Assessment System II (ABAS-II; Harrison & Oakland, 2003; General Adaptive Composite Score = 76) and the Reynolds Intellectual Assessment Scales (RIAS; Reynolds & Kamphaus, 2003; Composite Intelligence Index = < 40). According to her IEP, Calli's teacher described her as a happy, eager learner who wants to do well in school. Calli enjoyed being independent and liked to help others. Calli had three IEP goals related to strengthening social skills in an employment context.

Eliza was a 22-year-old, White female with ID (Down syndrome). Eliza's most recent assessments included the Vineland Adaptive Behavior Scale (VABS; Sparrow, Balla, & Cicchetti, 1985; Adaptive Behavior Composite = 61) and Leiter International Performance Scale–Revised (Roid & Miller, 1997; Full Scale IQ = 52). Her teacher described her as a student who came to school every day ready to work. She had two IEP goals related to the application of social skills to a vocational task.

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Jeffrey was a 22-year-old, White male with speech language impairment and ID (Down syndrome). Jeffrey's recent assessments included the VABS (Adaptive Behavior Composite = 64) and Wechsler Adult Intelligence Scale–IV (WAIS-IV; Wechsler, 2014; Full Scale IQ = 40). His case manager described him as very social with peers and the school staff. Jeffrey had two IEP goals related to social communication within vocational training and employment settings.

Cameron was a 19-year-old, White male with ID. Cameron's recent assessments included the ABAS-II (General Adaptive Composite Score = 58) and the RIAS (Composite Intelligence Index = < 40). His teacher described him as a student whom is easy to get along with and makes friends easily. Cameron had three IEP goals related to strengthening social skills when practicing vocational tasks.

Bethany was an 18-year-old, White female with ID. Bethany's recent assessments included the ABAS-II (General Adaptive Behavior Composite Score = 69) and WAIS-IV (Full Scale IQ = 62). Her teacher described her as a joyful learner with a good sense of humor who strives to do well in school and in the community. Bethany had three goals related to using social skills in the workplace.

Educator participants. We taught three paraprofessionals and one special education teacher to facilitate VBI. Carolyn was a 59-year-old, White female special education teacher who had a master's degree and 36 years' teaching experience. Karen was a 55-year-old, White female paraprofessional who had a bachelor's degree and 13 years' experience in the same role. Patricia was a 46-year-old, Black female paraprofessional who had a Master's Degree in Special Education and 10 years' experience as a paraprofessional but was starting her first year at this school. Kevin was a 57-year-old, White male paraprofessional with a high school diploma and 18 years' experience in the same role. Three out of four educators had known the students for at least three years (range = 1 month to 7 years). All educators received a $200 stipend for participation.

School and Setting

School-based job training. The primary setting was a high school in an independent suburban school district in the southeastern United States comprising more than 5,400 students and 500 employees across five schools. All students were in the same functional skills class for the last two periods of the day. The VBI intervention specifically targeted a job-training task procedure called the "supply cart," in which two students were accompanied by one educator to practice employment-related skills. At the beginning of each school year, their teacher coordinated with 12 teachers with an overlapping planning period about their interest in having the students frequently visit their classroom to deliver free supplies. Students distributed school supplies and sold candy to these teachers, as well as office staff and administrators. During this task, students were responsible for pushing the cart, finding the teachers' classrooms from a preassigned list for each class period, offering and distributing the items, and managing the money tendering and cash box. To help students locate the classrooms independently, the teacher placed small paper cutouts with the school mascot above each teacher's door, with colors differentiated for each period. While students were managing the cart, they visited a teacher's workroom to wipe down the tables and counters. The total task procedure lasted about 30 min and occurred once during the middle of each period (i.e., to avoid passing time at the beginning or end of class). Students typically managed the cart 4 days per week.

Hospital-based job training. All students participated in CBVI once per week at a local women's hospital accompanied by the teacher and two paraprofessionals. They rotated responsibilities at the hospital each week across three groups. The first group worked in the cafeteria cleaning tables and counters and collecting trays from customers in the dining area. The second group cleaned and dusted the waiting rooms across the hospital. The third group managed a hospitality cart in the patient wings in a similar way to the supply cart at the school. They distributed free magazines, crosswords, and coloring pages and sold candy and snacks for 1 dollar. Students visited the hospital each Thursday for 3 hours beginning in November, approximately eight weeks after the start of the study.

Materials

ONEder app. Video-based instruction was provided on an iPad via a mobile app called ONEder (SpecialNeedsWare, 2016), which is supported across platforms such as smartphones, tablets, or computers. At the time of the study, annual licenses were approximately $149 per

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individual teacher or student. All students had prior experience using an iPad and did not require extensive pretraining on the device. Each student was assigned an account personalized to support his or her target behaviors.

Creating the video clips. After identifying the target social behaviors for each student, we created individualized video clips and loaded them to each student's personal account. Each clip included captioned text that appeared in large font below the video while playing. Because these videos were filmed after school when students and teachers were not present, the first author acted as the model and one of the data collectors acted as the teacher the student would be visiting when operating the supply cart. We filmed the videos in the same hallway and included the same supply cart, cash box, snacks, and supplies as the students used each day. Each student watched four personalized videos, which combined elements of video prompting and video modeling to create a self-regulated intervention. The first video type summarized the lesson and its target behaviors and instructed students to navigate to the next video to get started. These videos ranged in length from 19 to 22 s.

The second video type comprised a series of video models illustrating the use of each target behavior. We filmed three unique videos of this type for each student, each demonstrating one target behavior. Each clip included at least one demonstration of the target behavior (e.g., verbally initiate conversation) or a sustained example of duration behaviors (e.g., giving someone eye contact). We scripted personalized conversations to cater to each student's hobbies and interests. These modeling videos ranged from 19 to 60 s in length. Preparing the video scripts and filming the personalized clips took approximately one hour per student.

Dependent Measures

Employment-related social behaviors. The primary dependent measure was an individualized measure of *employment-related social behaviors* (ERSB). We worked with the school team to select a set of three behaviors for each student to be measured during each observation as their ERSB. Each behavior was selected based on a demonstrated need for growth (as determined by a social skills inventory) and the extent to which the three behaviors could be practiced at the same time in an employment context (e.g., eye contact and verbal acknowledgement). Each of three behaviors comprising the ERSB had to be demonstrated with a peer, teacher, staff member, or someone else along the supply cart route. Therefore, we did not code occurrence of these behaviors during an interaction with the educator or classmate with ID also operating the supply cart. We used partial-interval data collection each 30 s to record the percentage of intervals in which at least one of three ERSB occurred. We recorded one of two mutually exclusive options to characterize each behavior: (a) *independent* (i.e., performed individually without assistance from anyone else) or (b) *assisted* (i.e., performed after a verbal antecedent prompt or performance feedback from the educator after 10 s of student delay).

Independent task engagement. We used momentary time sampling at the beginning of each interval to collect data on *independent task engagement*, which was defined as the student doing the expected task; demonstrating visible focus (i.e., body oriented toward materials) on the assigned task; listening to directions given or asking questions of the teacher, paraprofessional, supervisor, or another student about the task; or engaging in instructional support materials (e.g., iPad with ONEder app). Observers coded one of three mutually exclusive options for each time sample: (a) *engaged*, (b) *unengaged*, or (c) *no task*. We coded *engaged* if the student was focused on performing the specific task or direction most recently given by the educator. We coded *unengaged* if the student was not focused on performing the task explicitly assigned by the educator. We coded *no task* when there was no explicit expectation to perform work.

Proximity. We also used momentary time sampling to collect data on the percentage of intervals students were in *proximity* to others (i.e., body orientation, distance of 5 feet or less, and position of the student and other person that allows easy access for interactions). Observers noted each person in proximity at the start of each interval across three groups: (a) classmates, (b) educators (i.e., teacher or paraprofessional) proximity, and (c) others (i.e., anyone else).

Observers and Observational Procedures

Observer training. The first author served as the primary observer, along with two research assistants. At least two observers collected data approximately four days each week. Two observers collected simultaneous data on the same student

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approximately every three days to assess inter-observer reliability. Observer training occurred in two stages. First, observers participated in an initial 2-hr didactic training, in which we reviewed the data collection manual, including operational definitions, examples, and non-examples for each variable. The training included guided practice using scenarios and researcher-created video clips. Observers had to score 90% or higher on a written assessment of the coding manual. Next, each observer needed to reach 90% reliability (i.e., occurrence and nonoccurrence agreement) across three videos, as measured against a master code to provide a best estimate of the actual occurrence of events, and three live sessions with the first author before collecting data.

Observational procedures. We measured dependent variables and treatment fidelity using a paper-and-pencil recording system. Observations began when the student was instructed by the educator to begin the task procedure (i.e., the supply cart activity) and ended when the student returned to the classroom after visiting the assigned teachers. The total duration of the task procedure could range from 10 to 25 min, depending on whether teachers were in their classrooms during their planning period and how long students interacted with them. To ensure consistency across students, periods, and days, each observation period lasted 15 min. If the task procedure ended before 15 min, we coded the remaining time as "no task." If the task procedure exceeded 15 min, we continued to follow the students through the task, but did not take data. See Table 1 for a summary of measures collected through direct observation.

Inter-observer agreement. We collected inter-observer agreement (IOA) data in approximately one third of sessions randomly selected and balanced across phases and students. We were unable to collect IOA data during generalization probes due to hospital restrictions. We calculated IOA three ways: (1) *overall agreement*, by designating each interval as an agreement or disagreement and dividing the number of agreements by the sum of agreements and disagreements; (2) *occurrence agreement for all measures,* by dividing the total number of intervals of agreements of occurrence by the sum of agreements plus disagreements; and (3) *nonoccurrence agreement for all measures,* by dividing the total number of intervals of agreements of nonoccurrence by the sum of agreements and disagreements. This accounted for less frequently occurring behaviors (e.g., ERSB). Quotients were multiplied by 100%. Table 2 summarizes IOA across measures, phases, and students.

Fidelity Measures

Treatment fidelity for participating educators was assessed in two ways across all phases: (a) observational measures collected as part of primary data collection (i.e., extent to which "assistance" was provided in proximity); and (b) percentage of fidelity as measured by checklists completed by observers during each observation period. We completed a checklist immediately after each session summarizing the educator behavior during the task procedure. The checklist addressed (a) how the educator initiated the start of the task procedure (and navigation to the videos on the tablet, if needed); (b) any adult facilitative behaviors used during the task procedure, including prompting, reinforcing, and checking; and (c) how the educator directed the student through the self-reflection.

Fidelity *before* the task procedure was defined by completion of the following steps in order: (1) Show video to student or give the student the VBI device; (2) Take away the device after the student has watched all of the video clips; (3) Prompt the student to begin the task procedure by saying, "OK, go to work"; (4) Stand outside of proximity but still in visible distance of the student to assist if needed. Fidelity *during* the task procedure was determined by: (1) Stand outside of proximity but still in visible distance of the student to assist if needed; (2) Provide assistance if needed (i.e., if student pauses for at least 10 s during the task procedure); and (3) Give advice or information to support the next step of the task procedure. The educator could assist the student with the next step of the task and then return to their position outside of proximity for the student to carry out the next steps of the task. Fidelity *after* the task procedure was defined by completion of the following steps in order: (1) Return to proximity of the student; (2) Give student device and show them all of the videos again; (3) Ask the student to self-reflect on their performance in the task procedure based on what they saw in the videos; (4) Praise the student's performance in the task procedure; (5) Give constructive feedback or advice to the student about how they can improve if needed; and (6) Help the student come up with a plan for how they will act differently next time they complete this task procedure. We assessed

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IOA on the fidelity checklists for approximately 33% of sessions across phases. IOA across all 13 fidelity items averaged 92% across measures.

Social Validity

Three paraprofessionals and the special education teacher completed a survey comprised of 15 Likert-type questions (see Table 3) and five short-response questions asking whether they enjoyed participating in the intervention, felt effective in their role, and were motivated to continue using self-monitoring support tools. Students provided their feedback via an interview with their teacher. Questions addressed the extent to which students enjoyed participating in the study and whether they would like to do it again (see Table 4). Answer options were: *yes*, *no,* or *I don't know*. Students also had the opportunity to answer two short-response questions in writing or interview format about what they liked and did not like about the study.

Experimental Design and Procedures

We used a multiple-probe-across-participants design (Ledford & Gast, 2018) to evaluate the effectiveness of video-based instruction on the acquisition of employment-related social behaviors. Probe sessions were balanced across days of the week for each student to ensure data were representative. That is, students alternated the days and periods during which they performed the task procedure on the supply cart. We introduced the intervention phase in the tier with the most stable level of employment-related social behaviors during the baseline phase (i.e., Calli) and proceeded accordingly with each student. Baseline lengths were not determined a priori. We used visual analysis to decide phase changes based on level, trend, and variability (Ledford & Gast). We also compared level, trend, variability, and overlap to determine whether a functional relation existed between the introduction of the VBI and increases in occurrence of the ERSB.

Selection of target skills. To individualize the intervention for each student, we created a prebaseline assessment of critical social skills for employment adapted from similar tools (i.e., Agran et al., 2016; Carter & Wehby, 2003; Hughes & Carter, 2012). The special education teacher and one paraprofessional who had worked closely with the students for several years completed the assessment for all five students. Respondents were asked to evaluate each student's current level of performance of 52 total behaviors demonstrated in a workplace setting. Response options included: *very poorly*, *somewhat poorly*, *somewhat well*, *very well,* or *unsure*. Items spanned four sections addressing employment skills: *work-production related behaviors* (12 items; e.g., carrying out instructions that need immediate attention, performing job responsibilities without having to be asked); *task-related social behaviors* (12 items; e.g., asking a co-worker/peer for assistance when needed, accepting constructive criticism without getting angry or upset); *non-task-related social behaviors* (19 items; e.g., using polite language, making appropriate eye contact); *general work behaviors* (9 items; e.g., arriving to work on time, taking responsibility for own actions at work). Additionally, we included four items in a separate section to capture the extent to which students could perform basic components of this intervention not specifically related to employment skills: (1) ability to imitate behavior; (2) responding to stepwise prompting; (3) retaining new information; and (4) interacting with technology. Respondents could write in any behavior they believed to be pertinent not addressed in the inventory. We met with the special education teacher to establish consensus for the three social-related behaviors. This decision was based on which behaviors were identified as the highest need and which would be feasible to address, given the job task and setting. We used this measure *and* information from each student's IEP goals to develop an individualized definition for each student's employment-related social behavior.

Pretraining. Before the intervention began, students participated in a brief pretraining session lasting approximately 30 min. All students were comfortable with the iPad because they used a smartphone, tablet, or computer daily. They watched three practice videos modeling a non-related topic (i.e., sharpening a pencil) on the ONEder app to ensure they could navigate properly to the video, press play, pause, and stop, and adjust the volume if needed.

Baseline phase. During the baseline phase, educators were instructed to support students in employment skills instruction as they typically would without any training. Although they knew the intervention targeted social behaviors, they were not given a fidelity checklist and did not have access to each student's target ERSB. Observers recorded whether the student completed any component of his or her ERSB when given the

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Table 1
Summary of Observational Findings Across Primary Study Phases

	Calli		Eliza	
	% *M* (range)		% *M* (range)	
Measures	Baseline	VBI	Baseline	VBI
Task engagement				
Engaged	99 (93–100)	99 (93–100)	99 (93–100)	99 (93–100)
Unengaged	1 (0–7)	1 (0–7)	1 (0–7)	0 (0–3)
No task	0 (0–0)	0 (0–0)	0 (0–0)	0 (0–7)
Proximity				
To educator	88 (37–100)	32 (7–63)	88 (33–100)	39 (23–57)
To classmate	91 (73–100)	84 (43–100)	95 (83–100)	83 (67–100)
To others	10 (6–17)	18 (3–53)	11 (0–23)	17 (7–30)
Classmate interactions				
Independent	14 (7–27)	32 (3–67)	10 (0–17)	33 (17–60)
Assisted	0 (0–3)	0 (0–0)	0 (0–3)	1 (0–7)
ERSB				
Independent	9 (3–20)	32 (17–50)	11 (3–20)	28 (17–40)
Assisted	4 (0–7)	4 (0–13)	3 (0–10)	3 (0–7)
Types of targeted ERSB				
Ask for help when needed	—	—	0 (0–0)	5 (0–17)
Verbally acknowledge others	8 (3–13)	22 (3–43)	—	—
Non-verbally acknowledge others	1 (0–3)	20 (3–33)	—	—
Initiate conversation	5 (0–17)	11 (6–23)	7 (3–13)	10 (3–20)
Listen attentively without interrupting	—	—	—	—
Respond appropriately to directions	—	—	—	—
Initiate the end of a conversation	—	—	—	—
Remain engaged while talking	—	—	8 (0–20)	19 (3–20)

Note. These summary measures are reflective of 15-min observation sessions with 30-s intervals. All percentages are rounded to the nearest whole number. VBI = Video-based instruction; ERSB = Employment-related social behaviors. – = indicates the ERSB was not targeted for this student.

opportunity (i.e., when "other" people were in proximity) and if so, whether assistance was required. They also recorded the student's task engagement and proximity to others. Observers used the fidelity checklist to record whether any intervention components were implemented during the baseline phase.

Staff training. Staff participated in a 90-min training prior to beginning the intervention. The training comprised two parts: (1) didactic instruction about job coaching strategies and social skills development delivered via PowerPoint lasting approximately 60 min; and (2) modeling use of the ONEder app lasting about 30 min. We explained each student's target ERSB and pre-

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Table 1
Extended

Jeffrey		Cameron		Bethany	
% *M* (range)		% *M* (range)		% *M* (range)	
Baseline	VBI	Baseline	VBI	Baseline	VBI
99 (93–100)	98 (83–100)	99 (90–100)	99 (97–100)	99 (90–100)	99 (90–100)
1 (0–7)	1 (0–3)	1 (0–10)	0 (0–3)	1 (0–10)	0 (0–0)
0 (0–0)	1 (0–17)	0 (0–3)	0 (0–0)	1 (0–10)	1 (0–10)
80 (13–100)	42 (7–100)	62 (7–100)	41 (13–83)	54 (3–100)	25 (7–43)
88 (53–100)	91 (77–100)	82 (43–100)	73 (0–100)	81 (10–100)	91 (67–100)
16 (0–40)	26 (13–33)	21 (3–90)	25 (10–53)	15 (3–33)	26 (17–43)
26 (3–73)	39 (23–63)	43 (17–87)	46 (0–70)	23 (7–47)	40 (7–60)
0 (0–0)	0 (0–3)	0 (0–3)	0 (0–0)	0 (0–0)	0 (0–0)
7 (0–13)	31 (10–40)	14 (1–27)	33 (27–40)	17 (3–33)	32 (27–43)
2 (0–7)	4 (0–13)	1 (0–10)	3 (0–7)	2 (0–13)	3 (0–10)
1 (0–3)	4 (0–10)	—	—	0 (0–3)	1 (0–7)
—	—	—	—	18 (0–33)	27 (7–43)
—	—	6 (0–17)	22 (10–37)	9 (0–20)	23 (13–30)
—	—	9 (0–23)	13 (7–23)	—	—
—	—	6 (0–17)	18 (10–27)	—	—
4 (0–10)	18 (3–30)	—	—	—	—
4 (0–10)	15 (7–23)	—	—	—	—
—	—	—	—	—	—

viewed the videos for each student. At the end of the training, we explained the staggered nature of the study design and shared the projected timeline for VBI implementation.

Video-based instruction. The student with the most stable baseline patterns of ERSB began the intervention first. During the video-based instruction, only the video clips relevant for each student's ERSB appeared on his or her ONEder account. Each student was given an introductory video summarizing all three target videos and one video modeling each ERSB. Right before students began the supply cart task, they watched each of the videos one time. The educator directed the student to watch the videos one at a time and then view the next video until the stop sign appeared, indicating completion of the videos. Next, the student returned the tablet to the educator and proceeded through the task

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Table 2
Summary of Overall Interobserver Agreement by Measure

	Calli		Eliza	
	% *M* (range)		% *M* (range)	
Measures	Baseline	VBI	Baseline	VBI
Independent task engagement				
Engaged	96 (87–100)	99 (93–100)	99 (93–100)	99 (93–100)
Unengaged	100 (100)	98 (97–100)	99 (93–100)	99 (93–100)
No task	96 (87–100)	98 (97–100)	100 (100)	100 (100)
Proximity				
To staff facilitator	80 (57–97)	92 (82–100)	94 (80–100)	92 (82–100)
To classmate	82 (63–100)	87 (77–100)	93 (87–100)	93 (87–100)
To others	97 (93–100)	93 (87–100)	89 (77–97)	87 (77–100)
Classmate interactions				
Independent	87 (80–90)	90 (77–100)	81 (67–93)	84 (77–97)
Assisted	99 (97–100)	98 (97–100)	98 (97–100)	97 (93–100)
ERSB				
Independent	91 (80–97)	93 (87–97)	92 (90–93)	93 (87–97)
Assisted	98 (97–100)	97 (93–100)	94 (90–100)	97 (96–100)
Types of targeted ERSB				
Ask for help when needed	—	—	97 (93–100)	93 (90–100)
Verbally acknowledge others	89 (83–90)	90 (87–100)	—	—
Non-verbally acknowledge others	92 (87–100)	88 (80–97)	—	—
Initiate conversation	90 (77–97)	90 (80–97)	93 (87–100)	93 (87–97)
Listen attentively without interrupting	—	—	—	—
Respond appropriately to directions	—	—	—	—
Initiate the end of a conversation	—	—	—	—
Remain engaged while talking	—	—	93 (93–100)	90 (87–100)

Note.– = indicates the ERSB was not targeted for this student. All percentages are rounded to the nearest whole number.

uninterrupted (i.e., without having the opportunity to watch the video again). The educator was instructed to remain out of proximity during this time but was available to provide a system of least prompts if needed (i.e., if the student delayed the task for more than 10 s). The prompting hierarchy began with the educator reminding the student of the given task, followed by a rephrasing of the task, and eventually progressing to modeling or direct physical assistance. Observers marked *assisted* on the data observation sheet and the fidelity checklist to indicate if the educator stepped in to provide support, noting the extent and type of prompting.

After the student completed the task procedure, he or she met with the educator to receive the iPad again. They re-watched the three videos and used a self-evaluation tool on ONEder to check off the list of each target behavior and indicate one of the following options for each: (1) *yes, I did the best I could*; (2) *yes, I did it but I could have done better*; or (3) *no, I did not do it*. During this debrief time, the facilitator encouraged self-reflection by asking questions such as: *What could you have done better? What will you focus on for next time?* After the student completed the self-reflection, the facilitator shared any notes observed during the task procedure and his or her own evaluation of the student's performance. Due to student absences and the end of the semester, the number of intervention probes varied across students. The number of probes during the

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Table 2
Extended

Jeffrey		Cameron		Bethany	
% *M* (range)		% *M* (range)		% *M* (range)	
Baseline	VBI	Baseline	VBI	Baseline	VBI
99 (97–100)	98 (97–100)	98 (97–100)	97 (96–100)	98 (97–100)	99 (97–100)
99 (98–100)	99 (98–100)	98 (97–100)	96 (95–100)	98 (97–100)	99 (98–100)
99 (98–100)	99 (99–100)	100 (100)	100 (100)	100 (100)	98 (98–100)
86 (70–100)	88 (77–100)	78 (73–87)	82 (80–97)	81 (70–100)	84 (80–97)
98 (93–100)	99 (93–100)	84 (73–100)	87 (73–100)	88 (77–100)	93 (90–100)
97 (93–100)	95 (90–100)	95 (83–100)	90 (88–97)	93 (77–100)	94 (88–97)
84 (73–97)	82 (67–90)	84 (77–100)	82 (73–97)	80 (70–93)	82 (77–97)
99 (97–100)	97 (96–100)	100 (100)	99 (97–100)	100 (100)	97 (93–100)
90 (77–100)	88 (70–97)	97 (90–100)	92 (90–97)	92 (80–100)	94 (88–100)
93 (87–97)	97 (96–100)	98 (93–100)	94 (90–100)	96 (93–100)	97 (96–100)
99 (97–100)	99 (96–100)	—	—	99 (93–100)	94 (90–100)
—	—	—	—	93 (83–100)	90 (88–97)
—	—	97 (93–100)	98 (97–100)	90 (77–100)	88 (80–97)
—	—	95 (87–97)	92 (82–100)	—	—
—	—	91 (83–97)	94 (87–97)	—	—
95 (87–100)	96 (84–100)	—	—	—	—
93 (87–97)	90 (87–100)	—	—	—	—
—	—	—	—	—	—

intervention phase averaged 20.4 across students (range = 13–28).

Maintenance. After the intervention terminated, students still participated in the supply cart on a regular basis but could no longer access the tablet with VBI. Maintenance probes occurred approximately one month after the intervention ended. Observers used the same data observation sheet during maintenance to indicate whether any assistance was necessary.

Generalization. We collected generalization probes approximately once per week for each student in the hospital setting during the intervention phase and maintenance phases. Students did not have access to ONEder during generalization. We collected data on the same target ERSB for each student, independent task engagement, and educator proximity in the same way as in the baseline, intervention, and maintenance phases. Generalization data were collected weekly from November to February, with a 3-week lapse from mid-December until mid-January due to winter break.

Results

Employment-Related Social Behaviors

Figure 1 displays the percentage of intervals with independent ERSB (solid line), the proximity of others (dotted line), task engagement (dashed line), and generalization probes (open circles). All students' independent ERSB increased upon implementation of VBI. The mean percentage of baseline intervals containing ERSB ranged from 7% to 17% across all five students, compared with

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Table 3
Educator Social Validity Survey Responses

Statements	Carolyn (T)	Kelly (P)	Patricia (P)	Kevin (P)
The training I received was practical and reasonable.	5	5	4	4
I feel that this is an effective addition to traditional job coaching.	5	4	4	4
I was effective in my role as a coach.	5	4	3	4
I felt prepared to assist students with the videos.	4	5	3	4
The videos were helpful for my students.	5	4	4	5
It was easy to step away from the student during task procedures.	4	4	3	4
I think independence is an important part of job success.	5	5	5	5
I think social integration is an important part of job success.	5	5	5	5
This type of intervention fit well in the workplace setting.	4	5	4	5
My students benefitted socially from this coaching.	5	5	5	5
My students' job independence increased from this coaching.	5	4	5	5
I will continue to use these strategies after the study ends.	5	4	5	4
My students enjoyed receiving this intervention.	5	4	5	4
This intervention had a negative impact on the school/ workplace environment.	1	1	1	1
Overall, I enjoyed participating in this project.	5	5	4	4

Note. 1 = strongly disagree, 2 = agree, 3 = neutral, 4 = agree, 5 = strongly agree. T = teacher; P = paraprofessional.

a range of 28% to 33% during the VBI phase. The variability in trend is largely attributed to the opportunities for social interactions, measured by their proximity to others, and displayed in the dotted line.

Calli's percentage of ERSB (i.e., initiate conversation, verbally acknowledge others, nonverbally acknowledge others) averaged 9% during the baseline phase (range = 3%–20%) and increased to an average of 32% (range = 17%–50%) with an accelerating trend after the implementation of VBI. The percentage of nonoverlapping data points (PND) was 87%, reflecting limited overlap across conditions. Her most frequently demonstrated ERSB across VBI sessions were verbal acknowledgement ($M = 22\%$, range = 3%–43%), followed by nonverbal acknowledgement, usually in the form of eye contact ($M = 20\%$, range = 3%–33%), and verbal initiation ($M = 11\%$, range 6%–23%).

Eliza's percentage of ERSB (i.e., initiate conversation, remain engaged while talking, ask for help when needed) averaged 11% (range = 3%–20%) during the baseline phase and 28% (range = 17%–40%) during the VBI phase with an immediate change in level and very limited overlap (PND = 88%). The ERSB she most frequently demonstrated across VBI sessions were remaining

Table 4
Student Social Validity Survey Responses

Statements	Calli	Eliza	Jeffrey	Cameron	Bethany
I liked watching the videos before doing my job.	Y	Y	Y	Y	Y
I think the videos helped me do my job better.	Y	Y	I	Y	Y
I would like to watch more videos like this to learn new things.	Y	Y	Y	Y	Y
I would like to work and interact with other people in my future job.	Y	Y	Y	Y	Y

Note. Y = yes; I = I don't know.

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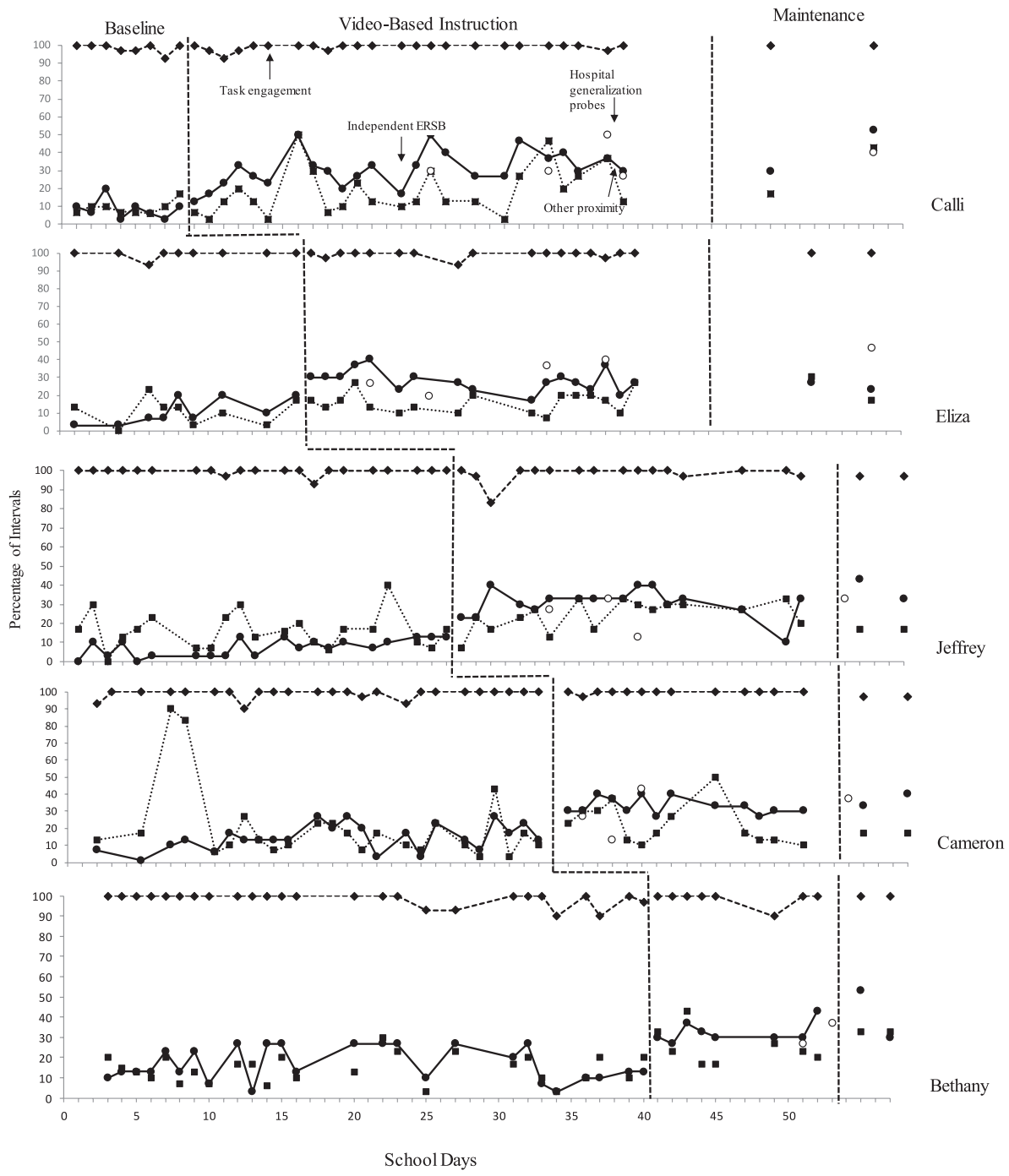

Figure 1. Task engagement (dashed line) and independent employment-related social behaviors (ERSB; dotted line) of students and proximity of others (solid line) during the baseline phase, intervention, and maintenance conditions. Open circles represent ERSB generalization probes.

engaged while talking (M = 19%, range = 3%–20%), followed by verbal initiation (M = 10%, range = 3%–20%), and then asking for help (M = 5%, range = 0%–17%).

Jeffrey's rate of his ERSB (i.e., ask for help when needed, respond appropriately to directions, initiate the end of a conversation) increased from an average of 7% (range = 0%–

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13%) in the baseline phase to 31% (range = 10%–40%) and immediate change in level was evident during VBI. There was very limited overlap (PND = 94%), except for his penultimate observation when he was not instructed to watch the videos before beginning the task procedure. His most frequently demonstrated ERSB during VBI was appropriate response to directions (M = 18%, range = 3%–30%), followed by initiating the end of a conversation (M = 15%, range = 7%–23%), and then asking for help (M = 4%, range = 0%–10%).

Cameron's rate of ERSB (i.e., initiate conversation, nonverbally acknowledge others, listen attentively without interrupting) immediately increased with the introduction of VBI, shifting from an average of 14% (range = 0%–27%) during the baseline phase to 33% (range = 27%–40%) during the intervention phase with very limited overlap (PND = 85%). Cameron's most frequently demonstrated ERSB during VBI was nonverbal acknowledgement (M = 22%, range = 10%–37%), followed by attentive listening (M = 18%, range = 10%–27%), and nonverbal acknowledgement (M = 13%, range = 7%–23%).

Bethany's rate of ERSB (i.e., ask for help when needed, verbally acknowledge others, nonverbally acknowledge others) increased from an average of 17% (range = 3%–27%) during the baseline phase to 33% (range = 27%–43%) and an immediate change in level with very limited overlap (PND = 88%). Bethany's most frequently demonstrated ERSB during VBI was verbal acknowledgment (M = 27%, range = 7%–43%), followed by nonverbal acknowledgement (M = 23%, range 13%–30%), and asking for help (M = 1%, range = 0%–7%).

Maintenance. We collected maintenance data for each student approximately one month after the termination of VBI. Calli's rate of ERSB maintained 4 weeks later at 30%. Due to winter break, Eliza's probe occurred 5 weeks after the end of her VBI, and her rate of ERSB maintained at 27%. Jeffrey's rate of ERSB maintained at 43% during his probe 4 weeks later. Cameron's rate of ERSB was 53% 4 weeks later. Bethany's ERSB maintained at 33% during her probe 4 weeks later.

Generalization. Generalization probes for ERSB are displayed as open circles in Figure 1. We observed each student in the hospital setting at least once after the implementation of VBI in the school setting. Calli's rate of ERSB averaged 34% across four generalization probes (range = 27%–50%). Eliza's rate of ERSB averaged 33% across four generalization probes (range = 20%–40%). Jeffrey's rate of ERSB averaged 24% across three generalization probes (range = 13%–33%). Cameron's rate of ERSB averaged 28% across three generalization probes (range = 13%–43%). Due to winter break, students took a hiatus from the hospital for 1 month. Therefore, we could only collect one generalization probe for Bethany, with a rate of ERSB of 27%.

Task engagement. Figure 1 displays task engagement for each student in the dashed line. All students sustained high levels of engagement during the task procedure, even as social interactions with classmates and others increased. In fact, average rates of task engagement remained identical between baseline phases and VBI phases for Calli, Eliza, Cameron, and Bethany (M = 99%, range = 93%–100%). Jeffrey's average rate of task engagement dropped slightly from baseline phase (M = 99%, range = 93%–100%) to VBI phase (M = 98%, range = 83%–100%) because of a day in which his task procedure ended several minutes early.

Proximity. Overall, the average rates of *educator proximity* dropped substantially across students between baseline phases (M = 74%, range = 3%–100%) and during VBI phases (M = 36%, range = 7%–100%). The variability in proximity can be attributed to the arrangement of students as dyads assigned to one educator during each task procedure. Because classmates were frequently in proximity to one another (M = 86%), there were many times when staff were helping the classmate (who may or may not be in the VBI phase), which resulted in them also being in proximity to the focus student. Figure 1 displays *other proximity* in the dotted line to estimate the opportunities students had to exhibit ERSB throughout phases. Overall, others were in proximity for an average of 14% of intervals across phases and students (range = 0%–90%).

Treatment fidelity. Observers assessed treatment fidelity while observing the task procedure by indicating the extent to which educators provided assistance to the focus students on social interactions with classmates and their ERSB. Educators provided little to no assistance explicitly targeting the students' ERSB during the baseline phase, which sustained at low levels after introducing VBI. Assisted ERSB occurred infrequently across all students in both baseline and VBI phases, averaging about 3% of intervals for all students (range = 0%–13%).

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Observers also completed a fidelity checklist for each educator before, during, and after the task procedure. The percentage values represent the percentage of observations during which the item was checked "yes" on the checklist. During the baseline phase, staff fidelity was uniformly low. After the staggered implementation of VBI, fidelity increased significantly across educators. Fidelity was 100% for the support behaviors demonstrated prior to the task procedure (i.e., show videos to the student, take away the device, prompt the student to begin the task procedure, and stand outside of proximity). During the task procedure, fidelity averaged 55% for three support behaviors (i.e., stand outside of proximity, provide assistance if needed, give advice or information to support the next step if needed). Fidelity averaged 90% for support behaviors after the task procedure (i.e., return to proximity, give back the device, ask the student to self-reflect on their performance, praise the student's performance, give constructive feedback, help the student come up with a plan for how to act differently next time). The areas of weakest demonstration of fidelity were related to proximity and assistance during the task procedure.

Social validity. Overall, educators felt the VBI training was practical and reasonable and felt prepared to assist students with the videos (see Table 3). They agreed this type of intervention fit well in the setting and felt their students benefited from it. Carolyn described VBI as a "completely new way of teaching skills." She noted, "[The students] were able to see exactly what they were to do. They were able to hear exactly what they were to say." When asked whether she noticed a change in her students after being a part of this study, she wrote: "Their self-confidence has skyrocketed!"

Student responses are displayed in Table 4. An educator read aloud the questions for each student to provide verbal feedback. To keep students from feeling obliged to answer positively about the study due to social desirability, educators explained the importance of honesty in their responses. All students indicated they liked the videos and they would like to watch more videos like this to learn new things. All felt the videos helped them to do their job better, except for Jeffrey who was unsure. Eliza said that watching the videos made her happy and confident. Calli said, "I liked that the videos were short and told me what to do."

Discussion

The need to strengthen employment-related social behaviors for young adults with ID is vital to both job acquisition and job retention in community-based employment settings. We evaluated the use of video-based instruction to increase three individualized ERSB for five students and maintain task engagement in the school setting and an inclusive community workplace. This study extends the literature focused on employment skills by offering several new understandings of the implementation and impact of video-based instruction for high school students with ID.

First, our data revealed a functional relation between the implementation of VBI and each student's individualized ERSB. All five students demonstrated and sustained a change in level after they began the intervention in the school setting. These findings are important as baseline data indicated students rarely demonstrated their ERSB above 25%, despite being in proximity to others. Intervals with targeted ERSB increased by an average of 20% (range = 15%–24%) across students when VBI was implemented for each student. This change in behavior approaches the ceiling of expectations for social interactions considering the nature of the task procedure and the available opportunities for interactions (i.e., averaged 20% of intervals across students and phases). Several components of this intervention package could contribute to these gains, including the video models, the educator's reduced proximity, the pre- and post-reflection process, or the explicit focus of social skills instruction delivered in an individualized way.

Second, even as students interacted more frequently with others during the VBI phase, task engagement maintained at high levels. Although multi-tasking was only a targeted ERSB for Eliza, data for all students indicate they were able to participate in more social interactions while still performing the basic expectations of the task procedure (e.g., pushing the cart, finding the classroom, money tendering). High levels of engagement across phases suggest the proximity of an educator was not required for students to remain attentive to their task. Prior studies have highlighted concerns about how the constant proximity of a support may inadvertently suppress the extent to which students participate in social interactions in academic settings (Carter et al.,

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2008). As transition-age students begin to shift to community-based settings, the consistent presence of a job coach may hinder potential opportunities for social interactions. This has enduring implications for the workplace in which employers typically expect employees to remain engaged on their task independently while demonstrating social competence to interact with co-workers, supervisors, and customers (Gilson & Carter, 2016). Thus, providing a technology-based support may be a means of promoting employment-related social skills without hindering the opportunities to practice them.

Third, our findings suggest the impact of VBI can maintain after the intervention ends and may be applicable to inclusive workplaces in the community. While receiving VBI at school, students demonstrated their ERSB at similar levels when practicing similar skills at the hospital. Maintenance data collected one month after the end of VBI for all students indicate the levels of ERSB acquired during VBI can be sustained for an extended period after the intervention ends. Because our study design did not allow us to make causal claims related to generalization, future researchers should seek to include generalization data collection throughout phases.

Fourth, feedback from staff and student participants affirm the acceptability and social validity of VBI in a high school transition setting. Educators generally felt satisfied with the training they received, felt effective in their role, and noted they would continue to use the new strategies. They considered VBI a beneficial tool that did not distract students from their job performance. The teacher indicated the intervention allowed her to access a new way of teaching and she planned to create new videos to teach different social skills in the future. Additionally, all students reported they enjoyed watching the videos, believed the videos helped them do their job better, and would like to watch similar videos to help them learn new things.

Implications for Practice

Our results extend the notion that social skills instruction should be intertwined within employment skills instruction in high school transition programs for students with ID to prepare students for future community employment after graduation. First, VBI is a practical and feasible intervention to teach individualized ERSB to students with severe ID. Both staff and students reported a positive experience with the intervention. By completing a social skills inventory, teachers can generate a list of two to three targeted items for instruction and quickly create video clips designed for each student. With the growing availability of technology, VBI can now be supported across platforms, such as tablets, smartphones, or laptops. Technology-based interventions provide an innovative means to target ERSB and promote inclusion in a salient and unobtrusive manner.

Second, self-regulation is a promising way to help secondary students with ID acquire new social skills. Students and staff alike reported students felt more confident when they were aware of their goals and were expected to reflect on them regularly. Paraprofessionals Karen and Keith emphasized this impact when asked whether they changed after VBI. Karen noted, "It made me more aware of our students being able to learn new things and gaining confidence and more independence at the same time." Kevin responded, "I have a better perspective on new ways to help the students achieve [their] goals." Adding the component of self-regulation before and after watching models and performing the task procedure helped students develop a predictable pattern of what a successful sequence entailed (Schunk & Zimmerman, 2007). Teachers could embed self-regulation by adding a reflective component before and after practicing a new skill.

Third, although all students indicated in their transition surveys prior to the start of VBI a desire to work in an inclusive employment setting, most did not report a specific interest in selling goods. However, the primary context for employment skills instruction was a supply cart intended to simulate sales-related jobs. Although there were some transferable skills acquired from this task, the narrow focus on this one venue of employment simulation highlights a missed opportunity for school staff to cater to the needs and interests of their students. Transition teachers should not only conduct these interest surveys but also find ways to design instructional practices that simulate jobs related to their students' interests.

Limitations and Implications for Future Research

Several limitations to this study offer avenues for future research. First, VBI was designed as an intervention package comprising multiple components, including (1) video models as a vehicle

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of individualized social instruction, (2) reduced educator proximity throughout the task procedure, and (3) a pre- and post-procedure reflection process facilitated by the educator. The simultaneous implementation of each component prohibits an understanding of which of these may have contributed more to the increases in employment-related social behaviors. The lack of comparison designs is prevalent in this literature (Gilson et al., 2017) and limits the extent to which the field can draw conclusions about which intervention components are most salient to deliver to students with ID in school and workplace settings. Future researchers should design a social intervention package with a staggered release of its primary components to allow for individual comparisons across phases.

Second, although a strength of this study was each student's individualized focus, there were components of the intervention design that should be noted when considering its feasibility. The cost of the ONEder app and the time spent preparing the videos could pose barriers for some teachers when replicating this intervention. In addition to ONEder, many low-cost or free apps are available to film and edit videos easily (e.g., VivaVideo, Splice, Video Scheduler). Moreover, the inherently dyadic structure of the supply cart activity, in which one educator was assigned to two students, affected the extent to which that educator could attend to each student. Future studies with an individualized dependent measure should personalize all components of the intervention.

Third, although the students had the opportunity to apply these new skills in a community setting, the hospital placement did not begin until the middle of the semester when two of the students were already receiving VBI. Additionally, students rotated task groups on a weekly basis at the hospital, which means that students only had the opportunity to practice the most functionally similar skill to that taught in the school setting (i.e., operating a snack and supply cart) every third week. Understanding the extent to which employment skills taught in school settings transfer to inclusive community settings is vital to fulfilling the expectation that these skills can and will transfer to a workplace setting (Gilson et al., 2017). Future researchers should be thoughtful when incorporating a community-based component to ensure that the scheduling and task procedures mirror closely those of the school setting.

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