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Effects of Self-Directed Summary of Performance on Postsecondary Education Students' Participation in Person-Centered Planning Meetings

Valerie L. Mazzotti, PhD[1], Kelly R. Kelley, PhD[1] and Cassie M. Coco, BSEd[1]

Abstract

Teaching students to develop and use a Summary of Performance (SOP) may be one method for teaching self-advocacy skills to ensure students with intellectual disability can advocate for accommodations and supports during Person-Centered Planning (PCP) meetings and in postschool employment settings. This study used a multiple-probe across participants design to investigate the effects of the Self-Directed Summary of Performance (SD-SOP) on participation in PCP meetings for students with intellectual disability. Results indicated increased participation during PCP meetings for all participants. In addition, participants were able to generalize use of the SD-SOP to employment settings. Implications for future research and practice are discussed.

Keywords

self-advocacy, self-determination, Summary of Performance, Person-Centered Planning, intellectual disability

Moving from school into postschool life can be a difficult transition for all youth, but especially challenging for youth with disabilities. Young adults with disabilities typically experience poorer postschool employment and education outcomes compared with young adults without disabilities (Newman et al., 2011). Positive postschool success in these two outcome areas differs among young adults in different disability groups. Research indicates that youth with intellectual disability (ID) experience less opportunity in postschool life than students in other disability groups (Baer, Daviso, Flexer, Queen, & Meindl, 2011; Newman et al., 2011). Wave 5 of the National Longitudinal Transition Study-2 (NLTS2) evaluated outcomes of youth with disabilities 8 years after high school, indicating youth with ID were less likely to (a) have a job after high school and (b) enroll in postsecondary education programs compared with youth in other disability categories (Newman et al., 2011). Finally, other studies have examined transition outcomes of students with ID and found that of all students with disabilities, students with ID were less likely to experience positive postschool outcomes in the areas of education and employment (Baer et al., 2011; Grigal, Hart, & Migliore, 2011).

To ensure successful movement from school into postschool life, educators must ensure that youth with disabilities have necessary services and supports to facilitate the process. One method is to ensure effective interagency collaboration between schools, communities, and adult service providers (Katsiyannis, Zhang, Woodruff, & Dixon, 2005). In 2004, the Individuals With Disabilities Education Improvement Act (IDEA) attempted to facilitate this process by requiring schools to develop a Summary of Performance (SOP) for each youth with a disability to facilitate communication between schools and communities. The initiative stated that the Local Education Agency (LEA) "provide the child with a summary of the child's academic achievement and functional performance, which shall include recommendations on how to assist the child in meeting the child's postsecondary goals" (IDEA, 2004, section 614 (c)(5)(B)(ii)). Despite the new requirement, no specific instructions regarding development and use of SOPs for transitioning youth with disabilities exist, and there is no consistency for development and use of SOPs across states and LEAs (Richter & Mazzotti, 2011). In

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addition, there is no experimental research to support the use of the SOP. Richter and Mazzotti (2011) suggested that researchers begin to investigate methods for instruction designed to teach youth with disabilities to develop and use the SOP document as a tool for advocating for accommodations in postschool employment and education settings. It is the assumption that a comprehensive SOP can provide important information to employers and personnel in postschool settings about the youth with a disability related to functional/academic performance and appropriate accommodations (Shaw, Keenan, Madaus, & Banerjee, 2010).

While the SOP is a document mandated under IDEA (2004), it can be a beneficial document providing a bridge into all aspects of postschool life for young adults with disabilities, whether moving from high school or from postsecondary settings. Recently, the U.S. Department of Education, Office of Postsecondary Education, funded 27 model demonstration transition programs for students with intellectual disability (TPSIDs) and a national coordinating center as part of recent reauthorizations to the Higher Education Opportunity Act (2008). The programs were funded to provide inclusive living, learning, and working experiences for youth with ID on college campuses. A primary component of the conceptual framework for inclusive postsecondary education programs is to ensure that youth with ID exit the program with self-determination skills (Grigal, Hart, & Weir, 2011). Historically, self-determination has been defined as "a combination of skills, knowledge, and beliefs that enable a person to engage in goal-directed, self-regulated, autonomous behavior" (Field, Martin, Miller, Ward, & Wehmeyer, 1998, p. 2). One important component of self-determination is self-advocacy (Wehmeyer & Schalock, 2001). One way self-advocacy is promoted for youth with ID in postsecondary programs is through implementation of Person-Centered Planning (PCP). PCP is an individualized process typically used with individuals with ID in high school and postschool life (Claes, Van Hove, Vandevelde, van Loon, & Schalock, 2010). PCP involves developing "collaborative, goal-oriented" plans for youth with ID to ensure community participation and involvement in all aspects of life (Claes et al., 2010, p. 432).

Similar to secondary transition planning meetings at the high school level, students with ID participating in postsecondary programs are encouraged to be active participants in PCP meetings. While research related to participation in PCP meetings is limited, there are a few studies that provide important implications (i.e., Hagner et al., 2012; Miner & Bates, 1997; Whitney-Thomas, Shaw, Honey, & Butterworth, 1998). First, Whitney-Thomas et al. (1998) conducted a qualitative study to investigate youth with developmental disabilities' participation in PCP meetings. Findings suggested that participation was affected by youths' ability to solve problems and discuss issues related to plans for the future. The authors emphasized the importance of using tools (e.g., picture prompts, symbols) and providing instruction to teach specific behaviors and actions that will increase an individual's participation in PCP meetings. Next, Miner and Bates (1997) conducted a group experimental study to examine the effects of PCP activities on parent participation and discussion of postschool goals for students with ID during PCP meetings. Findings suggested that teaching specific strategies to facilitate preparedness for and active participation in PCP meetings by students and parents is necessary, including providing opportunities for students to understand and discuss transition-related issues. Finally, Hagner et al. (2012) conducted a study using a randomized control trial design to investigate the effects of a family-centered transition planning intervention on participation in PCP meetings, levels of self-determination, and ability to make career decisions for youth with autism spectrum disorders (ASD). Findings reiterated the need for implementing strategies to teach students with disabilities to develop PCP plans and lead their PCP meetings. Implications across these studies reflected the importance of ensuring students with disabilities have the self-determination, knowledge, and skills required to discuss transition-related issues during PCP meetings to promote active participation.

As noted, PCP is a way to promote students' self-determination and involvement in this important decision-making process to ensure a meaningful and student-directed process (Michaels & Ferrara, 2005). For youth with ID to be active participants in the PCP process, it is necessary for them to have the tools and knowledge to be able to discuss their strengths, needs, goals, disability, and necessary supports and accommodations. The Self-Directed Summary of Performance (SD-SOP) may be one tool for teaching this involvement, so that youth with ID can actively participate in their PCP meetings in addition to being able to advocate for accommodations in employment settings. The SD-SOP process provides youth with disabilities the opportunity to (a) learn about their disability; (b) identify strengths, needs, and accommodations; and (c) identify goals for postschool life (Martin, Van Dycke, D'Ottavio, & Nickerson, 2007). Finally, while the SD-SOP document provides a bridge between secondary school and postschool life, it is important for youth with disabilities exiting postsecondary education programs to also have a type of personal profile of college opportunities similar to the SOP to display strengths and experiences to advocate for employment within the community (Luecking, 2009).

As there is currently no experimental research to teach youth with disabilities to develop and use the SD-SOP, it is imperative to evaluate the efficacy of various procedures to teach students to use and develop a SD-SOP (Martin et al., 2007). Comprehensive instruction related to the SD-SOP process should include instruction on the purpose and

contents of the SOP, steps relating to participating in the SOP process during PCP meetings, and detailed information on how youth with disabilities should use the SD-SOP as a self-advocacy tool in postschool environments (Richter & Mazzotti, 2011). Therefore, the purpose of this study was to investigate the effects of the SD-SOP on participation in PCP meetings for young adults with ID participating in an individualized inclusive postsecondary program. Finally, the study investigated the extent to which young adults with ID generalized the use of the SD-SOP to untrained locations. Specifically, the following research questions were addressed: (a) What was the effect of SD-SOP on participation in PCP meetings for young adults with ID? (b) To what extent did young adults with ID generalize the use of the SD-SOP document to untrained locations? (c) What were participants' perceptions of using the SD-SOP to advocate for accommodations in employment settings? and (d) What were employers' perceptions of participant use of the SD-SOP to advocate for supports and accommodations in the workplace?

Method

Participants

Participants included three young adults with ID participating in their last year of a 2-year postsecondary inclusive program. Participants met the following inclusion criteria: (a) were between the ages of 18 and 27; (b) were admitted and making satisfactory academic progress in a postsecondary program toward a certificate of accomplishment; (c) provided student consent if age 18 or older and declared their own guardian, or parental consent and student assent if they were not their own guardian; (d) had a documented ID and/or developmental disability (e.g., cerebral palsy); and (e) had verbal communication skills. Inclusion criteria for employers included (a) were current or potential future employment supervisors of students with ID in the postsecondary program and (b) provided consent for participation in the study.

Andrew. Andrew was a 27-year-old, Caucasian male, with cerebral palsy and mild ID (IQ = 67). Andrew worked at a sheltered workshop in his community prior to being accepted into the postsecondary program. He was interested in clerical work and data processing.

Erin. Erin was a 23-year-old, Caucasian female, with mild ID (IQ = 62). Erin had previously attended a compensatory education program at a community college prior to being accepted into the postsecondary program. She was interested in working in child care or with a community agency providing one-on-one assistance to young children with disabilities.

Conroy. Conroy was a 22-year-old, Caucasian male, with cerebral palsy and moderate ID (IQ = 53) and Vineland Adaptive Behavior score of 74. Conroy had previously attended a basic education program at a community college prior to being accepted into the postsecondary program. He was interested in working outdoors or helping in a greenhouse.

Setting

The study took place on a university campus located in a rural southeastern area of the United States. The participants for the study were enrolled in a postsecondary education program housed on the university campus. The program served eight young adults with ID and/or developmental disabilities and provided a fully inclusive university experience during which the young adults have the opportunity to live, learn, and work on the university campus, in addition to participating in community-based experiences. The study was conducted during the fall and spring semesters. Intervention sessions were conducted in the Career Development Coordinator's office located on the university campus. The office included two chairs, an L-shaped desk, and a desktop computer for delivering the intervention. Intervention sessions ranged between 30 and 60 min. Probe sessions for the mock PCP meetings were conducted in an adjacent office with a similar layout or in a conference room with a large table, projector, laptop, and a total of 14 conference chairs. Mock PCP meetings included the participant, Career Development Coordinator (third author), Project Coordinator (second author), and researcher (first author), who played the role of student support staff during mock meetings. Real PCP meetings were conducted in a conference room with a large table, projector, laptop, and a total of 14 conference chairs. Real PCP meetings typically included the participant, Career Development Coordinator, Project Coordinator, Faculty Outreach Liaison/Coordinator, parent, vocational rehabilitation representative, case managers, service providers, and student support staff. Generalization sessions were videotaped and conducted at each participant's job site with the employer and Career Development Coordinator.

Materials

A Macintosh© laptop computer with Microsoft PowerPoint© was used to create the visual and scripted components of each lesson. Select images used as visual aids were inserted throughout the PowerPoint© slides using Google Images©. Lessons were displayed using a Macintosh© laptop computer hooked to a Gateway© LCD monitor for screen magnification. Each lesson contained PowerPoint© slides with pictures and scripted lessons that the Career Development Coordinator followed to guide participants through each lesson. During each lesson, participants were provided a

modified version of the SD-SOP with scaled-down images of each PowerPoint slide and blanks for recording future goals, needs, and preferences (Martin et al., 2007; see http://www.nsttac.org/content/completing-summary-performance-form for SD-SOP document). SD-SOP documents were kept in personalized three-ring binders and stored in the Career Development Coordinator's office. Participants were not allowed to view their document outside of lesson times but received a personal copy at the conclusion of the study. In addition, Microsoft PowerPoint© was used to develop the SD-SOP PowerPoint© slides with picture cues that participants used to lead their meetings during mock and live PCP meetings and interviews with employers. A flip video camera and/or an iPad2© were used for recording probe sessions (i.e., mock/live PCP meetings, interviews with employers) and to accurately measure interrater reliability. Other materials included data collection sheets (i.e., probe sheets, interrater reliability checklists, treatment integrity checklists), clipboards, and pencils/pens.

Data Collection

Dependent variables. The primary dependent variable was student participation in PCP meetings measured using a 30-point probe. Student participation in PCP meetings was defined as independently leading the PCP meeting following the 15 steps of the SD-SOP. Researchers measured participant's response item-by-item based on student's oral response during PCP meetings. The total number of correct, partially correct, or incorrect responses (i.e., 0 = *incorrect*, 1 = *partially correct*, 2 = *correct*) to the 30-point probe were graphed. Each step of the SD-SOP was operationalized to include an observable and measurable response definition associated with each point value. See Figure 1 for probe checklist.

The second dependent variable was a measure of setting/situation generalization (Cooper, Heron, & Heward, 2007). Setting/situation generalization was measured in two ways. First, as a pre/posttest measure, participants were observed once during baseline in a real PCP meeting to determine the extent to which the participant independently led the meeting prior to intervention. As a posttest measure, participants were observed once during maintenance in a real PCP meeting to determine the extent to which the participant independently led the meeting following intervention. In addition, participants were observed in an interview with the employer to determine whether the participant could generalize information related to the SD-SOP to advocate for accommodations and supports in a work setting.

Interrater reliability. Interrater reliability was collected on student participation in PCP meetings on 34.1% of probes distributed evenly across all phases of the study for each participant. Interrater reliability data were collected by the second researcher (second author), who was trained to watch PCP meetings along with the first researcher. Item-by-item scoring was used to determine reliability. Agreements were recorded if both observers rated steps identically as correct, partially correct, or incorrect based on the SD-SOP probe checklist. A disagreement was recorded if observers' ratings were not identical. Percent agreement for each probe was calculated by dividing the number of agreements by the number of disagreements plus agreements multiplied by 100. Interrater reliability ranged from 93.3% to 100% with a mean of 98.9% across all phases, including pre/posttest real PCP meetings and interviews with employers.

Social validity. At the conclusion of the study, social validity data were collected from participants to evaluate social importance through a questionnaire that used a 4-point Likert-type rating scale (i.e., 1 = *strongly disagree*, 2 = *disagree*, 3 = *agree*, 4 = *strongly agree*) to determine the level of participant satisfaction and opinions of SD-SOP intervention and learning outcomes. In addition, participant social validity data were collected to determine usefulness of the SD-SOP to advocate for accommodations and supports during interviews with employers. An undergraduate student, working for the postsecondary education program and not associated with the study, read the questionnaire aloud to each participant. The questionnaire required less than 10 min to complete.

In addition, the Career Development Coordinator completed a social validity questionnaire to determine perceptions related to effectiveness of the SD-SOP intervention, feasibility of procedures, and participants' learning outcomes. Finally, participants' employers were asked to complete an Employer Social Validity Evaluation, which included rating participants in four areas (i.e., interview behavior, ability to discuss disability, ability to discuss previous jobs and goals, other). Employers rated participants across the four areas as superior, above average, average, below average, or needs improvement.

Experimental Design

The study used a multiple-probe across participants design (Gast, 2010) to evaluate the effects of the SD-SOP on students' participation in PCP meetings. In this design, baseline data were collected initially on all participants. The participant with the lowest, most stable baseline data entered intervention first. Once the first participant demonstrated mastery of at least 24 out of 30 points (80%) on the SD-SOP probe, baseline probes were administered to the remaining participants to determine whether their levels of performance remained stable. The participant with the most stable baseline entered intervention next, and the first participant entered the maintenance phase. Finally, the

Step	Objective	2 = correct	1 = partially correct	0 = incorrect
Beginning the Meeting				
1	Begin the meeting by introducing self, thanking attendees for coming, and stating the purpose	Begins meeting by introducing self, thanks attendees, and states the purpose of the meeting: "My name is ___. Thank you for being here. We are here to talk about my Summary of Performance."	Partially states name, thank you, and/or purpose.	• Does not start meeting • Does not state name • Does not thank attendees • Does not state purpose of meeting
		2	1	0
2	Introduce Everyone	Introduces all members by stating name and role: "This is (name) and she is my (role; family member, teacher"	Only introduces one/two persons; introduces by saying name, but not stating role; states role, but does not say name	Does not introduce or state role of anyone at the meeting.
		2	1	0
My Goals for Life After Graduation				
3	My Living Goals for Life after Completing UP Program	Student states: living goal, action to reach goal, and support needed	States goal, but omits action taken or support needed	Does not state goal, action taken, or support needed to reach goal after completion of UP Program
		2	1	0
4	My Learning Goals for Life after Completing UP Program	Student states: learning goal, action to reach goal, and support needed	States goal, but omits action taken or support needed	Does not state goal, action taken, or support needed to reach goal after completion of UP Program
		2	1	0
5	My Work Goals for Life after Completing UP Program	Student states: work goal, action to reach goal, and support needed to reach goal	States goal, but omits action taken or support needed	Does not state goal, action taken, or support needed to reach goal after completion of UP Program
		2	1	0
What I know about my disability				
6	Describing my challenges	Student identifies his/her disability(ies): "I have Cerebral Palsy" or "I have CP"	Student only identifies disability partially, does not include all disabilities, or states "I have no disability	Student does not identify disability or omits step
		2	1	0
7	My Disability's impact	Student identifies the impact of his/her disability on work or having fun	Student only identifies one areas regarding how the disability impacts work and having fun	Student does not identify the impact of the disability on work and having fun.
		2	1	0
8	Supports needed	Student identifies 2 or more supports needed to help he/she do the job	Student identifies 1 or less supports needed to help he/she do the job	Student identifies no supports needed to help he/she do the job
		2	1	0
What makes me a good employee?				
9	Previous jobs within the UP Program	Student states: previous jobs, job responsibilities, and what job skills he/she learned	Student only states previous job and responsibilities or previous job and what job skills he/she learned	Student only states previous job or does not state any information
		2	1	0

(continued)

Figure 1. (continued)

10	What has helped me become a good employee in my UP Program?	Student identifies 2 or more factors (e.g., peer buddies, picture schedule, checklists) that helped he/she be become a good employee in the UP Program	Student identifies 1 that helped he/she be become a good employee in the UP Program	Student identifies 0 that helped he/she be become a good employee in the UP Program
		2	1	0
11	Assistive Technology Accommodations	Student identifies 2 or more assistive technology accommodations (e.g., I-Pad, watch, timers, speech to text software) that helped he/she become a good employee in the UP Program	Student identifies 1 assistive technology accommodation that helped he/she become a good employee in the UP Program	Student identifies 1 assistive technology accommodation that helped he/she become a good employee in the UP Program
		2	1	0
What does a good employer like?				
12	Personal hygiene	Student identifies 3 or more personal hygiene traits (e.g., cleanliness, brushed/neat hair, clean clothes, brushed teeth) that employers like.	Student identifies 2 personal hygiene traits that employers like.	Student identifies 1 or no personal hygiene traits that employers like.
		2	1	0
13	Work ethic	Student identifies 3 or more work ethic traits (e.g., being on time, not wasting time, good attitude, hard worker) that employers like.	Student identifies 2 work ethic traits that employers like.	Student identifies 1 or no work ethic traits that employers like.
		2	1	0
14	My Goals for new employment	Student states why interested in new employment opportunity including minimum of 1 goal for the year and how they will know when they reach that goal	Student states why interested in new employment opportunity, but does not include new goal; or includes new goal, but not how going to reach that goal	Student does not state interest, goal, or how going to reach that goal
		2	1	0
Closing the meeting				
15	Closes meeting by asking if there are questions and thanking everyone	Student asks attendees/employer "Do you have any questions for me?" Student answers question(s) and closes meeting by saying "Thanks for coming."	Partially closes meeting by only asking if there are questions and does not say "thank you for coming"; partially closes meeting by only saying "thank you for coming" and does not ask if there are questions.	Does not close meeting Does not ask if there are questions Does not say "thank you"
		2	1	0
Total = /30				

Figure 1. SD-SOP probe checklist for student responses during PCP meetings.
Note. SD-SOP = Self-Directed Summary of Performance; PCP = Person-Centered Planning.

remaining participant entered intervention using the same method as the first two participants.

Procedures

General procedures. Prior to beginning the study, approval was granted through the Institutional Review Board at the university. Relevant consents and assents were obtained before data collection began. Students participated in the intervention for approximately four 30- to 60-min sessions per week. The 15 steps of the modified SD-SOP were developed into scripted PowerPoint© lessons that included role-play opportunities to practice the learned skill. After Lessons 5, 7, 9, and 11, a mock PCP meeting was conducted to evaluate student skill development for participation in PCP meetings using the 30-point probe. Data displayed in Figure 2 indicates the total number of correct responses to the 30-point probe following Lessons 5, 7, 9, and 11.

Baseline. Prior to beginning the SD-SOP intervention, researchers collected data on all students for participation in PCP meetings. During initial baseline, participants were given a choice to use either (a) the SD-SOP PowerPoint© with picture cues projected on a screen, which included pictures to help prompt them in leading their own PCP meeting or (b) the traditional method for leading PCP meetings, which was a posterboard with picture prompts. Both were displayed for participant's to view in the conference room. Participants were told they could choose to use either one to lead the PCP meeting. All participants commonly referred to the posterboard to lead their meetings instead of the SD-SOP PowerPoint©, and the posterboard visual cues did not directly relate to the information in the SD-SOP lessons. The posterboard included the following items that did not directly relate to the information presented in the SD-SOP PowerPoint: (a) stories of success, (b) what is working well, (c) what needs to be improved, (d) next steps, and (e) questions or other items. During baseline, one real PCP meeting and four mock PCP meetings were conducted, and data were collected using the SD-SOP 30-point probe sheet.

SD-SOP instruction. The SD-SOP lessons included instruction related to (a) developing the SOP; (b) discussing strengths, needs, accommodations, and goals; and (c) participating in PCP meetings. Each instructional lesson built on the 15 steps used to teach the SD-SOP, were grouped when appropriate, and developed into 11 PowerPoint© lessons. Each instructional lesson was scripted, with procedures and script included in the notes section of each PowerPoint© slide. Each lesson followed a model-lead-test-feedback format (i.e., listen to the model, say it with the model, say it on your own, model provides positive or corrective feedback) and included role-play at the end of each lesson for practice and review of information taught during each lesson. Table 1 includes a description of each SD-SOP lesson. Praise-specific positive reinforcement (e.g., good job!) was used throughout each lesson and during role-play sessions. When participants missed a step during role-play, the Career Development Coordinator used corrective feedback by modeling the information and having the participant practice presenting that step in sequence. As students participated in each lesson, they completed corresponding sections of the SD-SOP. Following Lessons 5, 7, 9, and 11, mock PCP meetings were conducted using the 30-point probe following the same procedures used during baseline.

Lessons were completed sequentially with each lesson building on the next, including review of previous lessons. Mastery criteria for student participation were based on correct, partially correct, or incorrect responses during each mock PCP meeting based on the 30-point probe. Participants remained in intervention until mastery criteria (i.e., 24/30 points; 80% correct) were met. Once participants met mastery criteria for the SD-SOP intervention, intervention was stopped, and the participant entered maintenance.

Response maintenance. Maintenance data were collected to determine the extent to which participants continued to perform targeted behaviors after the intervention was terminated. When participants met mastery criteria on the 30-point probe (i.e., 24/30 points) and had completed the 11 SD-SOP lessons, intervention was stopped and maintenance data were collected for students' participation in mock PCP meetings. Maintenance data were collected at 2 and 6 weeks following intervention.

Setting situation generalization. Setting/situation generalization data were collected to determine the extent to which the learning strategies taught (i.e., SD-SOP) would generalize to real PCP meetings and employment settings. When participants met mastery criteria on the probe (i.e., 24/30 points) and had completed the 11 SD-SOP lessons, intervention was stopped and generalization data were collected. Posttest data were collected at 1 week following intervention during which data were collected during the participant's real PCP meeting. Finally, setting/situation generalization data were collected at 8 weeks following intervention during an interview with employers.

Treatment integrity. Treatment integrity data were collected on 42.4% of all lessons distributed evenly across participants. Researchers (first and second authors) used a treatment integrity checklist to collect data on lesson implementation during the SD-SOP intervention lessons. Treatment integrity data were calculated based on the

Table 1. Overview of SD-SOP Lessons.

Lesson	Title	Description
1	Begin My Meeting	Begin meeting by introducing self, thanking attendees, and stating purpose
2	Introduce Everyone	Introduce meeting attendees by stating each person's name and role
3	My Living Goals	Identify goals, methods, and/or supports, accommodations needed to attain future living goals
4	My Learning Goals	Identify goals, methods, and/or supports, accommodations needed to attain future learning goals.
5	My Work Goals	Identify goals, methods, and/or supports, accommodations needed to attain future work goals
6	My Disability	Identify disability, common characteristics of the disability, and impact on work and leisure activities
7	Supports I Need	Identify supports needed to complete work tasks based on information provided in Lesson 6
8	My Previous Jobs	Identify jobs held during postsecondary program, areas of responsibility, and skills learned
9	What Makes Me a Good Employee?	Identify factors and assistive technology devices that have helped participant become a good employee
10	What Does a Good Employer Like?	Identify characteristics of a good employee including personal hygiene and work ethic traits
11	My Goal for New Employment	Identify a future employment goal for the year, a method for reaching the goal, and appropriately close meeting

Note. SD-SOP = Self-Directed Summary of Performance.

percent of lesson items delivered correctly by the Career Development Coordinator (third author) during instructional sessions. Lessons were scripted to ensure consistency of content taught across instructional sessions. Treatment integrity data ranged from 90% to 100% with a mean of 98.6%.

Results

Results for each participant are presented in Figure 2. Each graph includes participant data across baseline, SD-SOP intervention, maintenance, and generalization phases. The total number of points each participant received for the 15 steps of the SD-SOP is illustrated. Participants had the opportunity to obtain a total of 30 points. Based on visual analysis of graphed data, results indicated a functional relationship between the SD-SOP and increased participation in PCP meetings across all study participants. A functional relationship was established based on consistency of data patterns across phases with no overlap in data and three demonstrations of effect replicated across participants (Kennedy, 2005; Kratochwill et al., 2010). In addition, percent of nonoverlapping data (PND) were calculated resulting in a PND calculation of 100% indicating the intervention was *highly effective* (Scruggs, Mastropieri, & Casto, 1987). All participants maintained high levels of participation in PCP meetings for 6 weeks following removal of the SD-SOP intervention.

Andrew

During baseline, Andrew's performance was stable and remained at 0 points during each of the four mock PCP meetings. Collection of only four data points for this phase were sufficient given that Andrew's data demonstrated a floor effect. Within-phase analysis indicated a low level (M = 0) with flat trend. During intervention, Andrew's performance showed a moderate-magnitude slope with scores ranging from 4 to 30 points with a mean of 14.8 indicating an increasing/positive trend. Between-phases analysis indicated a gradual immediacy of effect between baseline and intervention phases in that the data showed a change in level and gradual increasing trend over time until Andrew met mastery criteria. Furthermore, there was no overlap in data (0.0%) between baseline and intervention phases. Maintenance data for Andrew's performance remained at high levels, ranging from 27 points (2 weeks out) to 26 points (6 weeks out) with a mean of 26.5. Generalization data indicated that during baseline Andrew scored 1 point on the 30-point probe during the prereal PCP meeting and scored 28 points following the SOP intervention during the postreal PCP meeting. Finally, during the interview with the employer, Andrew's performance decreased with a score of 17 out of 30 points. During the interview with the employer, Andrew rushed through the meeting and omitted several steps decreasing his overall performance.

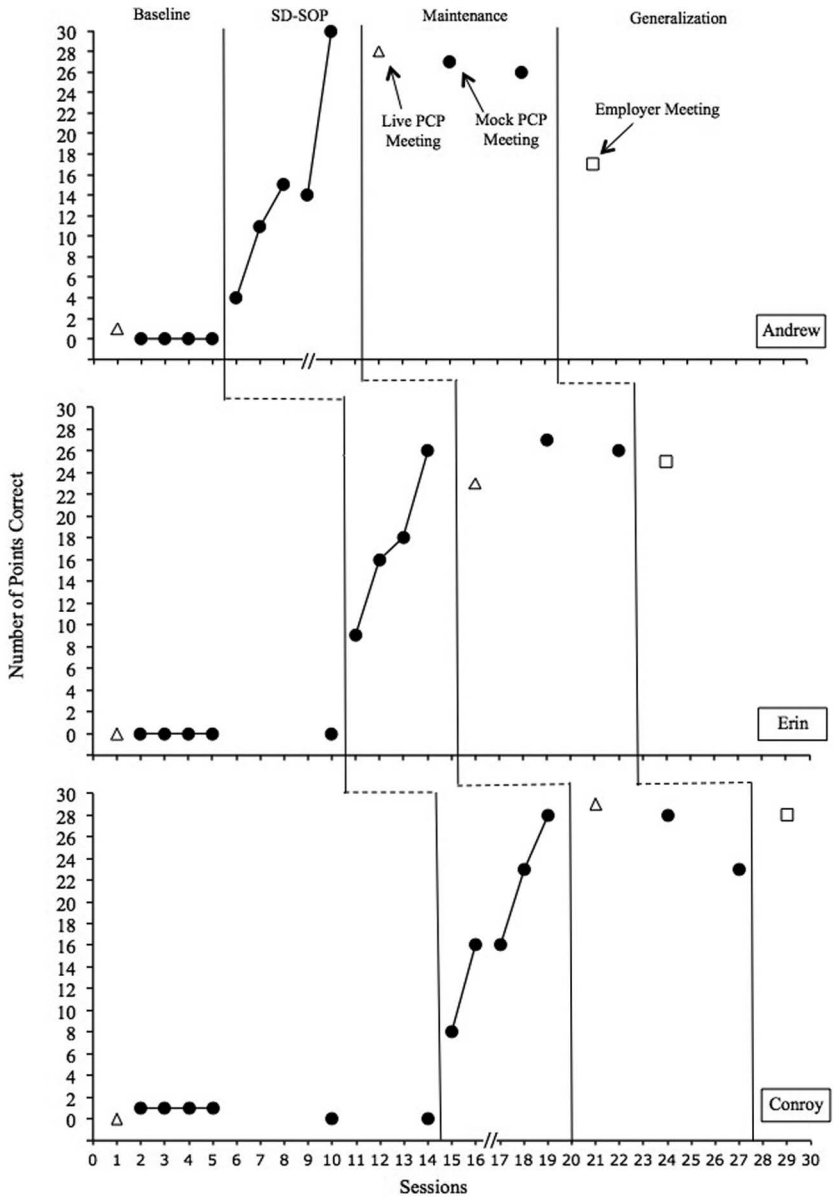

Figure 2. Number of points correct on 30-point probe indicating student participation during PCP meetings.
Note. SD-SOP = Self-Directed Summary of Performance; PCP = Person-Centered Planning. First break in *x*-axis indicates winter break for students; second break in *x*-axis indicates spring break for students.

Erin

During baseline, Erin's performance was stable and remained at 0 points during each of the four mock PCP meetings. Within-phase analysis indicated a low level (M = 0) with flat trend. During intervention, Erin's performance showed a moderate-magnitude slope with scores ranging from 9 to 26 points with a mean of 17.3 indicating an increasing/positive trend. Between-phases analysis indicated a gradual immediacy of effect between baseline and intervention phases in that the data showed a change in level and gradual increasing trend over time until Erin met mastery criteria. Furthermore, there was no overlap in data (0.0%) between baseline and intervention phases. Maintenance data for Erin's performance remained at high levels, ranging from 27 points (2 weeks out) to 26 points

(6 weeks out) with a mean of 26.5. Generalization data indicated that during baseline, Erin scored 0 points on the 30-point probe during the prereal PCP meeting and scored 23 points following the SOP intervention during the postreal PCP meeting. The post-score showed a decrease from intervention falling 1 point below mastery. During the real PCP meeting, Erin was extremely nervous; therefore, this may have influenced the decrease in performance. Finally, during the interview with the employer, Erin's performance remained at a high level with a score of 25 out of 30 points.

Conroy

During baseline, Conroy's performance was stable with scores ranging from 0 to 1 point during each of the mock PCP meetings. Within-phase analysis indicated a low level (M = 0.7) with flat trend. During intervention, Conroy's performance showed a moderate-magnitude slope with scores ranging from 8 to 28 points with a mean of 18.2 indicating an increasing/positive trend. Between-phases analysis indicated a gradual immediacy of effect between baseline and intervention phases in that the data showed a change in level and gradual increasing trend over time until Conroy met mastery criteria. Furthermore, there was no overlap in data (0.0%) between baseline and intervention phases. Maintenance data for Conroy's performance showed a decreasing trend, ranging from 28 points (2 weeks out) to 23 points (6 weeks out) with a mean of 25.5. Generalization data indicated that during baseline Conroy scored 0 points on the 30-point probe during the prereal PCP meeting and scored 29 points following the SOP intervention during the postreal PCP meeting. Finally, during the interview with the employer, Conroy's performance remained at a high level with a score of 28 out of 30 points.

Social Validity

Table 2 indicates that participants' social validity data ranged from 3.67 to 4.00. On a 4-point Likert-type rating scale (1 = *strongly disagree* to 4 = *strongly agree*) participants either agreed or strongly agreed that the SOP intervention helped them learn how to talk about their disability, previous jobs, and goals after graduating from college. All agreed or strongly agreed that the SOP lessons taught them how to talk more about their disabilities and about themselves at PCP meetings. There were no open-ended questions for participants.

Next, employers completed social validity evaluations. Employers rated participants across the four areas as superior, above average, average, below average, or needs improvement. Employer open-ended responses indicated "Conroy did a great job in the interview explaining his goals and job experiences. He needed to use the prompting, but in general was able to explain his points well." Table 3 provides mean ratings of employer responses to the Employer Social Validity Evaluation. Most areas indicated average or above-average ratings with the exception of a few below-average and needs-improvement ratings from one employer related to Erin's nervousness and lack of self-confidence affecting how she led her meeting with the employer.

In addition, social validity data indicated the Career Development Coordinator strongly agreed that (a) the SD-SOP was easy to implement, (b) participants actively participated in their PCP meeting with greetings and introductions, (c) participants actively identified goals for their life after graduation, and (d) participants actively identified their disability, impact of the disability on their life, and supports or accommodations needed for successful employment. The Career Development Coordinator agreed that the SD-SOP lessons were time efficient. Based on open-ended responses, the Career Development Coordinator felt the SD-SOP intervention helped two (i.e., Erin, Conroy) of the three participants acquire self-advocacy skills. Specifically, during job-site observations, Erin and Conroy were able to use knowledge gained from the SD-SOP to ask for items or supports needed to improve job performance. Related to participants' ability to identify employment goals, the Career Development Coordinator indicated that although participants already had an idea of their employment goals, the intervention helped solidify their future plans and taught them to vocalize how to reach overall goals. Finally, when asked if the SD-SOP intervention had a positive effect on participants' ability to talk about their disability and goals, the Career Development Coordinator indicated the intervention had a positive effect and shared that one participant had no knowledge of his disability prior to the study, and he really benefited from the intervention by learning about his disability and limitations, which helped him be more confident and self-aware of the abilities he possessed.

Discussion

The purpose of this study was to investigate the effects of the SD-SOP on participation in PCP meetings for young adults with ID participating in an individualized inclusive postsecondary program. Results demonstrated a functional relationship between the SD-SOP and participants' ability to participate in PCP meetings. It is important to note that prior to beginning the study, participants were not fully leading their meetings, as visual cues and verbal prompting in addition to the posterboard were used to help them participate in meetings. No prompting beyond the PowerPoint© and posterboard cues were provided to assist participants in leading meetings during baseline. Following the SD-SOP intervention, participants were able to generalize new skills to real PCP meetings with PCP meeting members present and to employment settings. All findings support using the

Table 2. Participants' Social Validity Questionnaire Summary.

Questions	Mean ratings
My SOP helped me learn how to talk about my disability	3.67
My SOP lessons helped me talk about previous jobs I had	4.00
My SOP helped me identify goals to work on after I graduate from college	3.67
My SOP helped me identify goals related to a job I would like to have	4.00
I liked learning how to use the SOP	3.67
My SOP lessons taught me how to talk about my disability and talk about myself at my PCP meeting	3.67

Note. SOP = Summary of Performance; PCP = Person-Centered Planning. Scores based on a 4-point Likert-type scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *agree*, 4 = *strongly agree*).

Table 3. Employer Social Validity Evaluation.

Interview behavior and employer responses	Mean ratings
Ability to provide relevant background information	3.00
Ability to lead the interview process by introducing self and others	3.00
Ability to discuss goals for life after graduating from UP program and obtaining employment	3.00
Identifying disability	3.00
Discussing how disability affects learning, work, and living	3.33
Supports that help them work best and what does not help	3.33
Accommodations that worked in college	3.33
Ability to discuss previous jobs	3.33
Ability to discuss goals for upcoming year related to employment	3.67
Communication skills	3.00
Motivation	3.33
Self-confidence	2.67
Enthusiasm	3.33
Hygiene and appearance	3.67

Note. UP = university participant. Scores based on a 5-point Likert-type scale (1 = *needs improvement*, 2 = *below average*, 3 = *average*, 4 = *above average*, 5 = *superior*).

SD-SOP to teach young adults with ID to participate in PCP meetings and advocate for accommodations and supports with employers.

This study extends the research in several ways. First, Richter and Mazzotti (2011) indicated the need for experimental research to evaluate the development and use of the SD-SOP as a method for teaching students with disabilities to advocate for accommodations in postschool employment settings. This study adds to the literature because it was the first experimental study that investigated using the SD-SOP to teach students to participate in PCP meetings and advocate for accommodations and supports in postschool employment settings. Second, this was the first study that investigated using the SD-SOP with students with ID in postsecondary settings to facilitate participation in PCP meetings. Findings from this study extend previous research related to participation in PCP meetings (Hagner et al., 2012; Miner & Bates, 1997; Whitney-Thomas et al., 1998) because it focused on young adults with ID in postsecondary settings and taught students to use the SD-SOP to facilitate active participation in PCP meetings. Third, while this is the first experimental study to investigate the effects of the SD-SOP on participation in PCP meetings, this study extends similar research related to teaching self-advocacy skills to enhance student participation in student-focused planning meetings. Arndt, Konrad, and Test (2006) and Kelley, Bartholomew, and Test (2011) specifically found that when students with mild and moderate disabilities were taught to use the Self-Directed Individualized Education Program (IEP), student participation in IEP meetings increased during mock and real IEP meetings. This study extended these findings because it (a) included youth with ID, who participated in a postsecondary program; (b) increased student participation in PCP meetings based on knowledge of developing and using the SD-SOP; and (c) enhanced participants' ability to generalize the use of the SD-SOP to real PCP meetings and employment settings. Finally, Grigal, Hart, and Migliore (2011) indicated that teaching self-determination skills is one key element in successfully preparing young adults with ID in postsecondary

education programs for postschool life. This study extends the literature by providing a method for young adults with ID to be more actively involved in PCP meetings and self-advocate with employers.

Limitations and Implications for Future Research

Although a functional relationship was demonstrated between the independent and dependent variables, there are several limitations to be considered. First, the study included a small number of participants ($n = 3$) in one postsecondary program, which limits the generality of findings. Horner et al. (2005) indicated that for a program to be identified as an evidence-based practice using single-subject methodology, it must be evaluated in different geographic locations with a variety of researchers. Future research should focus on exploring the effects of the intervention in secondary school settings and other postsecondary settings with students with various disabilities (e.g., learning disabilities, autism, severe disabilities). This would permit investigation of the SD-SOP procedures as an evidence-based practice.

Second, based on the new standards for single-case design research, the Institute of Education Sciences' (IES) What Works Clearinghouse recommends collecting five data points for each phase to "meet evidence standards" (Kratochwill et al., 2010, p. 15). This study only collected four data points during baseline and SD-SOP intervention phases, which "meets standards with reservations" because it included six phases with a minimum of three data points per phase (Kratochwill et al., 2010, p. 16). Future research should include a minimum of five data points across baseline and intervention phases to ensure data collection "meets evidence standards" based on recommendations by IES.

Third, this study analyzed effect size using PNDs to determine the efficacy of the intervention. While PNDs are a common method used for analyzing single-subject research, PNDs are a nonparametric method for analyzing data and do not provide a true effect size (Kratochwill et al., 2010; Scruggs et al., 1987). Future research should use parametric measures (e.g., regression estimates, multi-level models) to calculate effect size based on recommendations for single-case designs from IES (Kratochwill et al., 2010).

Fourth, there is a lack of long-term maintenance data. Maintenance data were collected 2 and 6 weeks following intervention. Future research should focus on collecting maintenance data at 3 and 6 months to determine whether participants maintain the skills over time. Next, two of the three participants maintained mastery levels during the generalization session with employers, while one participant struggled with generalizing the SD-SOP to an employment setting. Future research should focus on including strategies to promote generalization to use the SD-SOP with employers. While discussion throughout the lessons included talking with study participants about using their SD-SOP with employers, no specific instruction was provided and role-play was not included for the generalization measure. Finally, the intervention was appropriate and effective for study participants; however, as this is the first study to evaluate the effects of the SD-SOP, future research should focus on refining the intervention to ensure relevance across lessons for students.

Implications for Practice

Based on study results, the SD-SOP intervention may provide a method for promoting self-advocacy skills of youth with ID and a method for teaching students with disabilities about the SOP, including participation in IEP or PCP meetings. The SD-SOP intervention taught study participants to develop the SD-SOP and use this resource to participate in PCP meetings while advocating for accommodations and supports in employment settings. The SD-SOP intervention may not only be a method for faculty working in postsecondary education programs, but may also be an effective method for secondary teachers of students with disabilities to use to teach development and use of the SOP document. This study found that participants required picture cues to facilitate participation during PCP meetings and during generalization. It is important for educators to consider the disability group (e.g., mild/moderate/severe disabilities) when determining implementation of the intervention. Visual cues and simplified language could help with increasing self-advocacy skills for individuals with ID. Finally, teachers should use the SD-SOP to explicitly teach participation in the IEP and PCP process to ensure students with ID are actively engaged in having a voice for planning their future. PCP should be a process focused on the overall gifts, capacities, strengths, and goals of individuals with ID while explicitly teaching participants how to set those future goals and lead their own meetings (Michaels & Ferrara, 2005).

In conclusion, this study examined the effects of the SD-SOP to teach youth with ID to participate in PCP meetings and advocate for accommodations and supports in postschool employment settings. More research is needed to determine whether the SD-SOP intervention is an effective and efficient method for promoting the self-advocacy skills of students with disabilities.

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