

CHECK-IN/CHECK-OUT: FACILITATING PERFORMANCE
FEEDBACK DURING VOCATIONAL TRAINING FOR
YOUTH WITH INTELLECTUAL DISABILITIES

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ABSTRACT

The lack of supervisor-focused interventions and strategies needed in building natural supports between supervisors and employees with intellectual disabilities has been discussed in a number of studies. In addition, literature discusses the hesitation of many supervisors to communicate performance feedback to employees with disabilities. Majority of studies in transition have focused on interventions to change the behavior of the employee with a disability instead of modifying environmental factors. This study sought to address this gap in research on integrated vocational training by implementing an intervention intended to change the supervisor's behavior towards an individual with a disability. Using a multiple-baseline design across participants, this study examined the efficacy of the check-in/check-out (CICO) intervention in increasing the rate of performance feedback statements given by a supervisor to an intern with an intellectual disability during vocational training. Results indicated the CICO intervention was effective for increasing the rate of performance feedback statements given by a supervisor. Supervisor's performance immediately increased following intervention and maintenance data confirmed that the intervention stayed consistent over time. Furthermore, social validity questionnaires completed by supervisors and the interns with disabilities revealed that the supervisors and interns with intellectual disabilities found the intervention helpful in building a relationship with one another. Future research on integrated vocational training for individuals with disabilities should consider using the CICO intervention as a strategy to use in fostering natural supports and receiving more feedback from supervisors on job performance.

DEDICATION

This dissertation is dedicated to everyone who supported me through this process. In particular, my parents, Michael and Deborah Robinson, who have always believed in me and provided me with strength. I also want to devote this study to my fiancé, Robert Hester V, who stood by me with the utmost support and encouragement. Additionally, I want to take a moment to recognize my close doctoral colleagues, Lauren Rollins, Shannon Romano, and Elizabeth Stewart, all of whom kept me motivated and determined. Last but certainly not least, I want to devote this study to all of the inspiring and encouraging students that I have had the pleasure of teaching over the years.

LIST OF ABBREVIATIONS AND SYMBOLS

AA	Associate's Degree
BA	Bachelor's Degree
CICO	Check-In/Check-Out intervention
F	Female
ID	Intellectual Disabilities
IOA	Interobserver Agreement
M	Mean: The total sum of the measurements divided by the number of measurements
MA	Master's Degree
n	Number of participants
PBIS	Positive Behavioral Interventions and Supports
=	Equal sign: Equal to

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CHAPTER I:
INTRODUCTION

The following research study examined the effectiveness of using an intervention with supervisors to increase the rate of feedback given by a supervisor to an intern with a disability during vocational training. In the following introductory chapter, pertinent background information is discussed including identifying the problem and the significance of the study. The chapter concludes by defining some of the key terms that were used throughout the study.

Background of the Problem

Section 501 of the Rehabilitation Act of 1973 prohibits federal agencies from discriminating in employment against individuals with disabilities (U.S. Equal Employment Opportunity Commission, n.d.). However, this only accounted for federally-funded organizations; therefore, in 1990 the Americans with Disabilities Act (ADA) was passed to allow individuals with disabilities to have greater access to competitive integrated employment opportunities (Hulett, 2009; Scheid, 2005). ADA (1990) states that all private sectors such as businesses cannot discriminate against hiring people with disabilities and those individuals with disabilities have the right to reasonable accommodations. Following ADA, the Individuals with Disabilities Education Act (IDEA; 1990) defined and required transition services for youth with disabilities and placed an emphasis on post-school outcomes such as competitive employment (Hulett, 2009). These three laws were passed more than twenty-years ago and still individuals

with disabilities are significantly under-employed compared to the people without disabilities (Sulewski, Zalewska, Butterworth, & Migliore, 2013).

More specifically, young adults with intellectual disabilities (ID) in transition have the lowest rate of employment and post-secondary education experience after high school compared to all other disability groups (Migliore, Butterworth, & Hart, 2009). ID is defined as having significant limitations in both mental ability (between 70-75 IQ and below) and deficits in adaptive behavior (IDEA, 2004). Individuals with ID may have difficulty in social and behavioral interactions as well as academic and functional skills. According to Sulewski et al. (2013), only 32% of people with ID between the ages of 20- and 30-years old are competitively employed. This can be compared to 74% employment rate for same-aged peers without disabilities. Additionally, the gap between having employment compared to same-aged peers without disabilities significantly increases with age. According to the 2017 Bureau of Labor Statistics, only 18.7% of people with disabilities (16 and older) were competitively employed compared to 65.7% of people without disabilities.

Due to the significant difference in employment rates for youth with ID compared to their peers without disabilities, educators have increased their attention to providing more vocational training opportunities in transition in hopes to better prepare young adults for post-school outcomes (Cobb & Alwell, 2009; Gilson, Carter, & Briggs, 2017; Grigal, Hart, & Migliore, 2011). Transition has been described in many different terms, such as (a) a movement, (b) life changing, (c) adjustments, and (d) cumulative experiences (Wehman, 2006). Transition must start by age 16 and is student-driven (IDEA, 2004). Transition is designed to help students with disabilities move from school to post-outcomes such as employment, independent living, and postsecondary education (Wehman, 2006). Employment as a post-school outcome is the only

element of transition that this study focused on vis-a-vis young adults with ID. For people with and without disabilities, “Work is centrally related to quality of life” (Fornes, Rocco, & Rosenburg, 2008, p. 374). In our society, obtaining a job is expected and often the work individuals do, define who they are (Wehman, 2006). Being competitively employed is also viewed as a right to citizenship and contributing back to society (Rogan, Callahan, Griffin, & Hammis, 2007).

Individuals with ID who have participated in transition and received vocational training are more likely to become competitively employed (Chadsey-Rusch & Heal, 1995; Gilson et al., 2017; Hedley, Uljarevic, Cameron, Halder, Richdale, & Dissanayake, 2017). Competitive integrated employment means an individual with ID works in an environment alongside co-workers without disabilities and receives competitive pay (Ellenkamp, Brouwers, Embregts, Joosen, & Weeghel, 2016; Wehman, 2006; Wehmeyer, Gragoudas, & Shogren, 2006). Competitive integrated employment emphasizes the importance of natural supports in the workplace. Natural supports are those people who help an employee by providing assistance when needed. Natural supports for people with and without disabilities can be a supervisor or co-workers. Research continues to emphasize the importance of natural supports on the job for employees with disabilities. Natural supports allow an employee with a disability to work more independently and be included and valued in the workplace (Ohtake & Chadsey, 2001; Rogan, Hagner, & Murphy, 1993).

Previous studies have found competitive integrated employment for individuals with ID leads to higher quality of life outcomes than those in sheltered and supported employment settings (Akkerman, Jassen, Kef, & Meininger, 2016; Wehmeyer et al., 2006). Sheltered workshops are a type of employment setting where individuals with disabilities work alongside

others with disabilities. Thus, sheltered workshops are not integrated settings and the wages of people in those settings are not very high. Supported employment refers to an individual with a disability receiving more intensive one-on-one support from a job coach or agency representative. Typically, supported employment involves the individual with a disability always attending work with the assistance of someone else and receiving lower wages (Wehman, 2006).

Compared to sheltered workshops and supported employment, individuals with ID who are competitively employed receive (a) higher wages, (b) access to benefits, (c) greater independence, (d) economic self-sufficiency, (e) more opportunities for choice and self-determination, (f) higher job satisfaction, and (g) more career options (Kiernan & Hart, 2011; Wehman, 2006; Wehmeyer et al., 2006). Competitive employment continues to lead to the highest positive outcomes for individuals with ID, such as (a) greater autonomy, (b) social acceptance, (c) self-confidence, and (d) higher overall quality of life (Fornes et al., 2008; Kiernan & Hart, 2011; Shrogen, Lee, & Panko, 2017; Spector, 1997; Roessler, 2002). Research continues to prove the importance of competitive integrated employment for individuals with ID.

Nevertheless, there are several barriers to competitive employment for youth with ID. One of the largest barriers is the stigma associated with the labeling of ‘disability’ (Green, Davis, Karshmer, Marsh, & Straight, 2005; Mik-Meyer, 2016; Scheid, 2005). Previous research has found that supervisors are less likely to hire someone with a disability based on the stigma that is associated with disability (Ellenkamp et al., 2016; Vornholt, Uitdewilligen, & Nijuis, 2013). Supervisors often believe that people with ID in the workplace will (a) underperform, (b) require more assistance to complete simple tasks, and (c) require extensive accommodations (Burke, Bezyak, Fraser, Pete, Ditchman, & Chan, 2013; Li, 2004). Many of these beliefs are built upon concepts that are socially constructed about what it means to be disabled. This can cause people

with disabilities to often feel a sense of “otherness” (Green et al., 2005, p. 198) in inclusive settings including the workplace environment. Stereotypes about disability can have negative consequences during the hiring process and can continue into the work environment once employed. Stereotypes held by supervisors have caused employees with disabilities to be less likely to receive promotions and receive lower ratings in job performance evaluations (Colella & Varnea, 1999; Mik-Meyer, 2016; Scheid, 2005; Vornholt et al., 2013). Another barrier to competitive employment is the social interactions and skills necessary to be successful in the workplace. People with ID may experience more difficulty in social situations and being socially accepted by co-workers and supervisors. Moreover, interpersonal conflicts with supervisors are one of the leading causes of job loss for individuals with ID (Chadsey & Beyer, 2001; Pedbani, 2014).

However, previous research on employment for individuals with ID has continued to recognize the lack of supervisor-focused interventions (Akkerman et al., 2016; Chadsey & Beyer, 2001; Chadsey-Rusch & Heal, 1995; Flores, Jenaro, Orgaz, & Martin, 2011; Hagner & Cooney, 2003; Hedley et al., 2017). Supervisors play an important role in the employment success of individuals with and without disabilities. For instance, supervisors are the main source of feedback for employees (Andiola, 2014). Frequent feedback from a supervisor has the ability to change, guide, motivate, and reinforce work behaviors of employees (Guo et al., 2017). It could be argued that feedback is even more vital to the success of employees with ID. Individuals with ID have a harder time picking up on the nuances and social cues of the work environment. In addition, individuals with ID need to be explicitly explained what they need to improve on and then shown systematic ways to improve (Hagner & Cooney, 2003).

Statement of the Problem

The stereotypes and stigma associated with disability can cause supervisors to feel uncomfortable in communicating with employees with disabilities. This can lead to lack of social interaction with the employee with a disability and interpersonal conflicts. Supervisors and employees with ID report feeling social anxiety toward one another when discussing specific job-related content such as employee performance (Butterworth & Strauch, 1994; Hagner & Cooney, 2003). Supervisors often hold misconceptions and stereotypes that surround the label of *disability* that has caused many to report social anxiety on how to interact and provide meaningful feedback to someone with ID (Gormley, 2015; Mik-Meyer, 2016). However, results from previous studies indicate that communication and social integration are associated with higher job satisfaction for employees with ID and helps to establish natural supports on the job (Flores et al., 2011; Rogan et al., 1993; Ohtake & Chadsey, 2001). Studies have found that positive communication interactions can help to break down the stereotypes and stigma associated with ID and can help build a working relationship in the employment setting (Cramm, Tebra, & Finkenflugel, 2008; Li, 2004; Vornholt et al., 2013). Supervisors who have worked closely with an employee with ID identify more positive attitudes and advantages in hiring someone with a disability. In addition, supervisors who develop a close working relationship with an employee with ID also feel invested in the employee's wellbeing and take on more responsibility in the training and success of the individual in the workplace (Akkerman et al., 2016; Ellenkamp et al., 2016).

Furthermore, supervisors who feel more comfortable communicating with an employee with ID are more likely to provide feedback on how the individual is performing (Ellenkamp et al., 2016). Studies continue to show the importance of consistent, frequent, and immediate

feedback on job performance to employees (Beenen, Pichler, & Levy, 2017; Kuvaas, Buch, & Dysvik, 2017; Tolli & Schmidt, 2008). Performance feedback from a supervisor has the power to motivate and improve job performance of employees with and without disabilities. In addition, performance feedback allows for an individual to set work-related goals and monitor their progress towards achieving those goals (Holderness, Olsen, & Thornock, 2017; Thornock, 2016). It could be argued that performance feedback is even more vital to the success of employees with disabilities. Individuals with disabilities have a harder time picking up on the nuances and social cues of the work environment. Instead, individuals with ID need to be explicitly explained the things that they need to improve on and then shown systematic ways to improve. Flores et al. (2011) found that people with ID experience higher job satisfaction when they receive direct and regular feedback from their supervisors. In addition, the more support an employee with ID receives from their supervisor, the higher quality of working life the employee reports. Flores et al. (2011) emphasized the importance of the employee with ID to develop meaningful relationships with their supervisors in order to receive regular feedback and set reasonable work goals.

However, most studies related to workforce integration with employees with ID have focused on changing the behavior of the individual with a disability by implementing social skills or interventions instead of trying to change the behavior of those in the workplace. More research is needed on interventions that can be used to change the behavior of the supervisors in communicating and collaborating effectively with employees with ID (Akkerman et al., 2016; Chadsey & Beyer, 2001; Chadsey-Rausch & Heal, 1995; Hagner & Cooney, 2003; Hedley et al., 2017). Interventions with supervisors could help with forming natural supports on the job,

building a working relationship with the employee with a disability, and providing the opportunity for performance feedback to improve job performance of an employee.

Boden, Jolivette, and Alberto (2018) have suggested the use of the check-in/check-out (CICO) intervention as a strategy to use with supervisors to help establish a relationship and to help the supervisor give constructive feedback to an employee with a disability. CICO is an evidence-based practice that has shown to increase the academic and behavior performance of students in the school setting (Hawken, Bundock, Kladis, O’Keeffe, & Barrett, 2014; Wolfe, Pyle, Charlton, Sabey, Lund, & Ross, 2016). CICO is grounded in Positive Behavioral Interventions and Supports (PBIS). PBIS is a three-tiered framework for addressing problem behaviors in schools. CICO is a Tier II intervention within PBIS (Wolfe et al., 2016). Tier II interventions typically focus on providing a targeted group of students or an individual student who is showing particular at-risk behaviors (Swoszowski, McDaniel, Jolivette, & Melius, 2013b).

Traditionally, CICO involves five steps: (a) check-in with a facilitator, (b) use goal sheet or behavior monitoring sheet, (c) check-out with a facilitator, (d) home component, and (e) return signed form the next day to the facilitator (Swoszowski et al., 2013b). The student and facilitator work closely together to set goals and reinforce appropriate behavior. CICO has mostly been applied in school and home settings to address attention-seeking behavior, social skills, goal setting, and academic skills (McDaniel & Bruhn, 2016; Ross & Sabey, 2015; Wolfe et al., 2016). Boden et al. (2018) is the only study that has used a modified version of CICO in assisting with vocational training of young adults with ID to increase on-task behaviors of students in employment type settings. Boden et al. (2018) have suggested that future research is needed on CICO in vocational training and the potential for supervisors to fill the role of the

facilitator for a more natural vocational experience. This can also be coupled with the repeated edicts from scholars about the need for more interventions that focus on the on-site supervisors and work environment instead of the person with a disability (Akkerman et al., 2016; Chadsey & Beyer, 2001; Chadsey-Rausch & Heal, 1995; Flores et al., 2011; Hagner & Cooney, 2003).

Purpose of the Study

The purpose of the following study was to determine the efficacy of the CICO intervention on the rate of performance feedback statements from a supervisor to an intern with ID in an integrated employment setting. The study was designed to use the CICO intervention during vocational training to assist a supervisor in giving feedback to an intern on their work performance and to help establish a working relationship between a supervisor and intern with ID. The CICO intervention included (a) check-in with a facilitator, (b) using goal sheet, (c) check-out with a facilitator, (d) home component, and (e) return signed form the next day to the facilitator (Swoszowski et al., 2013b).

As suggested by Boden et al. (2018), the on-site supervisors served as the CICO facilitator in goal setting and provided feedback to the employee with ID. Three supervisors from three different employment sites were chosen for this study based on their interaction (or lack of interaction) with an employee with ID. Individualized training was provided to each supervisor on using the CICO intervention. The three interns were young adults with ID in a transition program that provided semester-long internships for employment training. Due to the lack of fidelity in the home component of CICO (Mitchell, Adamson, & McKenna, 2017; Wolfe et al., 2016), the home component in this study was the transition teacher within the program. The data collection and procedures are discussed in further detail in Chapter III.

This study aimed to focus on the supervisor instead of the individual with ID. The purpose of this is two-fold. First, previous literature supports the need for interventions focusing on addressing supervisor's misconceptions and social anxiety that supervisors report in working with employees with ID (Butterworth & Strauch, 1994; Flores et al., 2011; Hagner & Cooney, 2003). Secondly, as a society and even as educators, we continually try to mold the individual with ID to fit into the work environment instead of trying to analyze how the work environment might need to change to better support the individual.

Theoretical Framework

The theoretical framework for this study was composed of three theories. Each theory plays a critical role in the design of the study. The first relates to disability studies, which is a multi-disciplinary approach to exploring disability as a social, cultural, and political phenomenon (Goodley, 2010). Disability studies uses the social model of disability to analyze how disability is defined and characterized by society. The social model emphasizes that disability results from societal views of what constitutes as 'normal.' The model recognizes how people are made disabled by their social and physical environments. This is due to various environmental factors such as physical barriers, social stigma and stereotypes, and economic resources (Adams, Reiss, & Serlin, 2015). The social model of disability advocates focusing more on how the environment might be the barrier for an individual instead of focusing solely on the individual (Titchkosky, 2011; Williams, 2015). This is also true when viewing the workplace environment. We have to constantly ask ourselves what possible barriers might be affecting an employee with a disability from reaching their full potential. Alexander den Heijer (2018) once stated, "When a flower doesn't bloom, you fix the environment in which it grows, not the flower" (p. 130).

Secondly, the performance management theory was incorporated in the theoretical framework for this study. This theory involves a supervisor and an employee or group of employees working in a partnership to improve future work performance. Performance management theory is rooted in the importance of ongoing communication, evaluation, feedback, and a working partnership between a supervisor and an employee (Cardy, 2004). The theory emphasizes that supervisors who provide employees more constant and consistent feedback (a) perform better, (b) set work goals, (c) increase motivation, and (d) experience higher job satisfaction. Performance management theory is a way for supervisors and employees to establish a shared understanding about expectations and what needs to be achieved. The theory is grounded in the need for employees to receive performance feedback and support from supervisors to increase motivation and setting work goals (Buchner, 2007).

Finally, the employment consultation model was integrated within the theoretical framework for this study. Vocational rehabilitation counselors have started using the employment consultation model as a way to provide information and training to an employer or business about how to best support an employee with a disability (Kaya et al., 2016). In this model, an employment specialist in working with people with disabilities provides information and training to an employer or business. The employment specialist acts as a consultant to the employer regarding accommodations and supports. By providing employment consultation, supervisors will feel more secure in providing support for their employees with disabilities. Previous studies have validated the use of the employment consultation model and results indicate that the model is an effective way to establish natural supports (Butterworth, Whitney-Thomas, & Shaw, 1997; Hagner & Cooney, 2003; Rogan, Hagner, & Murphy, 1993).

The interactions from these three theories laid a foundation for the following study. From the social model perspective, the work environment must be analyzed to determine how to better meet the needs of an individual with ID. This includes how supervisors can be trained using the employment consultation model on working and supporting an employee with ID. Performance management emphasizes the need for performance feedback for all employees including those with disabilities. This theoretical framework as well as the conceptual framework will be further discussed in Chapter II.

Hypothesis and Research Questions

Supervisors often lack training and experience on how to best support their employees with disabilities (Nota, Santilli, Ginevra, & Soresi, 2014; Vornholt et al., 2013). As a result, supervisors are hesitant to provide any feedback on how the employee is performing at work due to misconceptions and stereotypes that surround the label of ‘disability’ (Butterworth & Strauch, 1994; Flores et al., 2011; Hagner & Cooney, 2003). Feedback on an employee’s performance with and without disabilities is an important aspect for monitoring employee work behavior and assisting employees with setting work-related goals (Buchner, 2007; Cardy, 2004; Tolli & Schmidt, 2008).

Therefore, in this study, the CICO intervention was applied to three employment settings using a multiple-baseline design across participants to increase the rate of performance feedback statements given by a supervisor to an intern with a disability. The intervention included training on the use of CICO and the five key principles of the intervention. Thus, the purpose of this study was to address the following research questions: 1) does the use of the check-in/check-out procedure at the beginning and end of a work shift increase the rate of the supervisor’s performance feedback statements to an intern with ID; 2) what do supervisors of interns with

intellectual disabilities identify as challenges in communicating feedback with persons with disabilities; and 3) in what ways do those challenges change after the use of the check-in/check-out intervention? In answering these questions, the following hypotheses were developed based on previous research: 1) the use of CICO intervention increases the rate of the performance feedback statements given by a supervisor to an intern with ID before and after a work shift; and 2) the use of the CICO intervention will decrease the amount of challenges supervisors identify in communicating feedback to interns with ID identified by supervisors.

Significance of the Study

Numerous employment-related articles on people with ID recognize the lack of supervisor-focused interventions (Akkerman et al., 2016; Chadsey & Beyer, 2001; Chadsey-Rausch & Heal, 1995; Flores et al., 2011; Hagner & Cooney, 2003; Hedley et al., 2017). This study aimed to examine the employment setting using the social model perspective to break any environmental barriers between a supervisor and an employee with ID. Previous studies continue to emphasize the importance of supervisor feedback in relation to the job satisfaction for employees with disabilities (Akkerman et al., 2016; Flores et al., 2011; Li, 2004). The goal of this study was to use a scientifically proven intervention that relies on goal setting and feedback to create a more supportive work environment for individuals with ID.

Currently, most vocational training programs use job coaches who accompany an employee or intern with ID to work and assist in learning the job duties and responsibilities. Job coaches are time-limited and fade as the individual with ID becomes more independent (Cramm et al., 2008; Ohtake & Chadsey, 2001). However, research has found a job coach can actually hinder the individual with ID from getting to know their supervisors and co-workers. Individuals with ID are more likely to communicate with their job coach. Similarly, supervisors and co-

workers are more likely to discuss problems and job-related information with the job coach instead of the individual with ID. This breakdown in communication can impede the ability to form natural supports on the job (Cramm et al., 2008; Hagner & Cooney, 2003; Mautz, Storey, & Certo, 2001). The potential use of CICO in vocational training with supervisors and employees with ID may limit the need for job coaches and help to ensure that communication and feedback is taking place.

Scope of the Study

The focus of this research study was to determine if a functional relationship exists between the CICO intervention and the rate of performance feedback statements given by a supervisor to an intern with ID in an integrated employment setting. This study addressed the following research questions using a multiple-baseline design across participants: 1) does the use of the check-in/check-out procedure at the beginning and end of a work shift increase the rate of the supervisor's performance feedback statements to an intern with ID; 2) what do supervisors of interns with intellectual disabilities identify as challenges in communicating feedback with persons with disabilities; and 3) in what ways do those challenges change after the use of the check-in/check-out intervention?

A single-subject research design was chosen as the method of inquiry. A multiple-baseline design across participants was used to determine if there is a functional relationship between the CICO intervention and the rate of performance feedback statements given from a supervisor to an intern with ID. Single-subject research design was chosen due to several advantages and the flexibility that this design allows in a community environment (Gast & Ledford, 2014). Additionally, single-subject research is one of only two designs recognized as

“methodologically sound studies” (Council for Exceptional Children, 2014, p. 2) appropriate in identifying evidence-based practices in special education.

Limited research has been conducted with on-site supervisors in changing their behavior towards employees or interns with disabilities. To date, there are no studies reporting the use of CICO with supervisors in vocational training for youth with ID in transition. This study sought to provide insight into the power of performance feedback and an initial stride in exploring how interventions that have been proven to work in the school setting may also prove valuable to use in the employment setting.

Definition of Terms

Supervisors are the direct correspondent for employees at the workplace and expected to help train new employees (Auerbach, 2013).

Intellectual disability (ID) is defined significant limitations in intellectual functioning (between 70-75 IQ) and adaptive behavior that originates before the age of 18 (IDEA, 2004).

Transition services are mandated by the Individuals with Disabilities Education Act (IDEA; 2004) to help students with disabilities reach post-school outcomes upon graduating.

Vocational training provides on the job training, coaching, network opportunities, career development, and internship positions (Gilson & Carter, 2016).

Competitive integrated employment means an individual with ID works in an environment alongside co-workers without disabilities and receives competitive pay (Ellenkamp et al., 2016; Wehman, 2006; Wehmeyer et al., 2006).

Performance feedback is a praise statement or constructive statement given by an employer that explicitly identifies a work behavior of the employees (Holderness et al., 2017).

Check-in/check-out (CICO) is an evidence-based practice designed to modify behavior(s) particularly in the school setting (Everett, Sugai, Fallon, Simonsen, & O’Keeffe, 2011).

Summary

This introductory chapter provided a brief overview of the study by presenting pertinent background information, specifying the problem of the study, and describing the significance of the study. In Chapter II, an in-depth review of the literature will be presented that addresses the need for supervisor-focused interventions, the importance of performance feedback, and the CICO intervention.

CHAPTER II: REVIEW OF LITERATURE

The following chapter discusses previous literature that informed the need for supervisor-focused interventions in the workplace for employees with intellectual disabilities (ID). Specifically, this chapter provides a review of literature on the following key areas that highlight the importance of supervisor feedback to employees with ID: (a) the need for supervisor-focused interventions, (b) building natural supports, and (c) the impact of feedback on work performance. Previous literature on the check-in/check-out (CICO) intervention will also be discussed in-depth. The chapter ends with the key theories that form the conceptual framework for this study.

A systematic literature review was completed in order to collect and analyze the most relevant information on the various aspects of this study, such as employment interventions for individuals with ID, performance feedback for employees, and the CICO intervention. Literature was also compiled in relation to the three theories that comprise the conceptual framework. *Scout*, *ERIC*, and *Academic Search Premier* were the leading databases for identifying relevant literature. Primarily, articles from the past ten years (2008 to 2018) were identified using search terms such as (a) intellectual disabilities, (b) transition, (c) employment interventions, (d) vocational training, (e) supervisors, (f) performance feedback, (g) check-in/check-out, (h) performance management, (i) employment consultation, and (j) the social model of disability. Articles from earlier than 2008 were included due to their significance and/or the limited amount of research on a particular topic. Following the articles found from the database search, a backward search (i.e., reference checking) was completed to identify any additional articles.

The Need for Supervisor-Focused Interventions

Since the passing of Section 501 of the Rehabilitation Act (1973), the Americans with Disabilities Act (ADA; 1990), and the Individuals with Disabilities Education Act (IDEA; 2004), researchers have placed a greater emphasis on identifying effective interventions to assist individuals with ID in obtaining and remaining in competitive employment (Cobb & Alwell, 2009). Due to the complexity of competitive integrated employment, one would think that researchers have focused on the various aspects of the competitive employment settings such as interventions with co-workers and supervisors. However, previous research interventions in competitive employment settings for people with ID have focused predominantly on changing the workplace behavior(s) of the individual with ID (Amado, Stancliffe, McCarron, & McCallion, 2013; Hedley et al., 2017).

Gilson et al. (2017) completed a review of 56-articles related to instructional techniques and interventions in employment for young adults with ID in transition. Surprisingly, only 17 (30.4%) previous research studies on employment interventions took place in a community-based employment setting while over half (55.4%) took place in the school setting. Majority of the reviewed interventions focused on changing the behavior of the individual with ID. Although, one of the best practices in this population speaks to person-environment fit, which implies making whatever changes necessary in the environment to promote success for the person with ID. According to Gilson et al. (2017), interventions related to social skills, self-monitoring, and prompting procedures for individuals with ID are widely researched and utilized in employment. Only five studies involved the supervisors and co-workers. Three of those five articles only used supervisors and co-workers in social validity measurements. The other two

articles used supervisors and co-workers to examine the affects of various interventions to increase communication and social interactions in the workplace (Gilson et al., 2017).

Majority of previous research in the transition of young adults with ID into competitive employment have focused extensively on the individual with ID. Very few articles have used interventions with co-workers and even fewer with supervisors (Amado et al., 2013; Hedley et al., 2017). Hedley et al. (2017) also completed a review of employment interventions for youth with ID and found only three studies involved the supervisor. Most studies involving supervisors have focused solely on the attitudes and perceptions of disability held by the supervisors during the hiring process (Akkerman et al., 2016; Hedley et al., 2017).

The importance of involving the supervisor cannot be over-emphasized. Not only are supervisors often responsible for hiring and firing employees but also many are responsible for training. Supervisors help employees set and pursue goals, review employee performance, and monitor productivity in the workplace. Successful supervisors encourage growth and are advocates for their employees. Supervisors are often viewed as mentors that model and show others the business and expectations of the workplace (Auerbach, 2013). With the increase of people with ID in competitive employment, it is important for research to analyze how supervisors are working with employees with ID and possible interventions that can improve the workplace for both the supervisor and employee.

Previous research has suggested future studies need to examine effective interventions that can be used with supervisors in order to assist both the place of employment and the employee with ID (Akkerman et al., 2016; Hagner & Cooney, 2003; Hedley et al., 2017). Most of the previous research that has involved supervisors falls into one of three categories: (a) stigma associated with disability, (b) concerns over hiring an employee with a disability, and (c)

ways to form natural supports in the workplace. In the following section, each of these will be discussed with findings from earlier research.

Stigma Associated with Disability

With the increasing attention and push for competitive integrated employment settings, various studies have examined supervisor responses to hiring and working with employees with disabilities. Some studies have found that individuals with ID are discriminated against in the hiring process and in the workplace culture (Burke et al., 2013; Gewutz & Krish, 2009; Li, 2004). Supervisors who hold more negative views of working with people with disabilities often have misconceptions that align with the labeling of disability (McLaughlin, Bell, & Stringer, 2004; Mik-Meyer, 2016). This can cause a supervisor to perceive an employee's disability as more severe than it actually is. In addition, these misconceptions can also cause supervisors to feel more social anxiety when communicating and providing feedback to an employee with ID (Butterworth & Strauch, 1994; Gormley, 2015; Hagner & Cooney, 2003). Mik-Meyer (2016) found that "...employees with impairments are not solely defined by the work they do; they are also defined by their impairments" (p. 1344) in the workplace. Supervisor and co-workers have reported that they feel social distance from an employee with a disability (Vornholt et al., 2013). This can cause individuals with ID to feel unappreciated, lonely, socially isolated, and uncomfortable around co-workers and supervisors (Akkerman et al., 2016).

Stigma and stereotypes associated with disability stem from societal views of people who are constructed as 'different.' Green et al. (2005) explained how stigma associated with disability causes everyone in the workplace, including the individual with ID, to feel a sense of "social awkwardness" (p. 202). Individuals with ID describe this as everyone staring at each other and no one knowing what to talk about due to misconceptions and stigma that comes with the label

of disability (Green et al., 2005). Hernandez et al. (2008) found that supervisors with little experience and knowledge of disability report discomfort and unfamiliarity. This can also cause supervisors to feel pity or dread when having to come in contact with their employee with a disability. Thus, supervisors may try to avoid the individual with ID (Green et al., 2005).

Gormley (2015) examined how supervisor's view of disability changes overtime by examining first time supervisors who were participating in vocational training. Prior to meeting the individuals with disabilities, the supervisors held more negative views and misconceptions (52%) than positive (22%). Some misconceptions were low work expectations and a fear of not being able to communicate effectively with the individual. However, after a year of being involved with vocational training, 93% of the supervisors shared positive views of people with disabilities. Additionally, Gormley (2015) found that supervisors participating in a vocational training experience were skeptical prior to working with individuals with disabilities. The supervisors were anxious about how to interact and communicate with the youth. Likewise, the youth with disabilities expressed similar concerns.

Research continues to show the more supervisors gain experience and knowledge about disability, the more comfortable they become with working with people with disabilities. Once hired, supervisors who take a more active role in working with the employee with ID report higher satisfaction with their decision (Ellenkamp et al., 2016). Communication between the supervisor and the individual with ID helps to break down any misconceptions and stigma the supervisor may have (Butterworth, Hagner, Helm, & Whelley, 2000; Cramm et al., 2008; Hagner & Cooney, 2003; Mautz et al., 2001). Cramm et al. (2008) found that the key to supervisors having a more positive view of people with disabilities was to increase communication through social integration at work. Research has found that supervisors who work closely with an

employee with ID start to take more responsibility in their success. Gormley (2015) found that after supervisors gained experience through working with a young adult with ID, they held higher expectations of their abilities, felt more comfortable communicating with them, and were more invested in their success in the workplace.

Concerns Over Hiring

ADA was passed in 1990 to help prevent discrimination against people with disabilities in the workplace. ADA requires that that all private sectors such as businesses cannot discriminate against people with disabilities and that people with disabilities have the right to reasonable accommodations. This was to hold businesses accountable in hiring people with disabilities and provide incentives for hiring (Hulett, 2009). However, ADA has made some supervisors wary of hiring people with disabilities due to the possible cost of accommodations and legal requirements (Kaye, Jans, & Jones, 2011; Vornholt et al., 2013). This is especially true for small businesses that tend to worry about supervision, training time, costs of accommodations, and medical insurance (Burke et al., 2013). However, ADA provides incentives to small businesses with less than 30 full-time employees or total revenues of less than \$1 million by providing tax credit and deductions. Tax credit incentives include the cost of accommodations and modifications to a business such as ramps, providing sign-language interpreters, and cost of accessible materials (e.g., large print or audiotapes). Regardless of the size of the business, businesses can file for a tax deduction of up to \$15,000 per year for accessibility (U.S. Department of Justice, 2011).

Still, supervisors are twice as likely to hire someone without a disability because of misconceptions that follow the label of disability (Burke et al., 2013). Some of these misconceptions include (a) cost of accommodations, (b) legal requirements, (c) frequent

absences, (d) lower productivity, and (e) ongoing training (Burke et al., 2013; Ellenkamp et al., 2016; Hernandez et al., 2008). Supervisors are more likely to hire someone with a disability if possible accommodations, safety, promptness, available support services, and productivity are addressed. Several studies have surveyed supervisors about the cost of accommodations and majority have stated that the costs were minimal and overall reasonable (Ellenkamp et al., 2016; Hernandez et al., 2008; Kaye et al., 2011). Scheid (2005) found that 61% of businesses had made accommodations for their employees with disabilities. Of those, 80% reported that the accommodations were inexpensive. Supervisors identified accommodations such as (a) stools, (b) task list, (c) picture cues, and (d) modified computer keyboards (Hernandez et al., 2008). Many of the accommodations that supervisors have provided are similar to accommodations they provide to other employees (Hagner & Conney, 2003).

Experienced supervisors, who have hired people with disabilities before, rated employees more positively and are more likely to hire someone with a disability again. Supervisors with prior experience in working with employees with disabilities acknowledge the advantages of hiring someone with a disability and identified fewer disadvantages compared to supervisors that lack experience (Burke et al., 2013; Cramm et al., 2008; Ellenkamp et al., 2016; Hagner & Cooney, 2003). Supervisors identify benefits in hiring and working closely with employees with ID such as (a) lower absences, (b) loyalty, (c) reliable, (d) hardworking, and (e) longer tenures than employees without disabilities. Supervisors also have acknowledged how hiring employees with ID makes the overall work environment more positive and sends a positive message of inclusion to the community (Hernandez et al., 2008).

However, supervisors continue to report that they receive little to no training on accommodations and how to best assist someone with a disability. Supervisors express an overall

feeling of being unprepared to support an employee with a disability. The need for more informational training on the legal aspects of hiring someone with a disability, types of accommodations, and how to support an employee with ID are evident (Hagner & Cooney, 2003; Kaye et al., 2011).

The use of an employment specialist is becoming more popular. Employment specialists are typically vocational rehabilitation counselors and other professionals that work specifically on employment interventions for adults with disabilities. Employment specialist can provide supervisors with training and information on accommodations. Simonsen, Luecking, and Fabian (2015) reported that the use of an employment specialist was beneficial for supervisors in providing information on job training, accommodations, and legal requirements. Tilson and Simonsen (2013) acknowledged the need for employment specialist to work with supervisors and the workplace in order to help with problem solving and ways to best support employees with ID. Future research is needed on the effectiveness of employment specialists providing training to supervisors and workplace personnel on how to support an individual with ID (Simonsen et al., 2015; Tilson & Simonsen, 2013).

Interventions on Forming Natural Supports

When an individual with a disability gets hired, support services, such as a job coach, help the individual adjust and learn the needed job skills. Job coaches are also there to help the new employee communicate and build relationships with supervisors and co-workers. They help the individual become more independent and integrated into the workplace culture (Gilson & Carter, 2016). But job coaches are typically time limited and gradually fade from the employment site as the employee with a disability becomes more independent and natural supports are in place.

Natural supports are individuals in the workplace that assist an employee with a disability. For instance, a natural support can be a co-worker or supervisor. Natural supports are most successful when the individual is invested and cares about the employee with a disability on a more personal level. Establishing a relationship with a supervisor or co-worker is extremely important for the employee with a disability to know who they can ask questions to and seek assistance when needed. Natural supports are established through building a working relationship between the natural support and the employee (Rogan et al., 1993; Ohtake & Chadsey, 2001). This can be accomplished by providing more social integration between an employee and their supervisor and co-workers (Chadsey & Beyer, 2001).

Several studies have examined the possible barriers to forming natural supports. Job coaches have been found to hinder the communication between the employee with a disability and the supervisors and co-workers (e.g., Gilson & Carter, 2016; Hagner & Cooney, 2003; Rogan et al., 1993). For instance, supervisors and co-workers often feel “social awkwardness” (p. 202) when communicating with someone with a disability (Green et al., 2005). This can cause supervisors and co-workers to avoid communicating with the employee with a disability. As a result, supervisors and co-workers often rely heavily upon the job coach to provide assistance to the employee with a disability instead of taking responsibility for helping the employee with a disability succeed (Cramm et al., 2008). Likewise, employees with disabilities are more likely to communicate with the job coach than seek guidance from their supervisor (Mautz et al., 2001). Therefore, in such instances, the role of the job coach is erroneously redefined into one of more of a direct service to the supervisor. A job coach often provides the supervisor with consultation and assists with problem solving when needed (Chadsey & Beyer, 2001; Cramm et al., 2008; Rogan et al., 1993).

Another barrier in forming natural supports are the social skills of the individual with a disability and the lack of social interaction with supervisors and co-workers. Previous research indicates that even though an individual with ID is competitively employed, close relationships with co-workers and their supervisor do not always form (Chadsey & Beyer, 2001). Research has shown that sharing the same break, working on the same tasks, and the proximity of the supervisors and co-workers can lead to more social integration and the forming of natural supports (Butterworth & Strauch, 1994; Ellenkamp et al., 2016).

Chadsey and Beyer (2001) evaluated interventions that have been used to form work relationships for people with ID. Interventions such as social skills and self-management strategies have shown mixed success in increasing appropriate social behavior at work for people with ID and to help them in forming work relationships; however, research in this area continues to be sparse. Chadsey and Beyer (2001) acknowledge the need for research to identify more interventions that can be used to establish relationships at work as well as strategies to use with natural supports (i.e., supervisors and co-workers).

In summary, most studies related to workforce integration of employees with ID have focused on changing the behavior of the individual with a disability by implementing social skills or social interventions instead of trying to change the behavior of those in the workplace (e.g., Akkerman et al., 2016; Hedley et al., 2017). Research involving supervisors have focused primarily on perceptions of disability, concerns about hiring, and interventions for forming natural supports. Previous findings continue to echo the need for interventions focused on increasing the social integration and communication between an employee with ID and their supervisor (e.g., Gormley, 2015). Increased interaction can help change a supervisor's misconceptions about disability and help to form natural supports (e.g., Cramm et al., 2008;

Hagner & Cooney, 2003). More research is needed on interventions that can be used to change the behavior of the supervisor in communicating and collaborating effectively with employees with disabilities (e.g., Akkerman et al., 2016; Hagner & Cooney, 2003; Hedley et al., 2017).

Importance of Performance Feedback for Employees

Receiving feedback on one's performance is important for all employees with and without disabilities. Businesses may have varying techniques (annual reviews, rating scales, etc.) in giving performance feedback to their employees but all businesses give some kind of feedback. Performance feedback is defined as giving someone information regarding the accuracy of a past behavior(s). Feedback can be both positive and negative (Cianci, Schaubroeck, & McGill, 2010). Previous research has shown feedback can have powerful effects on the performance of employees with and without disabilities. The following section is divided into four parts in regards to employee feedback: (a) the effects of feedback, (b) common workplace practices, (c) factors that contribute to feedback, and (d) the importance of feedback for employees with disabilities.

The Effects of Feedback

The influence of feedback on an individual's behavior has been widely studied. Feedback has the ability to change, guide, motivate, and reinforce behavior (Guo et al., 2017). The same is true when providing feedback to employees. Feedback in employment can influence a workers' motivation and job performance (DeNisi & Kluger, 2000). Feedback also has the power to help organizations achieve objectives (Holderness et al., 2017). Performance feedback is defined as an external agent, such as a supervisor, giving information about the accuracy or correctness of a particular person's behavior (Andiola, 2014; Earley, Northcraft, Lee, & Lituchy, 1990; Kluger &

DeNisi, 1996). Performance feedback has also been defined as a comparison made between an individual's performance and a standard benchmark (Holderness et al., 2017).

Feedback is essential to motivation and has the ability to increase an employee's job satisfaction (DeNisi & Kluger, 2000). This is true especially for positive performance feedback. Positive feedback can increase an employee's self-esteem, incentive, and work performance. Employees are more likely to accept positive feedback than negative (Holderness et al., 2017). Negative feedback must be given strategically because it can lead to negative psychological effects for the recipient such as self-doubt, anxiety, and decrease in work motivation (Cianci et al., 2010; Guo et al., 2017).

However, Cianci et al. (2010) found that individuals who receive negative feedback followed by goal setting improved their performance. Performance feedback can be thought of as a way of providing information to someone about his or her progress towards a goal. Feedback allows individuals to then compare and adjust their performance to reach set benchmarks (Tolli & Schmidt, 2008).

Performance feedback coupled with goal setting has shown promising effects. Earley et al. (1990) acknowledged that goals and performance feedback are often interacting. Goals have the power to enhance performance by increasing the participant's effort. Without clear feedback and specific ways an employee can improve, an individual will not be able to judge whether their goal is reachable or needs to be altered. Likewise, DeNisi and Kluger (2000) found that feedback is more effective when coupled with goal setting interventions. DeNisi and Murphy (2017) also acknowledge that performance feedback requires not only information about an employee's work performance but also should include strategic goal setting on ways to improve performance.

Common Workplace Practices

Supervisors are the main source of performance feedback for employees. However, with how large companies and corporations are growing, supervisors often do not have the time or opportunity to provide employees with consistent performance feedback (Andiola, 2014). Over the past decade, other evaluation techniques have emerged to provide employees feedback on their job performances. One common technique in the corporate sector is the use of annual reviews. Annual reviews are evaluations that often use rating scales to quantify the performance of individual employees and provide documentation of growth (Kuvaas et al., 2017; Schaefer, 2018). Another popular approach is the use of the 360-Degree Appraisal. Organizations that are using the 360-Degree Appraisal rely on the performance feedback from various entities such as other co-workers, customers, and supervisors (DeNisi & Kluger, 2000). Typically, the employee will receive a summary of how they performed on certain benchmarks based on completed surveys from those around them (Toegel & Conger, 2003).

There are several issues when using generic evaluations such as annual reviews and the 360-Degree Appraisals. First, both of the evaluation systems are typically used once a year. This does not allow the employee to receive regular feedback about how they are improving. Secondly, using techniques with such scarcity can lead to the feedback being focused more on self-level instead of task-level. Self-level feedback can hinder the performance of the individual because the recipient's ego and self-worth feels threatened. When feedback is only focused on task-level performance, recipients feel less threatened and are more likely to improve their work performance (DeNisi & Kluger, 2000; Holdness et al., 2017; Schaefer, 2018). Finally, these tools of evaluating and providing performance feedback does not foster growth, problem-solving skills, or learning on how to improve one's performance (Toegel & Conger, 2003).

Factors that Contribute to Feedback

Several factors influence the effectiveness of performance feedback on employees. Studies continue to show the importance of consistent, frequent, and immediate feedback for employees (Beenen et al., 2017; Thornock, 2016; Tolli & Schmidt, 2008). Several large corporations such as Microsoft and General Electric have removed their generic review process because of the need to supply employees with immediate and frequent feedback to improve performance. For instance, if an employee receives feedback following a work shift, they are more likely to view that feedback as sufficient feedback. But when employees receive feedback months later on their performance, they may not find the feedback accurate. Previous studies have found that immediate performance feedback is more effective than delayed feedback (Kuvaas et al., 2017). A delay in feedback may actually hurt the learning and motivation of the employee (Thornock, 2016). Frequent and immediate feedback helps employees to learn and enhance work performance without the risk of forgetting or becoming distracted (Kuvaas et al., 2017).

Similarly, previous studies have found that the effectiveness of feedback depends on who is providing the feedback. Holderness et al. (2017) found that performance feedback is not as effective when given by another co-worker. Performance feedback is much more powerful when given by someone the employee views as a superior. Therefore, supervisors should continue to be the main source of performance feedback (Northcraft, Schmidt, & Ashford, 2011). Supervisors are typically viewed as credible, experts, and in the position of power needed to give reliable feedback to employees (Holderness et al., 2017). The more credible and superior the source, the more likely the employee is to value the feedback and change their work performance accordingly (Andiola, 2014).

Additionally, giving frequent performance feedback helps to build a trusting relationship between the supervisor and the employee. Beenen et al. (2017) have acknowledged the need for future studies to examine effective supervisor training in building relationships with employees. Beenen et al. (2017) suggested interpersonal skills training for supervisors in learning how to build more supportive relationships with all of their employees. For feedback to be effective, the feedback has to be task-specific and give the employee advice on how to improve (Kuvaas et al., 2017; Northcraft et al., 2011). This relates to goal setting and helping the employee to recognize how they can improve and adjust their goals to reach a set benchmark.

Importance of Feedback for Employees with Disabilities

Performance feedback has the same effectiveness on employees with disabilities as it does for employees without disabilities. However, it could be argued that performance feedback is even more vital to the success of individuals with ID. Individuals with ID have a harder time picking up on the nuances and social cues of the work environment. Individuals with ID need to be explicitly told things that they need to improve on and then shown systematic ways to improve (Hagner & Cooney, 2003). In addition, feedback is vital for young adults with ID in vocational training. During vocational training, young adults with ID need regular feedback on ways they can improve their work performance in order to obtain a competitive employment position. Indeed, such an approach is consistent with what's known about their learning characteristics---that they need time to acquire and maintain a skill.

Flores et al. (2011) found that people with ID experience higher job satisfaction when they receive direct and regular feedback from their employers. In addition, the more support an employee with a disability receives from their supervisor, the higher quality of working life the employee reports. Flores et al. (2011) emphasized the importance of the employee with a

disability to develop meaningful relationships with co-workers and supervisors. Ellenkamp et al. (2016) found that people with ID are more likely to keep their job if they feel valued and accepted by both supervisors and co-workers. Akkerman et al. (2016) also found the importance of communication and direct feedback from the supervisor to the employee with ID. Akkerman et al. (2016) have suggested that future research needs to identify interventions that can be used with supervisors to increase communication and feedback to employees with ID. Supervisors should be assisting with goal setting, personal development, and giving their employees with ID choices in order to increase job satisfaction (Akkerman et al., 2016; Ellenkamp et al., 2016).

One of the main sources for job satisfaction for employees with ID is social acceptance in the workplace. Employees with ID who interact with co-workers and supervisors report higher job satisfaction rates. This includes offering assistance, feeling comfortable to seek help, and understanding the work environment. Employees with ID who feel that they are part of the workplace tend to experience higher social interactions and ultimately feel more social acceptance (Flores et al., 2011). Inclusive employment has also shown to positively affect more appropriate social interactions (Wehmeyer et al., 2006).

Employees with ID need regular feedback on their job performance. Job performance relates to a person's work responsibilities and task production. Work responsibilities means that the employee feels a sense of commitment and dedication to the job. This includes being motivated, taking initiative, and having a positive work attitude. Task production is the ability to perform a certain job task with a certain degree of accuracy and at an acceptable rate. Job performance with frequent feedback for employees with ID increases job retention and improves job satisfaction (Fornes et al., 2008; Roessler, 2002).

In addition to receiving feedback, employees with ID perform best when supervisors also provide systematic ways the employee can improve their performance. Supervisors should communicate with their employees with ID on explicit ways they can improve their performance and assist them in setting new work goals (Akkerman et al., 2016; Flores et al., 2011). Goal setting helps an individual work towards enhancing their performance by directing their attention to certain aspects they can improve on. Without goal setting and ways to improve their performance, individuals with ID will lack a clear understanding of how they can improve (Buchner, 2007; Early et al., 1990). Northcraft et al. (2011) acknowledged the more performance feedback an employee receives, the more an employee will attend to their work-related goals.

Locke and Latham (2002) have described a work-related goal as the object or aim of an action. A goal can be used to predict, explain, and influence the performance of individuals at work. Previous studies have found that the higher goals are set, the more likely the individual is to rise to those goals; whereas, if goals are stagnant, individual performance actually levels off (Locke & Latham, 1990). For goals to be effective, individuals need feedback in relation to their goals. This feedback needs to be specific and come from an individual of authority in the workplace. Goals plus feedback is more effective than just goal setting alone (Locke & Latham 2002). Reeve (2015) acknowledged the need for feedback in the goal setting process for employees by stating, “Without feedback, performance can be emotionally unimportant and uninvolved” (p. 225). Performance feedback can help generate higher feelings of competence in one’s self and greater self-worth. Feedback can supply “constructive instructions, modeling, coaching, and scaffolding” (Reeve, 2015, p. 173) to increase one’s skill.

In summary, performance feedback is a powerful behavior modification tool for providing individuals with and without disabilities with valuable information on ways to improve

work performance. This is also true for young adults with ID who are receiving vocational training. Youth with ID need feedback on how they can improve during their vocational training in order to obtain employment. Employees with ID report higher job satisfaction when they receive regular and consistent feedback from their supervisors. Moreover, employees with ID report lower stress about their job demands when they receive assistance in setting work-related goals and systematic ways to improve their performance from their supervisors. Prior research has suggested that more studies are needed on supervisors providing feedback on the performance of employees with ID and providing ways they can improve their performance (e.g., Akkerman et al., 2016; Flores et al., 2011).

Check-In/Check-Out

One strategy that is most frequently used in schools across the U.S. to modify behavior is called the check-in/check-out (CICO) intervention. This intervention relies on a facilitator or mentor assisting a student in demonstrating more appropriate behavior(s). I believe this is the type of intervention needed in the employment setting to help the transition of young adults with ID into competitive employment and allow a structured time for the supervisor and employee with ID to sit and discuss goals and receive feedback on how they are performing. The following section is a review of the previous literature on CICO. This includes an overview of what the intervention is and the past research methods that have been used to evaluate the effectiveness of CICO. Additionally, this section will discuss previous modifications to the intervention followed by the various participants that have been evaluated using CICO.

CICO Definition

CICO, also known as the behavior education program (Crone, Horner, & Hawken, 2010), is an evidence-based practice that has been shown to increase positive academic and behavior

performance of students in the school setting (Hawken et al., 2014; Wolfe et al., 2016). In 2017, the Office of Special Education Programs (OSEP) reported that over 3,500 schools across the country were subscribers to the CICO web-based application. This does not take into account the schools that are using this intervention but are not using the web-based version (Hawken et al., 2014).

CICO is grounded in Applied Behavior Analysis (ABA) and Positive Behavioral Interventions and Supports (PBIS) used to identify, address, and refine problematic behaviors for children and youth (Mitchell et al., 2017). CICO also relies on the core principles found in ABA and PBIS. These principles are: (a) explicitly defined behavior expectations, (b) instruction on how to meet or exceed those expectations, (c) high rates of feedback, and (d) constant data collection and monitoring (Crone et al., 2010).

PBIS is a three-tiered framework for addressing problem behaviors in schools (Wolfe et al., 2016). The tiers are a comprehensive way to address various behaviors of at-risk students. Tier I is known as the primary prevention level and is designed to set school-wide behavior expectations that are held by all students and staff across school settings. Tier II is the secondary prevention level and is focused on providing additional supports and interventions a targeted group of students or an individual student who are demonstrating at-risk behaviors and are not responding to the school-wide behavior expectations. The final tier is the tertiary prevention level and this is for more individualized supports and interventions for students who are displaying persistent high-risk problem behaviors (Crone et al., 2010; Swoszowski et al., 2013b)

In PBIS, CICO is a Tier II intervention that focuses on providing a targeted group of students or an individual student who demonstrates at-risk behaviors and is not responding to school-wide behavior expectations (Swoszowski et al., 2013b). CICO is a preventative approach

and is used when a student is demonstrating persistent problem behaviors that are not categorized as dangerous or violent. Previous studies have used CICO on a number of problematic behaviors such as attention-seeking, off-task, and task avoidance (Boden et al., 2018; Ennis et al., 2012; Mitchell et al., 2017). Crone et al. (2010) stated that the primary function of CICO “is to improve the efficiency of school-wide procedures, while reducing the number of individualized interventions that are needed” (p. 1).

Traditionally, CICO is comprised of five steps: (a) check-in with facilitator, (b) use of a goal sheet or behavior monitoring sheet, (c) check-out with facilitator, (d) home component, and (e) return signed form the next day to the facilitator (Swoszowski et al., 2013b). A facilitator (also referred to as a mentor) is someone who supports the student by checking-in and checking-out with the student. The facilitator is the most important role in the implementation of CICO. They must be committed to meeting twice daily and discussing the student’s behavior (Swoszowski, Patterson, & Crosby, 2011). The facilitator must be someone who is open to forming a relationship with the student and is committed to the student’s progress. CICO increases the opportunities for positive interactions between an individual and their facilitator and provides structured times for frequent feedback (Wolfe et al., 2016). During CICO sessions, the facilitator discusses the student’s goals and provides reinforcement and feedback to the student about how they can improve. At most, both CICO sessions should only last a total of 15- to 20-minutes (Crone et al., 2010; Swoszowski et al., 2011).

Another common step of CICO is using a daily progress report card, which is also referred to as a goal or behavior-monitoring sheet. The student picks up the sheet every day from the facilitator and uses it as a progress monitoring technique for the remainder of the day. After each class period, the student checks in with the teacher to complete their performance on the

sheet. Each sheet can be individualized based on what the student needs. Expectations and goals are set depending on what the student is working on. The student and the facilitator typically set the goals and expectations together. In addition, some sheets might use a point system while others may rely on pictures such as smiley faces. Some include a more self-directed monitoring sheet where the student sets daily goals and problem-solves with their facilitator (Andrews, Houchins, & Varjas, 2017). At the end of the day, the facilitator reviews the sheet during check out. This is when the facilitator and the student can review how the student performed that day. The sheet is then sent home for a parent or guardian to sign. The next day, the student turns the form into the facilitator during check-in (Crone et al., 2010; Hawken & Johnson, 2007).

The daily progress report or goal sheet is used for several reasons. First, it serves as a way for students to take ownership over their behavior and provides immediate feedback and reinforcement. Secondly, it bridges the gap between home and school by including the home component where parents or guardians sign their son or daughters daily progress report or goal sheet. The home component is to encourage parents or guardians to reinforce the student's behavior and provide frequent communication on the student's performance (Swoszowski, Jolivet, & Fredrick, 2013a).

There are also several studies that have made modifications to the five components of CICO or have added additional steps. For example, Ross and Sabey (2015) implemented CICO with additional instruction in social skills to help five elementary school students increase their positive social interactions at recess. McDaniel and Bruhn (2016) used CICO with goal modifications with two seventh graders to decrease their conduct problem behaviors (i.e., disruption, disrespect, impulsivity and confronting authority) in the classroom. Furthermore, several studies have used a student's peer as the facilitator in CICO. Melius, Swoszowski, and

Siders (2015) used a peer-led CICO intervention with two elementary school students to increase their pro-social behaviors.

Similarly, Smith, Evans-McCleon, Urbanski, and Justice (2015) used peer-mediated CICO by replacing the facilitator with a high school peer mentor for an elementary school student who was displaying disruptive behaviors in the classroom. Several articles have also added an additional component to CICO called check-in, check-up, check-out. This modification adds an additional check with the student's facilitator in the middle of the day. This is to provide more feedback and reinforcement for students. Check-in, check-up, check-out has been suggested as an option if students are unresponsive to CICO. In addition, several studies suggest students with disabilities may respond better to the additional check-up component because of the frequency of feedback and check-ins (Boden, Ennis, & Jolivette, 2012; Boden et al., 2018; Swoszowski et al., 2013b).

Methods

CICO is an evidence-based practice and has been backed by numerous studies on the effectiveness of the intervention on a student's problem behavior(s). Majority of the studies on CICO have used a single-subject research design. Hawken et al. (2014) completed a review of literature that initially included 60 published and unpublished articles from 2000 to 2013. Only 28 articles met the inclusion criteria of being single-subject designs and group designs. Of those studies, 20 (71%) used a single-subject design while only eight (28%) studies used a group design. Results indicated that 49% of the single-subject designs and 75% of the group designs showed CICO as an effective intervention. Hawken et al. (2014) acknowledged the need for more research on CICO using more rigorous designs such as single-subject and group designs.

Wolfe et al. (2016) synthesized the CICO literature from 2002 to the beginning of 2014. Wolfe et al. (2016) found 15 single-subject studies and only one group design study. Of those that were single-subject designs, nine were multiple-baseline designs, five were reversal designs, and only one was changing criterion design. However, only two of the studies discussed fading procedures and none of the reviewed studies identified a criterion for terminating the intervention. Additionally, none of the articles examined long-term maintenance data (Wolfe et al., 2016).

Mitchell et al. (2017) completed a similar literature review but compared included articles that met the 2014 Council for Exceptional Children's (CEC) quality indicators and standards. The CEC standards are designed to identify studies that can be used to justify that an intervention is grounded in high-quality research and can be considered as an 'evidence-based practice' in special education (CEC, 2014). Originally, Mitchell et al. (2017) found 29 articles that used CICO but after applying the CEC standards, only five articles met the inclusion criteria. Of the five articles, two were ABA designs, two were multiple-baseline designs, and one was a randomized group study. Mitchell et al. (2017) found that CICO is an evidence-based practice; however, considering CICO has been used for the past ten years in school districts across the country, there are not many methodologically sound studies that provide evidence. Most of the 29 studies that were originally found were descriptive designs (Mitchell et al., 2017).

Similarly, Maggin, Zurheide, Pickett, and Baillie (2015) reviewed literature on CICO to determine if the intervention meets the *What Works Clearinghouse* (WWC, 2013) criteria for an intervention to be evidence-based for single-subject and group research. Only eight single-subject studies met the inclusion criteria of WWC. Articles that did not meet the criterion were due to interobserver agreement issues and not having enough data points. In the eight studies,

there were 35 participants total but only 28 participants (80%) showed a positive effect during the CICO intervention. All of the single-subject studies kept the traditional steps of CICO. Only one study met the WWC criterion for randomized control trial. Maggin et al. (2015) also found four articles that they identified as quasi-experimental designs. Results indicated that when comparing CICO articles to WWC standards, there were sufficient single-subject studies that found CICO as an evidence-based practice but there were not enough group comparison articles (Maggin et al., 2015).

There are several gaps in the literature involving the design and methods used for examining the effectiveness of CICO. Wolf et al. (2016) found that only seven out of 15 articles reported treatment validity. In addition, previous studies have failed to report termination criteria's, fading approaches, details about training, and maintenance data (Mitchell et al., 2017; Wolf et al., 2016). Several single-subject studies have also had issues reporting a sufficient interobserver agreement and not providing enough data points in each phase (Hawken et al., 2014; Maggin et al., 2015).

Participants and Settings

CICO intervention has been around for over ten years and has been used by thousands of school systems across the country. However, there are several gaps in the research that need further investigating to determine the effectiveness of the interventions. Wolfe et al. (2016) found that the majority of participants in the studies on CICO were white males that did not qualify for special education services. To date, only one study has implemented CICO with three male students in high school with moderate ID (Boden et al., 2018). More research is needed to determine the effectiveness of CICO on students with more severe disabilities. Mitchell et al. (2017) also acknowledged the need for more studies with female participants.

CICO has mostly been applied in school settings to address attention-seeking behavior, social skills, goal setting, and academic skills (McDaniel & Bruhn, 2016; Ross & Sabey, 2015; Wolfe et al., 2016). Previous research on CICO has found that the intervention is most effective when the target behaviors are maintained by adult or peer attention and task avoidance (Ennis, Jolivette, Swoszowski, & Johnson, 2012; Swoszowski et al., 2013b). It is significant to point out that most of the targeted participants in the CICO literature have been identified by teacher recommendations or by the number of office referrals (Mitchell et al., 2017; Wolfe et al., 2016). More studies are needed that rely on direct observations to identify participants are warranted.

The CICO intervention has mostly been implemented in the elementary school setting followed by the middle school setting. Hawken et al. (2014) found that only 26% of the studies on CICO were completed in secondary settings compared to 64% in elementary settings. To date, only three studies have been completed with high school students using CICO. In addition, two of those studies were completed in residential facilities (Ennis et al., 2012; Swoszowski, Jolivette, Fredrick, & Heflin, 2012).

Boden et al. (2018) is currently the only article that used CICO on three high school students (ages 14- to 21-years-old) with moderate ID receiving vocational training. In this study, a modified version of CICO called check-in, check-up, check-out was used to decrease off-task behavior during employment. Therefore, instead of the intervention being implemented in the academic setting, it took place in employment training. Three vocational sites were used for each student that included the classroom, school coffee shop, and a pizzeria in the community. The paraeducators served as the facilitators and the transition teacher served as the home component. Findings indicated that the intervention was effective for all three students in decreasing the

percentage of off-task behavior in all three settings. In addition, Boden et al. (2018) found that the intervention is not stigmatizing or intrusive for the employment setting.

Hawken et al. (2014) also acknowledged that 82% of the previous research on CICO only used the intervention in the school building. Hawken et al. (2014) suggested that more research is needed to determine the effectiveness of CICO in various settings outside the school. CICO has been implemented in several residential and juvenile centers to help children and youth address problem behaviors. Results from residential and juvenile centers are promising in assisting students with problematic behaviors (Ennis et al., 2012; Melius et al., 2015; Swoszowski et al., 2012; Swoszowski et al., 2013a; Swoszowski et al., 2013b). However, to further generalize the use of CICO, more studies are needed to examine how the intervention can be used in various settings (Hawken et al., 2014).

From the literature reviewed in this section, there are several gaps in the literature of CICO including the lack of studies that analyze the effects of CICO on students with ID. Majority of studies have focused on elementary school students in decreasing attention-seeking behaviors. In addition, previous studies have relied heavily on participants without disabilities (e.g., Mitchell et al., 2017; Wolf et al., 2016). Only three studies have examined the effects of CICO on high school age students (Ennis et al., 2012; Swoszowski et al., 2012). Moreover, only one of those three studies took place in a high school with students with moderate with ID (Boden et al., 2018). Previous researchers have repeated the need for more studies that are methodologically sound in using more single-subject designs or group comparison designs (e.g., Hawken et al., 2014; Mitchell et al., 2017; Wolfe et al., 2016). In addition, CICO is more effective when all five steps of CICO are implemented (Maggin et al. 2015).

To date, the only previous literature that analyzed the effects CICO had on the facilitator was when the facilitator was a peer mentor (e.g., Melius et al., 2015; Smith et al., 2015). Examining how the facilitator's behavior changes due to implementing the CICO intervention is important in providing a deeper understanding of how the intervention works to not only change the target participant(s) behavior but also the facilitator's role in supporting the individual. In addition, Boden et al. (2018) is the only study that has analyzed the use of CICO in vocational training. The study recommends that future studies examine the use of CICO in authentic employment settings in the community with the on-site supervisor serving as the facilitator. This would allow for "a more natural vocational experience" (Boden et al., 2018, p. 17).

Theoretical Framework

This study was grounded in three theories from different areas of scholarship including disability studies, business, and vocational rehabilitation. Theories included (a) the social model of disability, (b) performance management theory, and (c) employment consultation. Each of these played a critical role in the design of the study and in highlighting the importance of supervisors giving frequent, systematic feedback directly to employees with ID within the CICO approach.

Social Model of Disability

Historically, there are two models that are recognized in studies about disability: the medical model of disability and the social model of disability. The medical model is the belief that disability is a biological product that results in the impairment of the body and/or mind (Brittain, 2004; Haegele & Hodge, 2016). The medical model of disability seeks to 'fix' the individual with a disability in order for the individual to fit into the environment (Bingham, Clarke, Michielsens, & Van De Meer, 2013). The medical model of disability informs

professional disciplines such as special education, rehabilitation, speech pathology, etc. In contrast, within disability studies, the social model examines how societal barriers and perception of impairment causes disability (Dirth & Branscombe, 2017). The social model separates impairments and disability. Impairments are perceived as limitations to body functioning, whereas, disability is a socially constructed phenomena that stems from environmental barriers and attitudes (Goodley, 2001).

The social model of disability provides a useful way to understand critical issues in the workplace environments and how they impact on employee with ID. Using the social model, interventions for remediating barriers to employment should not focus solely on the individual but instead should include interventions that also change the environment and people in the environment in order to make it more accessible to the employee with ID (Dirth & Branscombe, 2017).

Performance Management Theory

Stemming from the business field, the performance management theory is designed for supervisors and employees to establish a shared understanding about the workplace expectations and what needs to be achieved. This theory is rooted in the importance of ongoing communication, evaluation, feedback, and a working partnership between a supervisor and an employee (Cardy, 2004). Performance management theory states that employees need to receive performance feedback and support from supervisors to increase motivation and setting goals at work. Supervisors who use performance management strategies with employee's results in positive outcomes for the employee, such as (a) increased work performance, (b) setting work goals, (c) increased motivation, and (d) experienced higher job satisfaction (Buchner, 2007).

Traditionally, companies have relied on more measurement-oriented models such as annual review evaluations. However, research continues to show the ineffectiveness of annual reviews. Yearly evaluations often provide employees too much feedback at one time and can cause loss of motivation at work. In addition, only receiving feedback once a year is not sufficient in helping employees improve their work performance and adjusting their work-related goals (Toegel & Conger, 2003). Therefore, the performance management theory relies on the motivation model to provide employees with continuous and year-round reinforcement, performance feedback, learning, and goal setting (DeNisi & Murphy, 2017; DeNisi & Pritchard, 2006).

Performance feedback is a powerful behavior modification tool for providing individuals with valuable information (Holderness et al., 2017). New employees, especially, need regular and consistent feedback from authority figures such as their supervisor. Peer-level feedback has shown to be ineffective in providing negative feedback to new employees. Therefore, research in performance management theory continues to demonstrate the importance of supervisors being the primary communicator in providing both positive and negative feedback to employees (Toegel & Conger, 2003).

Employment Consultation

In business, it is common for consultants in specialized areas to provide companies with information and training sessions. Hagner and Cooney (2003) identified this method of consultation but applied it to providing information about working with employees with disabilities called the Consultation Model of Employer Support. In this model, an employment specialist in working with people with disabilities provides information and training to a supervisor or business. The employment specialist acts as a consultant to the supervisor

regarding accommodations and supports. By participating in employment consultation, supervisors feel more secure in providing supports for their employees with disabilities (Tilson & Simonsen, 2013). In addition, employment consultation involves the employee with a disability which gives the employee greater control over his or her inclusion, supports, and success in their job. Previous studies have validated the use of the employment consultation model to improve the knowledge and problem-solving skills of supervisors (Rogan et al., 1993; Tilson & Simonsen, 2013).

Employment consultation is an effective way to establish natural supports. During consultation, the supervisor and employment specialist work together to problem-solve and collaborate on ways of supporting the employee with a disability. This creates an opportunity for supervisors to take on more responsibility and invest in the success of the employee with a disability. Butterworth et al. (1997) acknowledged the need for more specific interventions in the development of natural supports using employment consultants. Supervisors have more background knowledge about the business and tasks requirements than the employment specialist. Therefore, involving them in the problem-solving process can result in better and more efficient solutions than the employment specialist might be able to come up with on their own (Butterworth et al., 1997; Simonsen et al., 2015).

Simonsen et al. (2015) found that supervisors value the assistance of employment specialists and consultation. Supervisors emphasized that training in disability awareness and consultation on the best ways to support the individual with disabilities helped the employer feel more comfortable. Employment consultation requires a delicate balance between providing support and providing solutions (Tilson & Simonsen, 2013).

Conceptual Framework

The social model of disability, performance management theory, and employment consultation model supports the hypothesis in the study that the CICO intervention affects the performance of the supervisor in working with an intern with ID. Figure 1 shows the conceptual framework that was used in the construction of this study. The framework used a logic model and was also backed by the findings from previous research literature. This framework encompasses theory, CICO, and the effects of performance feedback.

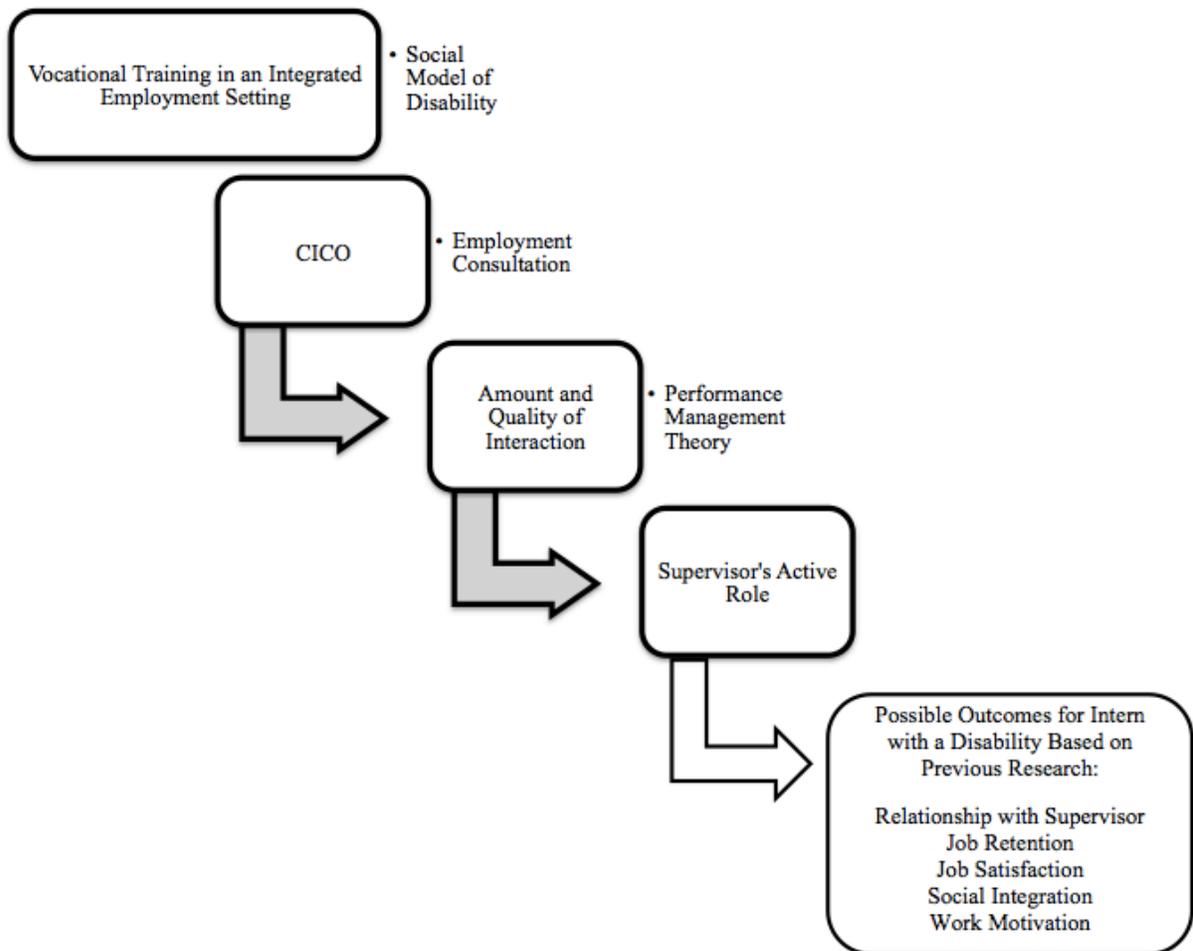


Figure 1. Conceptual framework for CICO in the vocational setting

Summary

This chapter provided a review of literature in regards to the need of supervisor-focused interventions, the effects of performance feedback, and the CICO intervention. Previous research findings were discussed and the need for future research was investigated. In addition, this chapter discussed the key theories that undergird the study and the conceptual framework. Chapter III presents the research methods.

CHAPTER III: RESEARCH METHODS

The following chapter details the methods that were used for this analysis. Consistent with the Council for Exceptional Children's (CEC) *Standards for Evidence-Based Practices in Special Education* (2014), this chapter specifies the participants, instrumentation, data collection techniques, procedures, and data analyses that were completed using a single-subject design.

Research Design

A single-subject research design was utilized as the method of inquiry for this study. Multiple-baseline design across participants was used to determine if there is a functional relationship between the CICO intervention and the rate of performance feedback statements given by a supervisor to an intern with a disability. A single-subject research design was chosen due to several advantages and the flexibility that this design allows in a community environment (Gast & Ledford, 2014). Single-subject are common in special education due to the limited number of similar participants (e.g., disability category, severity). In addition, this design allows the researcher to analyze the effectiveness of a treatment on particular individuals. Researchers can also focus on individual performance when using this method. As a result, the researcher can make more informed decisions throughout the study based on individual needs (Horner, Carr, Halle, McGee, Odom, & Wolery, 2005).

Moreover, single-subject allows for more data in a shorter amount of time. This design utilizes visual analyses to make data-driven decisions and to provide documentation of a functional relationship between variables. Visual analyses are graphical displays that involve

trend, level, and variability during each phase of the experiment. Data is continually recorded to determine the interaction. Visual analyses are able to illustrate individuals that are responding well to the intervention in addition to individuals who are not responding well. Many other designs such as group designs rely on group means and do not examine individual differences. Single-subject allows for researchers to actively examine the effectiveness of the intervention for each individual participant during the study (Gast & Ledford, 2014; Horner et al., 2005).

Single-subject research design also controls for most threats to internal validity, which allows for the researcher to determine if a functional relationship exists between the independent and dependent variables. Experimental control is established when the design allows for three demonstrations of experimental effects at three different time points and the results show a pattern that displays experimental control (Gast & Ledford, 2014; Horner et al., 2005). External validity is established through replication of a single-subject study using different participants, conditions, and measures of the dependent variable. The generalizability of a study is determined by the replication of the study in various settings and participants. The importance of operationally describing characteristics of the study is important for replication to be possible (Horner et al., 2005).

Single-subject is found to be a practical methodology for examining educational and behavioral interventions. Single-subject research is one of only two designs recognized by the CEC (2014) as “methodologically sound studies” (p. 2) appropriate in identifying evidence-based practices in special education. This argument is strengthened with replication and established experimental control. In addition, this method of inquiry allows for the research study to take place in an applied setting such as a school or community setting and is typically more cost-effective than other designs (Gast & Ledford, 2014; Horner et al., 2005).

Setting

The study took place within the CrossingPoints Transition Program. CrossingPoints is a model inclusive postsecondary transition program at The University of Alabama supported in part through a grant funded by the U.S. Department of Education, *Transition and Postsecondary Programs for Students with Intellectual Disability* (TPSID). Research within the CrossingPoints model is used to evaluate strategies that improve student outcomes in five main areas of transition: (a) postsecondary education, (b) employment, (c) independent living, (d) participation in leisure/recreational activities, and (e) community access and participation.

The setting of this study took place during the CrossingPoints academic year program called Tier 1. Tier 1 is a collaboration between two suburban school districts and The University of Alabama. Tier 1 participants are students with intellectual disabilities that are between 18- and 21-years of age. The students in CrossingPoints Tier 1 still receive services under the Individuals with Disabilities Education Act (IDEA, 2004) and are enrolled in their respective school districts but come to the University to receive training in independent living, employment, and post-secondary education. Students can stay in the program for up to three years. Students attended the program Monday through Friday from 8am to 2:45pm. During the study, the program consisted of 25 students, one director, one coordinator, two transition teachers, three paraeducators, four graduate research assistants, and four work study students.

During Tier 1, students attend semester-long employment internships on campus and in the community, three-days a week for about three-hours a day (8:30am to 11:30pm) to receive vocational training. The total number of hours a student spent at an employment internship per semester was consistent with the Labor law mandates. Students attended their internships with a job coach from the program until evidence derived from job performance-related data indicated

the student was independent enough to attend by themselves with natural supports. During employment internships, the students were considered interns who worked alongside their supervisor and co-workers. CrossingPoints also provides students with a small stipend during their employment internships to help emphasize the importance of working. Each semester, the students receive a new internship in order to gain a wide-range of employment skills.

During the time of this study, CrossingPoints collaborated with 42 internships across campus and in the community. Internship sites range from positions such as (a) food service, (b) cosmetology, (c) animal care, (d) office assistants, (e) librarian, (f) landscaping, (g) apparel, and (h) hospitality. All of the internship sites are not used every semester because internships are based on each student's interests, preferences, and needs. When trying to assign students to internships, CrossingPoints takes into consideration the student's (a) needs, (b) preferences, (c) strengths, and (d) long-term goals to try to provide each student with a unique vocational learning opportunity. Interests inventories, questionnaires, and the student's prior vocational training experience and performance are used to in determining placements. CrossingPoints also considers input from the student's family about their long-term goals for their young adult.

Job assignments at each site can vary depending on the site and the tasks they need help completing. CrossingPoints interns are expected to complete the task(s) their supervisor gives them. The goal of the internship is to prepare the student as much as possible for integrated competitive employment once they graduate. Therefore, CrossingPoints interns are expected to be treated like any other employee at the site. This means that they can be fired from an internship and receive decrease pay on their stipend for absences. Regular communication between the internship site and CrossingPoints is kept to make sure that everything is going smoothly and to determine what areas the student may still need to improve on.

In alignment with the research goals of CrossingPoints, the needs of the program, and the lack of supervisor-focused interventions in vocational training (Akkerman et al., 2016; Chadsey & Beyer, 2001; Chadsey-Rusch & Heal, 1995; Flores et al., 2011; Hagner & Cooney, 2003; Hedley et al., 2017), this study focused on an employment intervention that could benefit an individual with ID in accessing and participating in vocational training. More specifically, this study focused on the use of the check-in/check-out (CICO) intervention during vocational training to determine if a functional relationship exists between the intervention and the rate of performance feedback given by a supervisor to an intern with ID. Currently, there is little research on interventions to use with supervisors in giving performance feedback to employees or interns with ID (e.g., Akkerman et al., 2016; Hedley et al., 2017). However, previous research has found that performance feedback from a supervisor has the power to motivate and improve job performance and job satisfaction of employees with disabilities (Flores et al., 2011; Holderness et al., 2017).

Therefore, the setting for this study was three different internship sites within the CrossingPoints Tier 1 Program. The internship settings could have been any of the 42 sites that were available for students. Students chose their internship sites at the beginning of the semester and based on those preferences and the frequency of communication and feedback between the supervisor and intern determined the internship sites that were chosen for this study. The three settings that were used for the study were (a) a departmental office, (b) a therapy center, and (c) a museum. All of these settings were located on campus and were affiliated with The University of Alabama.

Although, these settings are different, the expectations of the interns and supervisors in each setting are the same. CrossingPoints interns are all working on similar job skills at their

sites such as (a) making appropriate eye contact, (b) asking for help when they need it, (c) staying on-task, and (d) reviewing their work. Each intern also spent the same amount of time per week in the employment setting. In addition, the three employment settings that participated (i.e., departmental office, therapy center, and museum) gave the interns similar tasks to complete such as (a) working on the computer, (b) organizing office materials, and (c) preparing materials and displays for upcoming events.

Participants

Four supervisors were recruited to participate from local businesses that collaborate with CrossingPoints in providing vocational training. Participants were identified by (a) agreeing to serve as a vocational training site for 18- to 21-year-olds with moderate to severe ID, (b) were chosen as an internship site that particular semester, (c) observed as needing assistance with communicating and providing feedback to the individual receiving vocational training, and (e) responsible for training new employees at the business. In anticipation of possible attrition, four supervisors were recruited for attrition purposes and in case a CrossingPoints intern declined to participate in the study. To reduce unnecessary variation among baselines, the researcher selected supervisors who shared similar characteristics and exhibited similar behaviors in working with an intern with a disability (Gast & Ledford, 2014). More specifically, similar characteristics and behaviors that supervisors shared were (a) prior experience working with CrossingPoints to provide vocational training, (b) lack of communication and interaction with the CrossingPoints intern, and (c) lack of performance feedback about how the student is performing.

During baseline, one of the four supervisors was removed from the study. This was due to research procedures and fidelity of implementation issues with the job coach. Thus results of

this study focus on the three supervisors who received training on CICO and went through intervention. The three supervisors that went through intervention are described in more detail below.

The following demographic and characteristics were collected about each participant prior to intervention: (a) gender, (b) age, (c) ethnicity, (d) occupation, (e) number of years at their current job, (f) highest degree earned, (g) number of years working with the transition program, and (h) experience working with people with disabilities. Demographic and characteristic information are displayed in Table 1. Consent was obtained prior to collecting baseline.

Table 1

Demographics of Participants

Name	Gender	Age	Ethnicity	Highest Degree Earned	Occupation	Years at Current Job	Years Serving as an Employment Site	Intern's Name
Caroline	F	42	White	BA	Office Associate	3	2	Maria
Shelby	F	27	White	AA	Program Assistant	1.5	1	Carly
Laura	F	32	White	MA	Education Outreach Coordinator	7	2	Renee

Note. F = Female; AA = Associate's Degree; BA = Bachelors' Degree; MA = Master's Degree

Caroline

Caroline was a 42-year-old female supervisor who worked for a departmental office at The University of Alabama. She held a bachelor's degree and served as an Office Associate for the past three years. In this position, Caroline assisted with administrative duties such as budgeting, program scheduling, event planning, and admissions.

Caroline had been working with the program as an employment internship site for two years. The student intern, Maria, was Caroline's fourth intern from the transition program. Prior to the collaboration with the transition program, Caroline did not have any other experiences working with children or adults with disabilities.

Shelby

Shelby was a 27-year-old female supervisor who worked for a therapy office that was located and associated with The University of Alabama. Shelby had her associate's degree and had been working for the therapy office for the past year and a half. During the study, her position at the therapy center was the Program Assistant. She was responsible for event planning, supervising work-study and graduate students, and office scheduling.

Although, the therapy office had been collaborating with the transition program for the past four years, Shelby had started serving as the supervisor this past year for the interns. She served as the main supervisor for the interns and was responsible for training and giving the intern tasks for complete. Shelby reported that she had some prior experience working with people with disabilities. She stated that she used to volunteered at a few childcare facilities where she was able to work with young children with various disabilities. However, she did not have any prior experience working with young adults with ID.

Laura

Laura was the third participant in the study. Laura was a 32-year-old female with her master's degree. During the study, Laura had worked for the past seven years as the Education Outreach Coordinator at a museum. In this position, she was responsible for planning, scheduling, and assisting with museum events and outreach. This includes grade-school

programming and campus-wide events. In addition, Laura was also responsible for several museum displays and changing out displays quarterly.

Laura had served as a supervisor for the transition program for the past two years. Laura reported that she had prior experience working in a pre-kindergarten classroom that had several children with disabilities during a practicum experience. However, Laura did not have any previous experience working with young adults with ID prior to collaborating with the transition program.

Nontarget Participants

This study also involved four nontarget participants. Nontarget participants were the young adults with moderate to severe ID between the ages of 18- to 21-years of age. Each nontarget participant attended the CrossingPoints Tier 1 Program on The University of Alabama campus. In this study, the nontarget participants (i.e., CrossingPoints students) are referred to as interns because they are completing semester-long internships with various businesses on campus and in the community. The four interns were recruited from students in the transition program that (a) received vocational training at a particular site that the supervisor is participating in the study and (b) needed assistance with communicating effectively with their supervisor. Four interns were recruited for attrition purposes and in case an intern declined to participate in the study.

During baseline, one of the four supervisors and interns were removed from the study. This was due to research procedures and fidelity of implementation issues. Thus, results of the study focused on the three supervisors and three interns that participated through intervention. Therefore, only three interns are described in more detail below.

The following demographic were collected about each intern: (a) gender, (b) age, (c) ethnicity, (d) disability diagnosis, (e) years in the transition program, (f) past vocational training, and (g) location of internship. Demographic and characteristic information are displayed in Table 2. Consent for the nontarget participants were obtained at the beginning of the school year with their parent/guardian. Nontarget participants assent were also obtained prior to data collection and parent/guardian were notified of the study.

Table 2

Demographics of the Interns

Intern	Gender	Age	Ethnicity	Disability Diagnosis	Years in the Program	Past Vocational Training	Location and Supervisor
Maria	F	19	Black	Multiple Disability	1	Office Assistant	Caroline at a Departmental Office
Carly	F	20	White	Autism Spectrum Disorder	2	Librarian Office Assistant Museum Office Assistant	Shelby at the Therapy Office
Renee	F	18	Black	Intellectual Disability	1	Animal Clinic	Laura at the Museum

Note. F = Female.

Maria. Maria was a 19-year-old female. During the time of the study, Maria was a first-year student in the program. Her first employment placement was with a professor on campus as an assistant. She was responsible for filing, organizing paperwork, and making copies. During the study, Maria worked for Caroline at a departmental office on campus. She expressed interest

in this position because she wanted to gain more confidence in her computer skills. Therefore, Maria worked primarily on typing notes and getting used to working on the computer.

Maria was receiving special education services for multiple disabilities. More specifically, this included other health impairment and intellectual disability. According to Maria's most recent evaluations, her IQ and achievement scores are below those of same-aged peers. On the Reynolds Intelligence Assessment Scale (Second Edition), Maria received a standard IQ score of 40 and a score of 40 on both sub scales for verbal and nonverbal. In addition, Maria received a standard score of 45 on the Kaufman Test of Educational Achievement (Third Edition). Her medical physician had also diagnosed Maria with Spastic Diplegic Cerebral Palsy. This has had adverse effects on her motor abilities including muscle control and coordination. She used a motorized scooter, crutches, or a walker to assist with her mobility.

Observational data showed that Maria could be very shy when communicating especially when asking for help and around people she is unfamiliar with. However, she had a lot of friends in the program and seemed most comfortable talking to her peers in the classroom. She is a strong writer and knows all of her personal information. According to her school records, Maria rarely missed school. She always came to school prepared and dedicated to learning. She reported that she wanted to gain a job in childcare or an assistant in an office.

Maria's first employment placement in the transition program was with a professor on campus as an assistant. She was responsible for filing, organizing paperwork, and making copies. During the study, Maria worked for a departmental office on campus. She expressed interest in this position because she wanted to gain more confidence in her computer skills. Therefore, Maria worked primarily on typing notes and getting used to working on the computer. When

assigned to a task, she would often wait to see if someone would do it for her and would typically ask for help first instead of trying to complete the task independently. At work, she was working on her fine motor skills in accessing and using the computer. In addition, she was also working on speaking to her supervisor and co-workers with more confidence as well as asking for help when she needs it.

Carly. Carly was a 20-year-old female with autism. She has been in the transition program for two-years. During the study, she chose to work at a therapy center on campus. She was responsible for organizing office materials, making ribbons for various awareness events, filing, and making buttons. Prior to this internship site, Carly was placed in a library to serve as a librarian assistant. She was responsible for organizing books, checking materials back into the library, and working on the display tables for the library. She also had an employment site in a museum where she worked on setting up for various educational events and displays. Carly also served as an office assistant one semester where she worked on her computer skills and filing.

According to Carly's most recent evaluations, she was receiving special education services for Autism Spectrum Disorder. In addition, Carly was diagnosed with generalized anxiety disorder and attention deficit/hyperactivity disorder (ADHD). On the Wechsler Adult Intelligence Scale (WAIS-IV), Carly received a standard IQ score of 71. Her verbal communication, perceptual reasoning, and working memory were borderline scores but her processing speed fell extremely low.

Carly had always been interested in history and had a talent for remembering dates and people throughout history. She was a strong reader and an excellent speller. However, Carly struggled with her communication, using an appropriate volume of voice, and displaying appropriate eye contact. Observational data showed that she tends to be more reserved, shy, and

often does not ask for help when she needs it. Carly also can become overwhelmed easily when given a task that she doesn't want to do. At work, Carly was working on using appropriate volume of voice and eye contact when addressing her supervisor and co-workers. She was also working on taking initiative and not becoming overwhelmed when given something to do that she doesn't want to do.

Renee. Renee was an 18-year-old female with an intellectual disability. During the time of the study, she was in her first year in the transition program. Her first internship site was at an animal shelter in the community where she was responsible for feeding the cats, filling water bowls, and cleaning. Renee's internship site during the study was at a museum. She was responsible for helping set-up for various educational events that the museum was hosting, assisting with displays, and organizing the educational materials.

Renee was receiving special education services for an intellectual disability. According to Renee's most recent evaluations, her IQ and achievement scores are below those of same-aged peers. On the Comprehensive Test of Nonverbal Intelligence (CTONI), she received a standard score of 57. In addition, she received a standard score of 63 on the Adaptive Behavior Assessment System (Second Edition). Evaluations also indicated that Renee struggles with her articulation of certain sounds and words making it difficult for others to understand her at times.

During the time of the study, Renee displayed appropriate social skills and had a lot of friends in the program. Renee loves animals and wants to work for a shelter one day. Observational data shows that Renee often struggles on comprehension and listening. When given multiple verbal instructions, Renee would struggle with remembering the tasks she was responsible for. She also tends to work too quickly without reviewing her work. At the museum, Renee was working on building her listening skills and following multiple verbal instructions to

complete a task. In addition, she was also working on reviewing her work and asking for help when she needed it.

Job coaches were also involved in the study. Job coaches were CrossingPoints staff members who were trained in vocational training and attended the employment sites with the CrossingPoints intern to assist them in learning the job. In this study, job coaches continued to assist each student intern during employment with their work tasks. They continued to provide prompts and assistance when needed. In addition to their job coaching responsibilities, job coaches were also responsible for audio recording the sessions and prompting the CrossingPoints intern to check-in or out with their supervisor at the beginning and end of the work shift. Job coaches were also responsible for signing their initials on the CICO Goal Sheet halfway through the work shift to provide feedback and reinforcement to the intern. This step of the study was also included to stay consistent with the five traditional steps of the CICO intervention.

Due to the low fidelity of implementation for the CICO intervention for the home component (Mitchell et al., 2017; Wolfe et al., 2016), the home component was incorporated in this study. The intern's transition teacher served as the home in the CrossingPoints classroom. Following each work shift the student intern took the CICO Goal Sheet back to the CrossingPoints classroom for their transition teacher to review and sign. This assisted the transition teacher in knowing how the student was progressing, what they still needed to work on, and provided an opportunity for the teacher to give feedback and reinforcement.

Prior to the start of the study, approval was granted by the Institutional Review Board (IRB) at The University of Alabama IRB #: 17-OR-425-R1, titled, "CrossingPoints: A Crimson Tide Model and Pipeline for Inclusive Higher Education." See Appendix A for approval form. This study followed the IRB guidelines so that all participants and nontarget participants'

confidentiality would be kept. This included giving sotto names, gaining consent and assent, and protecting the participants' rights to privacy.

Materials

The materials in this study consisted of a CICO Goal Sheet (see Appendix B), a CrossingPoints iPad with the Voice Memo app, clipboards, access to UA Box and Excel, and the CICO observation data sheet (see Appendix C). Other materials included: consent form for participants (see Appendix D); assent form for CrossingPoints intern (see Appendix E); parent notification form for CrossingPoints intern (Appendix F); demographic survey for participants (see Appendix G); a fidelity checklist (see Appendix H; adapted from Swoszowski, 2010). In addition, training guides for the participants (see Appendix I), job coaches (see Appendix J), and for interobserver agreement (see Appendix K) as well as social validity questionnaires (adapted from Crone et al., 2010) for participants (see Appendix L), CrossingPoints interns (see Appendix M), and CrossingPoints transition teacher (see Appendix N).

Instrumentation

A multiple-baseline design across participants was used to determine the efficacy of the CICO intervention in the employment setting. The following section discusses in detail the measures and steps that were followed to ensure experimental control. The recommendations for a single-subject study, suggested by Ganz and Ayres (2017), was followed as well as the standards that are addressed by the CEC (2014) for single-subject studies.

Independent Variable

CICO is an evidence-based practice for addressing problem behaviors particularly in the school setting (Everett et al., 2011). But this well-established intervention has never been implemented in the employment setting to assist a supervisor in giving performance feedback to

an employee or intern with a disability. The following study used the traditional five-steps of CICO: (a) check in with facilitator, (b) use goal sheet or behavior monitoring sheet, (c) check out with facilitator, (d) home component, and (e) return signed form the next day to the facilitator (Mitchell et al., 2017; Swoszowski et al., 2013b). The supervisor served as the facilitator and the individual receiving CICO was the student intern with ID. The intern was required to check-in with the facilitator (i.e., supervisor) before the work shift. The supervisor and intern with a disability then completed the CICO Goal Sheet before the work shift. This included the supervisor writing down the tasks that needed to be completed that workday. Following check-in, the student intern got started and checked-off tasks on their CICO Goal Sheet as he or she completed them during the work shift. Along with the job coaches other coaching responsibilities, the job coach also monitored the student intern's use of the CICO Goal Sheet. Halfway through the work shift, the job coach initialed the CICO Goal Sheet and provided any prompting and reinforcement needed to the intern in regards to using the sheet.

The student intern was required to check-out with the supervisor at the end of the work shift. The supervisor and intern with a disability went over the CICO Goal Sheet and discussed the overall performance of the intern including identifying what the intern exceeded on, still needed to improve on, and an overall goal for the following day. Lastly, the supervisor and intern signed and dated on the bottom of the goal sheet.

The home component in this study was the intern with a disability taking their CICO Goal Sheet to their transition teacher and having them sign the form. This varies from the traditional home component of getting the parent involved due to age of the individuals with disabilities. The student intern would then return the signed CICO Goal Sheet to their supervisor the next day.

The CICO Goal Sheets were printed-paper copies instead of an electronic version of the goal sheet for easier access for both the supervisor and intern. The CICO Goal Sheet was designed specifically for this study and reflects a simple and yet, informative sheet with only the needed information. The goal sheet was designed this way for two reasons. The first was to not overwhelm the supervisor or the student intern. The second reason was to try to avoid research fatigue. Research fatigue occurs when an individual participating in a study becomes tired and loses their motivation to participate resulting in low engagement. This can occur when a study asks for too much time and effort from participants such as long and time consuming surveys (Way, 2013). As such, CICO Goal Sheet was designed with brevity in mind. See Appendix B for the CICO Goal Sheet.

Dependent Variable

The dependent variable was the rate of performance feedback statements given by the supervisor to an intern with a disability during CICO sessions. Performance feedback was defined as a statement by an employer praising or giving constructive feedback that explicitly identifies a work behavior of the employee (Holderness et al., 2017). For example, “Michael, I really liked how you appropriately assisted the customer when they asked you for help.” Rate was used to measure performance feedback. Rate was defined by the number of performance feedback statements divided by the duration (in minutes and seconds) of the CICO session. For this study, a session referred to both the check-in and check-out procedures during the work shift. For example, if a supervisor gave 18 performance feedback statements during a six-minute CICO session, the rate would be three performance feedback statements per minute.

Data Collection

Continuous measurement was used throughout the study to assist in determining how each participant was responding to the intervention and to assist in data-driven decision making. In each condition, direct systematic observational recording was used to collect the rate of performance feedback statements. Rate accounts for sensitive behavior changes and allows for an easy comparison of the behavior across recorded sessions (Gast & Ledford, 2014). The rate was calculated by the number of performance feedback statements divided by the duration (in minutes and seconds) of the CICO session. For example, if a supervisor states four performance feedback statements during a two-minute session then the rate for the session would be two performance feedback statements per minute. To measure rate, the observer collected the duration of each session and tallied the number of performance feedback statements. Duration was collected using a stopwatch. For ease of calculation, seconds were rounded to the nearest minute or thirty-seconds.

Each CICO session was audio recorded on a CrossingPoints iPad to help assist with data collection and interobserver agreement (IOA). Some sessions were not audio recorded due to iPad issues or recording mishaps. Therefore, only successfully recorded sessions were included in the results. After every session, the audio recording was uploaded onto a secure folder on UA Box. Prior to the study, each job coach was trained using the training guide in Appendix J on the prompt in each phase and how to record and handle the data. All data collected on paper was kept in a lock filing cabinet in the CrossingPoints office and digital files were kept on a secured shared folder on UA Box that was password protected in a portal that utilized two-factor authentication.

Data were collected concurrently and continuously across the target behavior and participants. Appendix C shows the data collection sheets that were used to collect data during CICO sessions throughout baseline, intervention, and maintenance. The primary investigator reviewed each audio recording and collected data using the CICO data sheets. Furthermore, across participants and conditions, the researcher collected procedural fidelity data using a checklist (see Appendix H; adapted Swoszowski, 2010) to ensure that all steps in each phase were implemented correctly. Procedural fidelity was also assessed on the accuracy of the supervisor completing the CICO Goal Sheet. Procedural fidelity was collected using an online survey through Qualtrics (2019).

Prior to the start of the study, demographic and employment characteristics of each supervisor were collected using an online survey software called Qualtrics (2019). These questions addressed the following: (a) gender, (b) age, (c) ethnicity, (d) occupation, (e) number of years at their current job, (f) highest degree earned, (g) number of years working with the transition program, and (h) experience working with people with disabilities. In addition, three open-ended questions were included. The three questions were (a) describe how you communicate feedback to an employee with a disability, (b) what challenges might there be in communicating feedback to an employee with a disability, and (c) what are some ways you approach these challenges of communicating feedback to an employee with a disability? Following the completion of the study, the same three open-ended questions were included on the social validity questionnaire. Including these questions both before and after the intervention, allowed the researcher to compare how the supervisor identified and described communicating feedback and if the intervention had any impact on how they conceptualized their communication of feedback.

The social validity questionnaire (adapted from Crone et al., 2010) was used to measure the satisfaction of CICO for each supervisor (see Appendix L), the CrossingPoints interns (see Appendix M), and the transition teacher (see Appendix N). Each questionnaire was composed of nine-items that utilized a Likert-scale. Finally, the social validity questionnaire also included a space for additional comments, if the supervisor needed it. Social validity questionnaires were completed using an online survey software called Qualtrics (2019).

Steps to Minimize Threats to Validity

To establish experimental control, CICO was systematically introduced across participants in a time-lagged manner. Staggering the intervention helped to control for confounding variables. By staggering the intervention across tiers, internal validity threats for maturation, history, and testing were evaluated. Ideally for internal validity, data would show abrupt and immediate change when the intervention was introduced in each tier. To minimize threats to internal validity, careful research notes were consistently taken throughout the study to help explain any variability in the data for history effects. Although, a multiple-baseline design across participants only accounts for inter-subject replication, the generality of findings in this study increased because the intervention was implemented across three participants (Gast & Ledford, 2014).

In addition to internal validity, social validity was addressed by providing an opinion survey at the end of the study to obtain the supervisors' views of the intervention. The student intern with a disability as well as the transition teacher also completed the social validity questionnaire. Further, this study considered ecological validity by implementing the intervention in real-world settings (i.e., an employment site). All of these steps were needed to

minimize threats to validity and were considered throughout the study to establish experimental control (Gast & Ledford, 2014).

Data were continually graphed to analyze the amount of variability and to determine when it was appropriate to move onto the next condition. Graphs were completed in Excel. Conditions were changed only when the data displayed stabilization in level and trend (i.e., a minimum of three consecutive trends in the right direction) (Gast & Ledford, 2014).

Interobserver Agreement

Before data collection, a second observer was trained on the data procedures. Training also included expectations such as how to store the audio recordings, data collection sheet, and the fidelity of implementation checklist. See Appendix K for training guides. During training, the researcher and second observer listened to several pre-made demonstrations of audio recordings of CICO sessions and independently recorded the rate of performance feedback using the CICO Observation Sheet and completing the fidelity checklist. After each demonstration, results were compared. The researcher and second observer had to reach an IOA of 85% or above for three consecutive trials before the conclusion of training (Gast & Ledford, 2014).

During all stages of data collection, IOA between the two independent observers were recorded for at least 25% of the data for each participant and across conditions. Percentage agreement must be 85% or above to account for instrumentation and procedural infidelity. IOA was calculated by using event recording with exact agreement (Gast & Ledford, 2014). For event recording, also known as the gross method, the researcher and the second observer both listened to the same audio recordings of CICO sessions and recorded the duration of the session, frequency of performance feedback statements, and the time stamp that statement was made on the CICO Observation Sheet (Appendix C). A time stamp of the audio recording was used to

determine that the two researchers agreed on the exact statement. When comparing time stamps, an interval of ten-seconds was used. Point-by-point agreement was used to calculate IOA by dividing agreements by the total number of agreements plus disagreements and multiplying by 100% (Gast & Ledford, 2014).

Procedural fidelity was assessed for 25% across all phases. Adapted from Swoszowski (2010), a fidelity checklist (see Appendix H) was used to assess the accuracy of implementation. Fidelity also was assessed on the accuracy of the supervisor completing the CICO Goal Sheet. Dividing the total number of observed steps by the total number of expected steps and multiplying by 100% calculated fidelity. A second observer conducted 25% of the fidelity checks across participants and conditions (Gast & Ledford, 2014). The fidelity checklists were completed using Qualtrics (2019).

Research Procedures

A multiple-baseline design across participants was used to determine if a functional relationship existed between CICO and the rate of performance feedback statements given to an intern with a disability by a supervisor. The procedures that were followed during the study are described in greater detail below.

Baseline

After recruiting and gaining consent from participants as well as assent from the CrossingPoints student interns and signatures on the parent notification forms, baseline (A) data were collected in each of the participants' employment settings. Using a multiple-baseline design requires that all of the participants start baseline during the same day or session (Gast & Ledford, 2014). Therefore, all of the participants started baseline during the same work session. At the beginning of the work shift, the intern with ID was instructed by the job coach to, "Go check in

with your supervisor.” Without giving the supervisor or intern with ID any additional instructions, data were collected by the job coach by audio recording the interaction on a CrossingPoints iPad. Similarly, data were collected at the end of the work shift, by the job coach instructing the intern with ID to, “Go check out with your supervisor.” Baseline data across the participants needed to be stable in level and trend for at least three consecutive sessions before the invention was introduced in the first tier. The job coach uploaded the audio recordings daily on a secured folder on UA Box for the primary investigator to collect data further on the interaction. Refer to the instrumentation section for specific data collection procedures.

Training for CICO

The CICO intervention was systematically introduced into each tier in a time-lagged manner (Gast & Ledford, 2014). Therefore, prior to the intervention phase and following at least three consecutive and stable data entries, the supervisor received training on CICO. Trainings took place within one-week for each participant following baseline and before starting intervention. Trainings were held at each employment setting with the supervisor. The supervisor was taught how to use the CICO Goal Sheet (see Appendix B) along with the rationale of why performance feedback is important in the training of individuals with ID. The CICO Goal Sheet helped to serve as a guide for the supervisor in giving the individual with a disability task direction and feedback. The researcher used role-playing, examples, and nonexamples of how to implement the CICO intervention. See Appendix I for the training materials that were used. Trainings with each supervisor lasted at least 15-minutes but the exact length of each training depended on the mastery of the supervisor.

At the end of the training, the researcher asked the supervisor to role-play the procedures for both the check-in and check-out sessions. During the role-play, the researcher provided the

supervisor with guidance on how to complete the CICO Goal Sheet and answered any questions the supervisor may have had. The training was also audio recorded so that a second observer could collect on the fidelity of the training. Following training, the supervisor was asked to complete a quick demographic survey using Qualtrics (2019).

Intervention

CICO was introduced systematically into each tier in a time-lagged manner (Gast & Ledford, 2014). After receiving the CICO training, the first participant entered the intervention phase once a stable trend in baseline was met for three consecutive sessions. The second and third participant stayed in baseline until stability in the intervention was established (according to level and trend in the previous tier).

During the intervention (B) phase, the standard five components of CICO were preserved (Swoszowski et al., 2013b). The intern with ID received the same prompting as discussed in the baseline procedures from their job coach. Prior to the start of the work shift, the intern with ID was required to check-in with their supervisor. The intern was given a clipboard with the CICO Goal Sheet and was explained that they must bring the clipboard to and from work with them and hand it to their supervisor when they arrived at work. The supervisor then went over the CICO Goal Sheet and discussed the tasks the student intern needed to complete that work shift. The supervisor also explained to the intern with ID how to use the task list to check off tasks they completed during the work shift. During the work shift, the job coach provided additional instruction on how the intern was performing and assisted if the intern needed help. Halfway through the work shift, the job coach initialed on the CICO Goal Sheet to ensure the student intern was doing what they were supposed to and that they were checking off their tasks as they completed them. At the end of the work shift, the intern received the prompt from the job coach

to check out with their supervisor. The intern with ID would then find their supervisor and hand them their clipboard with the CICO Goal Sheet. During check out, the supervisor reviewed how the intern performed on the tasks and discussed his or her overall performance. The supervisor and the intern also decided on an overall goal for the next work shift. Finally, the intern then took the form back to their transition teacher to review and sign. The intern then returned the clipboard with the signed form to the supervisor the next work shift.

Data during intervention was collected as described in the instrumentation section. The duration of the sessions was calculated and the amount of performance feedback statements during CICO sessions was tallied. The average rate of performance feedback statements for each participant during baseline decided his or her criterion level during intervention. Criterion levels were twice the average of their performance during baseline.

Maintenance

Finally, maintenance data were collected for each participant two-weeks following the end of the intervention phase. Fading was not implemented in this study because the CICO intervention is a reasonable accommodation that can be applied with little effort on businesses and supervisors. Social validity was assessed within one-week following the conclusion of all phases of data collection.

Data Analysis

A multiple-baseline design relies on visual analysis of data to make informed decisions and to determine how each participant is responding to the intervention. Decisions for condition and phase changes were made based on graphical displays of the data using Excel. Line graphs were used to plot the rate of performance feedback statements during each CICO session. Line graphs helped to assess when the data are stable and showing a trend for three consecutive days

and when the participants could change from baseline to the intervention phase. Line graphs also assisted with monitoring the effects of the CICO intervention and helped the researcher decide if they needed to maintain or modify the intervention. The *y*-axis for each participant displayed the rate of performance feedback comments while the *x*-axis displayed the recorded sessions in consecutive order. The maximum units on the *x*-axis and *y*-axis changed based on the data but stayed consistent across participant graphs.

Following each CICO session, data were graphed per participant. Typically, CICO sessions occurred three times per week for each participant. For ease of viewing the data, only recorded sessions were graphed. Any missing recording sessions were due to iPad issues, the supervisor was unavailable, the intern was absent, or recording mishaps. Maintenance data were collected two-weeks after all participants had completed intervention.

Within Conditions

For within conditions, the condition length was monitored to determine how long each participant stayed in each condition. A minimum of three consecutive sessions of CICO was required in each condition to determine level stability and data trend. If more variability were present then the participants would stay in the condition longer until the level was stable. For the intervention phase to conclude, participants had to meet a criterion level of twice the average of their performance during baseline. Data-driven decisions for within conditions were based on the level, trend, and data patterns for each condition and for each participant.

Between Adjacent Conditions

Only data in adjacent conditions could be compared for each participant when using a visual analysis of graphical data. When analyzing between adjacent conditions, only one variable

could be changed at a time. Trend direction was also monitored closely between-adjacent conditions (Gast & Ledford, 2014).

Furthermore, the researcher analyzed the percentage of non-overlapping data values. To indicate the largest impact of an intervention, a researcher would hope to observe a high percentage of non-overlapping data. In addition, the study would be stronger if the data displayed a gradual and positive change in the rate of performance feedback statements from baseline to intervention phase. This would also indicate a stronger demonstration of experimental control and the effectiveness of the intervention.

Across Conditions

For across conditions, the researcher analyzed that baseline levels were maintained until the CICO intervention was introduced to each participant. Furthermore, the researcher examined that the trend and level improved following the introduction of CICO. Once all the guidelines for within, between, and across conditions had been met than the visual analysis of graphical data were complete.

Assumptions of the Study

As with any study, there were several assumptions that were presumed before the study began. Prior to starting this study, I assumed the supervisor's willingness to participate. The intervention would take some time and effort from supervisors. Supervisors would have to be willing to meet with the student intern with a disability before and after every work shift for at least a few minutes and be willing to participate in training. I assumed that the supervisors would be available before and after the work shifts and that they saw the value of working directly with their employees and interns to provide feedback. Although, this study required minimal effort from the supervisors, many of them were already loaded with other responsibilities. I also

assumed that the supervisors would be comfortable enough to be audio recorded and that consent was only needed from the supervisor and not the workplace. Additionally, CICO was selected as the intervention for this study. This was based on past research findings using CICO and the assumption that CICO would be more or equally as effective as other interventions.

Limitations of the Study

There were several limitations that were addressed prior to the start of this study. Discussing limitations prior to the study helped to guide how I approached the study to overcome these potentially confounding influences.

Participants

Supervisors. The study took place during vocational training in sites that are familiar with the transition program and working with young adults with disabilities. A potential limitation was the supervisors varying past experiences working with employees with disabilities. This is something I kept in mind when I selected the supervisors I asked to participate in the study. Ideally, I wanted participants with similar background experiences. Furthermore, the supervisor's willingness to participate in the study could have been a potential issue. Supervisors had to commit to providing more time and support to the intern with a disability. If a supervisor went out of town or was absent for any length of time this could have been a potential threat to experiential control. Expectations and requirements to participate in the study needed to be explicitly explained without giving away what I was measuring.

Student interns with disabilities. Another possible confounding influence was prior job training experience the student intern with ID had received. All of the student interns attended a transition program based on their work abilities and post-school goals in competitive employment. Therefore, the interns might have shown more work motivation and had more

experience than individuals in other settings. In addition, I had to be mindful of the strengths and weaknesses of each student intern with ID in their communication skills. Results could have varied if one of the interns struggles more with reciprocal communication than the others.

Design

With any method of research, there are going to be limitations to the design. Single-subject does not allow for randomized trials. In this study, participants were selected based on direct observations. Sample size was also relatively small to increase the ability to control for threats to internal validity. However, generalizable inferences could be increased through systematic replication of single-subject studies. Additionally, single-subject only allows for one dependent variable to be measured. I could also collect data on nontarget behaviors but I could only make causal claims related to the dependent and independent variable. In this study, the focus of the dependent variable lies with the supervisor but nontarget behaviors were also observed and collected on the intern with a disability (e.g., communication skills, task completion).

Summary

This chapter explained the design of the study and provided in greater detail about the participants, instrumentation, data collection techniques, procedures, and data analysis that were used to complete this study. Chapter IV presents the research findings.

CHAPTER IV: RESEARCH FINDINGS

Baseline results across all participants indicated a low rate of performance feedback statements at the beginning and end of work shift for the interns with ID. Majority of baseline sessions revealed that the participants did not give any performance feedback to the interns with ID. During baseline, participants gave a mean rate of .22 performance feedback statements (range = 0-3) per minute. All of the participants improved their rate of feedback statements immediately following the introduction to CICO. During intervention, the participants mean rate was five performance feedback statements (range = 3.3-6.8) per minute during CICO sessions. All of the participants reached stable levels and trends before moving into maintenance. Maintenance data indicated that all of the participants continued to provide performance feedback statements long after the intervention was introduced.

The visual analysis of data indicated that the use of CICO was highly effective in increasing the rate of performance feedback comments from a supervisor to an intern with ID during vocational training. Figure 2 shows the visual analysis results across all of the participants. The *y*-axis shows the rate of performance feedback statements per minute while the *x*-axis displays the recorded CICO sessions. Rate accounted for sensitive changes in the data. The rate was calculated by the number of performance feedback statements divided by the duration (in minutes and seconds) of the CICO session. For example, if a supervisor states four performance feedback statements during a two-minute session then the rate for the session would be two performance feedback statements per minute. Any missing recording sessions were due

(a) to iPad issues, (b) the supervisor was unavailable, (c) the intern was absent, or (d) the occurrence of a recording mishap.

Across all participants and phases, the percentages of non-overlapping data were 96%. The percentages of non-overlapping data indicate that the CICO intervention had a significant impact on the target behavior (i.e., rate of performance feedback statements) of the participants. The visual analysis of the data also showed a positive change in level and trend for each participant following the implementation of the intervention. The results of this study provide strong evidence that there is a functional relationship between the CICO intervention and the rate of performance feedback statements per minute given by a supervisor to an intern with ID.

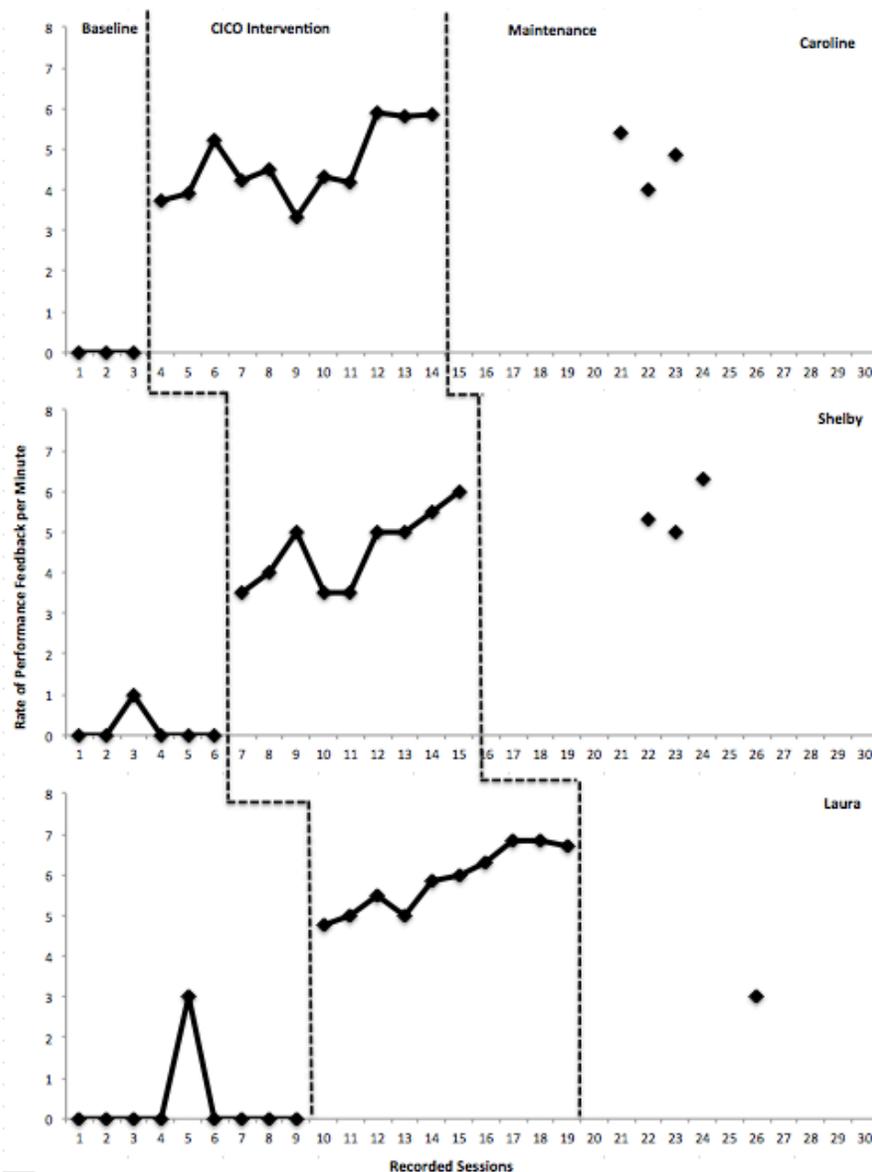


Figure 2. Visual analysis of results. Note: Each visual line graph represents a participant. The dotted line indicates phase changes and shows the introduction of the intervention in a time-lagged manner. The x-axis is the rate of performance feedback statements per minute while the y-axis denotes recorded sessions. Each dot represents a session.

During all stages of data collection, interobserver agreement (IOA) and procedural fidelity between the two independent observers were recorded for 36% (range = 35%-38%) of the data across participants and conditions. Percentage agreement required 85% or above to account for both instrumentation and procedural infidelity. The average agreement across all participants for IOA was 94%. Across all phases, the mean IOA for Caroline was 91% (range =

86-100%) while the mean for Shelby was 95% (range = 87-100%). Laura's mean IOA was 95% (range = 87-100%).

The mean procedural fidelity across participants and phases was 96%. Caroline's mean procedural fidelity was 97% (range = 94-100%). The mean procedural fidelity for Shelby was 96% (range = 88-100%). While Laura's mean fidelity was 95% (range = 88-100%). Overall the fidelity of CICO training across the three participants was 100%. On average, trainings were 23-minutes long and took place in each of the participant's offices. Fidelity also was collected on the completeness of the supervisor filling out the CICO Goal Sheet. On average the CICO Goal Sheet was completed in its entirety for 86% of fidelity checks. The fidelity of the home component of CICO also was collected. The home component in this study was the transition teacher signing the CICO Goal Sheet. The fidelity of the home component was 100% across all participants.

Caroline

During baseline, Caroline did not provide any performance feedback statements for three baseline sessions. Caroline was the first participant to receive training and intervention. She received a 16-minute training in her office within one-week following the conclusion of baseline. After the introduction of the intervention, Caroline's rate of performance feedback statements immediately improved. During intervention, Caroline gave a mean rate of 4.6 performance feedback statements (range = 3.3-5.9) per minute during CICO sessions. She reached the pre-established criterion leveling after three sessions. Visual analysis illustrates that after the introduction of the CICO intervention, Caroline's rate of performance feedback statement immediately increased. Furthermore, the percentage of non-overlapping data for Caroline between baseline and intervention was 100%. This indicated that the intervention was highly

effective for Caroline. Maintenance data were collected two-weeks after intervention had concluded. Her mean rate during maintenance was 4.7 performance feedback statements (range = 4-5.4). This confirms that not only was the intervention successful but the intervention continued to work for Caroline long after being introduced to the intervention. Caroline's data confirms that the CICO intervention was effective in increasing her rate of performance feedback statements per minute.

Shelby

Shelby stayed in baseline for six sessions. Her mean rate of performance feedback statements during baseline was .16 (range = 0-1). During the third session, Shelby gave one performance feedback statement to her intern with ID within one-minute causing a spike in baseline results for that session. Following baseline, Shelby received a 29-minute training in her office on how to implement CICO. After being introduced to the intervention, Shelby's performance immediately improved. Intervention data indicated that Shelby's mean rate of performance feedback statements during CICO sessions was 4.5 (range = 3.5-6) per minute. She also reached the pre-established criterion leveling after three sessions. The percentage of non-overlapping data for Shelby between baseline and intervention was 100%. Shelby met the pre-established criterion and stability levels needed to move into maintenance after session 15. Although, during intervention Shelby was showing a positive trend during sessions 13, 14, and 15, she moved into maintenance due to time constraints. Maintenance data were collected two-weeks after the intervention had concluded. Shelby's performance during maintenance improved compared to her performance during intervention. On average, Shelby's mean rate of performance feedback statements during maintenance was 5.5 statements per minute (range = 5-6.3). Maintenance data confirmed that the intervention was still effective in increasing the rate of

performance feedback long after the intervention had been introduction. The visual analysis for Shelby shows that the CICO intervention was highly effective in increasing her rate of performance feedback statements.

Laura

Laura stayed in baseline for nine sessions. Laura's mean rate of performance feedback comments during baseline was .33 (range = 0-3) per minute. There was a spike in Laura's baseline data for session five. During this session, she gave her intern with ID three performance feedback statements within one-minute. After baseline data were collected, Laura received training in her office for 23-minutes on the use of CICO. During intervention, Laura's mean rate of performance feedback increased to 5.8 statements (range = 4.7-6.8) per minute during CICO sessions. Visual analysis illustrates that after the introduction of the CICO intervention, Laura's rate of performance feedback statement immediately increased. She reached the pre-established criterion leveling after three sessions. Laura was only available for one data point during maintenance prior to the end of employment internships. Still, Laura's performance during one recorded maintenance session (rate = 3) was still better than majority of the data collected during baseline. Between baseline and intervention, Laura had 100% non-overlapping data. However, due her maintenance data, Laura's percentage of non-overlapping data were 90%. Even with the addition of maintenance, her percentages of non-overlapping data still provide strong evidence of the effectiveness of the intervention. Additionally, the visual analysis shows a steady incline for Laura during intervention and confirms that the intervention was highly effective for her.

Social Validity

The social validity questionnaires were completed one-week following the conclusion of maintenance for each participant. Social validity was completed with supervisors, the student

interns, and the transition teacher. Overall, the use of CICO during vocational training was highly regarded.

Supervisors

All three supervisors indicated that the CICO intervention was helpful in providing feedback to interns with ID. Social validity results show that the supervisors felt more comfortable with the individual with ID following the intervention and they saw the benefit of meeting with the intern before and after work. All of the supervisors indicated that the one-on-one training was beneficial and if they had the opportunity, they would participate in the intervention again. Caroline also add on her social validity questionnaire that, "...the goal sheets were a good guideline and it was rewarding to have the student work toward her goals and reach them, too." See Table 3 for results of the social validity questionnaires from supervisors.

Table 3

Social Validity Results from the Supervisors

Questions	Strongly Disagree (<i>n</i> = 0)	Somewhat Disagree (<i>n</i> = 0)	Agree Nor Disagree (<i>n</i> = 0)	Somewhat Agree (<i>n</i> = 5)	Strongly Agree (<i>n</i> = 22)
The CICO intervention was worth the time and effort.					3
The one-on-one training was helpful in discussing disability and ways to help support vocational training for young adults with disabilities.					3
The CICO goal sheet was easy to complete.					3
The CICO goal sheet served as a guide for giving the individual with a disability feedback.				1	2
I feel more comfortable talking to the individual with a disability following the intervention.				2	1
I feel more comfortable giving feedback (both positive and negative) to the individual with a disability following intervention.					3
I saw the benefit of meeting with the individual with a disability before and after work.					3
The performance of the individual with a disability improved following the intervention.				2	1
If I had the opportunity, I would participate in the CICO intervention again.					3

Note. CICO = check-in/check-out; *n* = number of participants.

Student Interns

The student interns with ID completed the social validity questionnaires following their last day at their employment internship sites. All of the interns responded to the survey with positive feedback to all nine-questions. See Table 4 for results. The interns agreed that the use of

the CICO intervention helped them feel more comfortable talking to their supervisor, they indicated that they enjoyed getting regular feedback from their supervisor, and they said they would want to participate in CICO again. Interns also believed the intervention improved their work performance.

Table 4

Social Validity Results from Student Interns

Questions	Agreed (<i>n</i> = 27)	Disagreed (<i>n</i> = 0)
The CICO intervention was worth the time and effort.	3	0
The CICO goal sheet was helpful to follow my progress in my job.	3	0
The CICO goal sheet was easy to complete.	3	0
I liked receiving feedback form my supervisor every day.	3	0
I feel more comfortable talking to my supervisor following the intervention.	3	0
Following the intervention, I feel more comfortable asking my supervisor for help or if I have a question.	3	0
I improved my work performance by meeting with my supervisor before and after work.	3	0
My performance improved following the intervention.	3	0
If I had the oppportunity, I would participate in the CICO intervention again.	3	0

Transition Teacher

Social validity results from the transition teacher indicated that they enjoyed using the CICO intervention. Overall, she rated the intervention high for all nine-questions on the survey. See Table 5 for results. The transition teacher found that the intervention was useful in knowing how the student intern performed at work. The teacher stated in the comment section that she wished the supervisors had provided even more constructive feedback on the CICO Goal Sheets.

However, she also commented, “It was still valuable in terms of getting a snapshot of what is going on when we are unable to monitor. I also like being able to occasionally add a comment. I think this sort of two-way communication is more valuable and informative.”

Table 5

Social Validity Results from Transition Teacher

Questions	Strongly Disagree (<i>n</i> = 0)	Somewhat Disagree (<i>n</i> = 0)	Agree Nor Disagree (<i>n</i> = 0)	Somewhat Agree (<i>n</i> = 3)	Strongly Agree (<i>n</i> = 6)
The CICO intervention was worth the time and effort.				1	
The CICO goal sheet was helpful to keep up-to-date on the performance of each individual with a disability.					1
The CICO goal sheet was easy to complete.					1
The CICO goal sheet served as a guide for giving the individual with a disability feedback.				1	
The intervention helped me (the teacher) provide feedback to the individual with a disability about how they can improve their performance.					1
Following the intervention, I feel more informed on what the individual with a disability is doing at work and areas they are exceeding as well as things they still need to work on.					1
I saw the benefit of meeting with the individual with a disability after work.					1
The performance of the individual with a disability improved following the intervention.				1	
If I had the opportunity, I would participate in the CICO intervention again.					1

Note. CICO = check-in/check-out; *n* = number of participants.

Challenges in Communicating Feedback

Prior to implementing the CICO intervention, supervisors were asked to discuss how they communicate feedback, the challenges they might face in communicating feedback, and how they overcome those challenges when communicating with an employee with a disability. The supervisors were asked the same questions following the use of the CICO intervention. This allowed for the responses to be compared and to determine if the CICO intervention had any affects on how the supervisors answered the questions. Overall, the supervisors were much more specific in answering the three questions after intervention. Table 6 shows each supervisor's response to the three questions before and after the intervention.

Table 6

Supervisor Responses to Open-Ended Questions

Questions	Response Before the CICO Intervention	Response After the CICO Intervention
Describe how you communicate feedback to an employee with a disability.	<p>Caroline: I feel that I provide feedback to an employee with a disability the same as I would with an employee without a disability. I would, of course, adjust as needed depending on the level of support needed.</p> <p>Shelby: As a supervisor, I do my best to communicate clearly and simply, as well as provide positive feedback. When improvements are needed, I will choose my phrases carefully in order to give clear instructions on how to improve, but to also praise for taking time to attempt the task at hand and for willingness to improve tasks/skills.</p> <p>Laura: I speak with them directly and work with them to find ways to improve their output on a task.</p>	<p>Caroline: I would let the student know what my goals were for the student for the particular day, ask the student what her goals were for a particular day, and then we would agree on goals together. At check out, daily goals were discussed with job coach as well as student.</p> <p>Shelby: We communicated both verbally and through the check-in/check-out sheet; my employee also communicated with my back-up supervisor for times when I was not in the office during work hours.</p> <p>Laura: If there were any difficulties with the tasks, I ask where they had difficulties and have a conversation about how to remedy them.</p>
What challenges might there be in communicating feedback to an employee with a disability?	<p>Caroline: Well, depending on the employee's disability, I would adjust the communication style. I think with any new employee, it takes time to adjust to new personalities, job skills, etc.</p> <p>Shelby: If an employees disability causes the employee to be mostly non-communicative, it can be challenging to understand the employee's feelings and responses about his/her/their assignments or how to improve skills. Employees with disabilities should feel safe discussing work questions and issues with his/her/their supervisor in order to create a successful working relationship.</p> <p>Laura: The employee might not ask questions if they do not understand the task, the employee might not take their</p>	<p>Caroline: There were some days when student had a hard time staying focused or just was having a bad morning. We would modify goals if needed and also the student was given the option to take a short break when needed.</p> <p>Shelby: My employee sometimes misunderstood feedback. However, through developing rapport and discussion, we were able to work through the issues and communicate with one another better.</p> <p>Laura: There could be a method of communication error. The employer might not be communicating in a way that is effective with the employee's learning style or abilities.</p>

Questions	Response Before the CICO Intervention	Response After the CICO Intervention
<p>What are some ways you approach these challenges of communicating feedback to an employee with a disability?</p>	<p>time with the task to complete it appropriately, the employer might not communicate instructions in a way that is most effective with the employee's communication style.</p> <p>Caroline: I am still learning, on a daily basis, different ways to communicate with employees with disabilities. As with anything new, repetition and being consistent with new skills is very important.</p> <p>Shelby: These challenges can be resolved by finding methods that reach the employee effectively so the supervisor can develop trust and rapport with the employee. Supervisors should learn what methods are most effective when communicating with the employee, and these methods can be individualized to each employee's needs.</p> <p>Laura: Ask the employee directly if they understand the task at hand and if they have any questions, guide the employee through the first part of the task to make sure they are comfortable with it, communicate with a variety of communication styles (instructions in writing, verbal instructions, video instructions, picture instructions).</p>	<p>Caroline: As stated earlier, the option of taking a short break to clear the mind was in place when needed. I would sometimes stop in the office to see how things were going and offer assistance if needed.</p> <p>Shelby: Occasionally my employee would misinterpret the job assignment given, or the employee would be too shy/nervous to speak with me openly. As time passed, we were able to find commonalities between us and have both work and non-work related discussions. I also learned to choose encouraging and supportive language that was easy to follow so that I communicated my requests efficiently and positively.</p> <p>Laura: I speak to the employee directly and with patience. I try to approach instructions and directions for a task with written and visual components to help ensure the best understanding of what is expected.</p>

Communicating Feedback

The first open-ended question was: Describe how you communicate feedback to an employee with a disability. Prior to intervention, all of the supervisors were pretty vague in discussing how they provided feedback. All three related their answers to giving some type of verbal feedback. For instance, Laura stated, “I speak with them directly and work with them to find ways to improve their output on a task.” However, after the intervention, two out of three related the question back to the intervention and how the CICO intervention assisted them with their communication. After the intervention, all three supervisors were able to discuss more specifically how they communicate feedback. For example, Shelby stated that she “...communicated both verbally and through the check-in/check-out sheet” with her intern, Carly.

Prior to the intervention, Caroline discussed that she would provide feedback to an employee with a disability the same as she would an employee without a disability. However, after the CICO intervention, Caroline discussed how she relied on goal setting in providing feedback to her intern, Maria. Caroline shared, “I would let the student know what my goals were for the student for the particular day, ask the student what her goals were for a particular day, and then we would agree on goals together.”

Challenges in Communicating Feedback

The second question that each supervisor was asked to answer was what challenges might there be in communicating feedback to an employee with a disability? Before being introduced to the intervention, all of the supervisors identified challenges that could be linked with the stigma associated with the labeling of disability. For example, Shelby stated, “If an employee’s disability causes the employee to be mostly non-communicative, it can be challenging to understand the employee's feelings and responses about his/her/their assignments.” Shelby went

onto discuss that employees with disabilities should feel “safe” asking their supervisor questions. However, after intervention, Shelby discussed how her feedback was “sometimes misunderstood” but “...through developing rapport and discussion, we were able to work through the issues and communicate with one another better.”

Before the CICO intervention, Laura identified two challenges related to the individual with a disability and one challenge related to the employer or supervisor. However, after intervention, Laura related all challenges back to the supervisor. She stated, “The employer might not be communicating in a way that is effective with the employee's learning style or abilities.” After intervention, supervisors discussed how they modified their communication in order for the intern with a disability to better understand their feedback.

Approaches to Address Challenges in Communicating Feedback

Lastly, the supervisors were asked what are some ways you approach these challenges of communicating feedback to an employee with a disability? Two of the three supervisors were very vague in their responses prior to intervention. Shelby discussed relying on different “methods” but did not identify what those methods were. However, after intervention, she was much more specific about how she tried to use “encouraging and supportive language” to communicate instructions and feedback. Shelby also discussed how the more she communicated with her intern with a disability, the more “...we were able to find commonalities between us and have both work and non-work related discussions.”

In addition, Caroline and Laura were much more specific in identifying ways they address challenges in communicating feedback after the intervention. Caroline discussed how she would make more of an effort to “...stop in the office to see how things were going and offer assistance if needed.” Laura also was more specific after intervention in discussing how she

speaks to the employee directly and relies on both “...written and visual components to help ensure the best understanding of what is expected.”

CHAPTER V:

DISCUSSION

The purpose of this study was to address the following research questions: 1) does the use of the CICO procedure at the beginning and end of a work shift increase the rate of the supervisor's performance feedback statements to an intern with ID; 2) what do supervisors of interns with ID identify as challenges in communicating feedback with persons with disabilities; 3) in what ways do those challenges change after the use of the CICO intervention? Using a multiple-baseline design across participants, results determined that there is a functional relationship between the CICO intervention and the rate of performance feedback statements given by a supervisor to an intern with ID during vocational training. According to the visual analysis of data, all three supervisors increased their rate of performance feedback statements immediately after being introduced to the intervention. In addition, maintenance data showed that the supervisors continued to provide high rates of performance feedback comments long after the intervention had been introduced.

According to social validity questionnaires, supervisors stated the intervention was helpful in helping them provide feedback to interns with ID and that the use of the CICO Goal Sheet was easy and meaningful to use. Supervisors also indicated that the one-on-one training was beneficial in discussing disability and ways to help support vocational training for young adults with disabilities. Interns with ID also stated that using the CICO intervention helped them feel more comfortable talking to their supervisor and that they liked receiving feedback every day from their supervisor. The transition teacher stated that it was beneficial for her to know how

the student intern performed that day at work and that it allowed her to also provide feedback. The supervisors, interns with ID, and the transition teacher all expressed that they would like to use CICO intervention again in the future.

In answering the last two research questions on challenges in communicating feedback, the supervisors responded to three open-ended questions at the beginning and again at the end of the study. This allowed the researcher to compare responses and to identify any changes in the supervisor's responses after the intervention. Prior to using the CICO intervention, supervisors stated more general ways they communicated feedback to employees with disabilities. However, after using the CICO intervention, supervisors were much more open about challenges and identified specific ways to overcome those.

In addition, when identifying possible challenges in communicating feedback, supervisors often related the question back to challenges that are often linked with the stigma associated with disability. For example, one supervisor identified employees with "non-communicative" communication as a possible challenge in communicating feedback to individuals with disabilities. In addition, making sure the employee with a disability feels "safe" in talking to their supervisor was also discussed before using the CICO intervention. Safety and communication deficits often are stereotypes associated with people with disabilities (Mik-Meyer, 2016; Nota et al., 2014; Scheid, 2005; Vornholt et al., 2013). Before being introduced to the intervention, supervisors discussed challenges associated with the employee with a disability such as not asking questions and not taking their time to complete tasks. However, after the intervention, all of the supervisors identified challenges related to the employer not communicating well enough.

Furthermore, when trying to identify approaches to use in addressing the communication challenges of giving feedback, supervisors were really vague in their responses prior to intervention. After intervention, supervisors answered with specific ways they approach challenges such as (a) allowing the intern to have a break, (b) offering assistance, (c) using supportive language, and (d) relying on written and visual components when giving instructions. In addition, goal setting and relationship building was not mentioned prior to the intervention. However, the importance of goal setting and non-work-related conversations to build a working relationship were discussed after the intervention. This supports prior research on the importance of feedback with goal setting as well as the emphasis on increasing communication in order to build natural supports at work (Akkerman et al., 2016; Flores et al., 2011).

Although, only three supervisors completed the open-ended questions, they still hold insight into how the CICO intervention may impact how supervisors view of individuals with disabilities. By comparing their responses, it is interesting to see how supervisors view changed. Prior to the intervention, supervisors were viewing challenges through the lens of disability and identified more challenges relating to the individual with a disability. After the CICO intervention, supervisors identified more challenges in relation to how they might be causing some of those communication barriers instead of the individual with disability.

There were several additional findings that were not initially explored but are noteworthy to discuss. First, supervisors spent a much longer time communicating with their intern following intervention. The average amount of time the participants spent at the beginning and end of the work shift during baseline was only two minutes across the three supervisors. However, during intervention, the supervisors spent an average of five minutes per work shift. The average time Caroline spent with her intern Maria at the beginning and the end of the work shift was one

minute and thirty seconds during baseline. During intervention, Caroline spent an average of seven minutes and thirty seconds per work shift working individually with Maria. During baseline, Shelby spent an average of one minute talking with Carly before and after her work shift. Following intervention, Shelby talked with Carly for an average of two minutes per work shift. Similarly, Laura spent an average of two minutes and thirty seconds talking with Renee each work shift; however, during intervention Laura spent an average of five minutes and thirty seconds. All participants at least doubled the amount of time they were spending with the intern with ID per work shift. According to previous research findings, this increase in communication can help to build a working relationship between the supervisor and intern with ID (Cramm et al., 2008; Li, 2004; Vornholt et al., 2013).

The supervisors also started to add their own additions to the CICO intervention. For example, toward the end of intervention, Caroline started asking Maria for her input during the check-out sessions. This allowed Maria to reflect on her own work. Caroline even gave Maria homework, which was to write her own goal list of things that she wanted to be able to do by the end of the internship. On the last day of internships, Caroline also gave Maria a goal for over the summer that she wanted her to do. Her goal for Maria was to continue practicing her typing skills. They discussed how she could go to the library since she doesn't have access to a computer at home. It should be emphasized that during baseline, Caroline did not provide any feedback to Maria but after the intervention she was assisting her in setting long term work-related goals. These unprompted conversations provide a glimmer of insight about the power of frequent communication in building a working relationship (or natural support) between the supervisor and intern with ID.

The findings in this study support the social model of disability by addressing underlying social barriers. While the goal of this study was to increase the rate of performance feedback from a supervisor to an intern with ID, this study's broader goal was integrating the intern with ID into the community and work place. This study found that the CICO intervention was non-intrusive and can result in broader implications on the environment and social work place. Shelby stated, "...we were able to find commonalities between us and have both work and non-work related discussions." After the intervention, supervisors spent longer amounts of time with the intern and had more unscripted conversations. The use of CICO intervention also helped alter the supervisor's perceptions of disability. For instance, prior to the intervention supervisors identified challenges in communicating with individuals with disabilities that were solely based on disability. Yet, after the intervention, supervisors identified that the communication challenges at work were due to their own communication errors. For example, Laura stated, "The employer might not be communicating in a way that is effective with the employee's learning style or abilities." The findings in this study align with the social model by focusing on shaping the environment to better meet the needs of the individual with a disability.

In addition, this study challenges the notions held about quantitative and single-subject research designs. Referencing the medical model, scholars view the use of single-subject as dehumanizing. Scholars argue the use of single-subject tends to spotlight the individual with a disability as needing intervention (Hartley & Muhit, 2003; Stone & Priestly, 1996). However, the results of this study show that using a single-subject design to implement an intervention does not have to spotlight the individual with a disability in a negative ways. Single-subject research can also be used to change the environment to better meet the needs of the individual with a disability, thereby acknowledging and reassigning functional deficits to the work context in

which the individual is expected to work that may or may not have accounted for different needs of workers with disabilities.

Regarding youth with disabilities in vocational training, this study adds significant findings to the transition literature. A majority of previous research in transition of young adults with ID into competitive employment has focused extensively on the individual with ID (Gilson et al., 2017). Despite previous findings that show increase interaction and communication between the supervisor and employee with ID helps to establish natural supports (Cramm et al., 2008; Gormley, 2015; Hagner & Cooney, 2003), very few articles have involved supervisors that work with employees with disabilities (Amado et al., 2013; Hedley et al., 2017). Therefore, previous literature has suggested future studies are needed to examine effective strategies that can be used to change the behavior of the supervisor in communicating and collaborating effectively with employees with disabilities (Akkerman et al., 2001; Chadsey-Rusch & Heal, 1995; Hedley et al., 2017). In addressing the gaps in the transition literature, this study focused extensively on the supervisors' role in vocational training. Results validate the use of the CICO intervention as a strategy in increasing communication and performance feedback statements by a supervisor to a young adult with ID in vocational training.

This study adds to the literature of CICO by exploring the use of the intervention in the vocational training setting with the on-site supervisor serving as the facilitator. Prior to this study, Boden et al. (2018) was the only study that examined the use of CICO in vocational training for three students with moderate ID. Boden et al. (2018) used the paraeducators in the classroom that also served as job coaches as the facilitators for the intervention. Boden et al. (2018) suggested that the CICO intervention could be used with on-site supervisors because the intervention is not stigmatizing, time consuming, or intrusive for the employment setting. This

study also found that the use of CICO was not time consuming or intrusive for supervisors. In addition, the intervention was not stigmatizing for youth with ID to use in inclusive employment settings.

In addition, this study addressed several other gaps in the CICO literature. Previous studies have echoed the need for examining the use of CICO in various settings (Hawken et al., 2014; Mitchell et al., 2017). Prior to this study, a majority of previous CICO studies were implemented in the elementary school settings. This limited the generalizability of the CICO intervention with older students as well as settings outside the school. Most studies on CICO were with younger students without disabilities or mild disabilities. Only three previous articles have used CICO in the high school setting (Boden et al., 2018; Ennis et al., 2012; Swoszowski et al., 2012). Of those, only one took place in a high school setting with students with moderate ID (Boden et al., 2018). Earlier literature has echoed the need for more studies that use CICO with female participants and with more severe disabilities (Mitchell et al., 2017; Wolfe et al., 2016). Therefore, this study included all female supervisors and female interns with moderate to severe ID.

Furthermore, Melius et al. (2015) suggested the need for future studies to analyze the effects the CICO intervention has on the mentor or facilitator. Thus, the focus of this study was on how the intervention ultimately changed the supervisor's behavior and attitude towards the individual with a disability. Prior research also has stated that more studies are needed that use maintenance data to determine the long-term effects of CICO (McDaniel & Bruhn, 2016; Wolfe et al., 2016). Although maintenance in this study was only two-weeks following intervention, the findings still demonstrate that the CICO intervention was effective well after the initial training in changing the supervisors' behaviors. Previous studies have found low rates of fidelity in the

home component of CICO (Mitchell et al., 2017; Wolfe et al., 2016). The home component in this study was the transition teacher receiving the CICO Goal Sheet. The use of the transition teacher instead of the parent was age appropriate and allowed the teacher to know how the intern was performing at their vocational training site. The fidelity of the home component for this study was 100%, which is much higher than previous studies (Mitchell et al., 2017; Wolfe et al., 2016).

Perhaps one of the most profound findings of this study was the utility of the CICO intervention in a fully integrated vocational training setting for young adults with ID. An exhaustive review of related research did not identify any study where CICO has been implemented in an integrated work setting. As such, this is the first identified study to use the CICO intervention in an integrated vocational setting and the first study to focus on the outcomes of the facilitator. The CICO intervention has broader implications than previous studies have outlined. Beyond promoting positive behavior outcomes, this study speaks to the value that CICO intervention can have in shaping the environment and building relationships. Shelby discussed this relationship building when she shared, "...through developing rapport and discussion, we were able to work through the issues and communicate with one another better." In addition, the results of the social validity questionnaires show how beneficial supervisors found the CICO intervention to be for them as well as the intern. Caroline stated on her social validity questionnaire, "...the goal sheets were a good guideline and it was rewarding to have the student work toward her goals and reach them, too."

The overall purpose of this study was to determine if there was a functional relationship between the CICO intervention and the rate of performance feedback statements given by a supervisor to an intern with ID. According to the findings in this study, there was a functional

relationship between the intervention and the rate of performance feedback by supervisors. Supervisors, interns, and the transition teacher reported the intervention as helpful and informative. Supervisors also found the one-on-one training helpful in discussing how they can better reach the interns needs. After the intervention, supervisors were also more conscious of their own behavior that might be causing communication challenges and how they can change their communication in order to better meet the needs of individuals with disabilities.

Limitations and Implications for Future Research

While this study found that the use of the CICO intervention was effective in increasing the rate of performance feedback statements by a supervisor to an intern with a disability, there are still several limitations that need to be discussed. First, two additional supervisors were asked about participating in the study but they preferred not to participate. The main concern from supervisors during recruitment was about the time commitment of the intervention and not being available to help with both checking in and out sessions. Furthermore, several sites had the student interns working on the same tasks each day and they did not see the value of writing the same task list out for the student. Future studies may want to consider asking supervisors with more flexible schedules and those that are willing to put in additional time per work shift.

Another limitation was not being able to introduce the intervention to the fourth participant. This was due to research procedures and fidelity of implementation issues with the job coach. The job coach experienced difficulties with understanding how to record the data and providing the correct prompts. This caused some variability and inconsistency in fidelity. Therefore, during training the job coach received additional instructions such as the use of a cheat sheet that provided pictures of how to record on the iPad and additional trainings including an on-site training during baseline with the researcher. With limited time, the researcher decided

to drop the fourth participant. However, the participant was removed during baseline, therefore, this did not raise any ethical concerns. Future studies should provide additional instruction if a job coach struggles to understand technology and needs further prompting. In addition, future studies may want to examine the use of the young adult with ID recording their own sessions. In this study, the intern's iPad could have included an alarm that prompted the intern to check-in or out with their supervisor and to start the audio recording.

As with any single-subject design, a small number of participants participated in the study ($n = 3$). The findings in this study would be strengthened by replication. Furthermore, future research should also consider using a larger sample size to increase generalizability and external validity. Additionally, the three participants that participated in the study were all white females. Future research should seek a more diverse group of supervisors to participate.

Although, rate was extremely sensitive and the measurement used in this study, it did not allow for readers to evaluate the significant increase in the duration of time supervisor's spent with their interns with ID during CICO sessions. Future studies may want to consider using another form of measurement in order to emphasize some of the additional findings such as the length of the sessions. Only recorded sessions of data were reported. This was due to the frequency of (a) to iPad issues, (b) the supervisor being unavailable, (c) the intern being absent, or (d) the occurrence of a recording mishap. However, future research may want to include all sessions in order to grasp the amount of time between sessions. In addition, Shelby could have stayed in intervention longer but due to time constraints she was moved into maintenance. Future studies may want to allow participants to stay in intervention longer to determine if the intervention would continue to improve the supervisor's performance. Laura was only able to

complete one maintenance point. Future research should obtain more maintenance data over a longer period of time.

All of the participants in this study had at least a year of experience working with individuals with ID in vocational training. More research is needed on the use of CICO with new supervisors who do not have prior experience of working with youth with disabilities. This would allow for a further investigation into how the intervention can also play a part in training supervisors in working with individuals with ID. Future research also needs to examine the use of CICO in a competitive employment position as opposed to a vocational training setting. This could provide evidence that the intervention is effective in helping a hired employee with a disability become well adjusted to their new working environment by establishing natural supports and understanding ways they can improve on the job. Likewise, this study focused on the effects of the CICO intervention on the supervisor. However, future studies are warranted in determining how the use of the intervention in employment also affects the work of the employee or intern with a disability. Qualitative inquiry is also needed to determine if the quality of interaction between the supervisor and the intern with a disability changes due to the intervention. This would speak to the impact of the CICO intervention on breaking down social barriers and forming natural supports, thereby establishing its utility.

Future studies may also want to limit the check-in portion if the intern does the same set of tasks each day. The task list can already be printed on the CICO Goal Sheet if the student does the same task each day and the supervisor may choose to only review the goal they set from the previous work shift during check-out. In addition, fading was not implemented in this particular study because the intervention could be considered a reasonable accommodation for individuals receiving vocational training. However, future analyses should examine possible fading

procedures for individuals with disabilities in gainful employment positions. For example, CICO could be faded to just the check-out portion once per week. This would allow the supervisor to go over with their employee what they exceeded on that week, what they still need to improve on, and they could set one overall goal for the following week.

Implications for Current Practice

Based on the results from this study, current practice may want to consider implementing CICO or a modified version in inclusive work settings. Similar to Boden et al. (2018), this study found that the CICO intervention provided structure but was not intrusive or stigmatizing for youth with disabilities in an inclusive employment setting. Professionals such as transition teachers, vocational rehabilitation counselors, and job coaches could use the CICO intervention as a strategy to assist individuals with ID in receiving more feedback on their work performance from their on-site supervisors. The intervention could be implemented in vocational training settings or in gainful employment. Professionals would provide employment consultation (i.e., training) with supervisors on how to implement CICO. Training on CICO is also a great opportunity for the supervisor to see the professional as a consultant that assists when problems arise as opposed to a more hands on role. If supervisors are unavailable, professionals may also want to consider using CICO with co-workers.

The supervisors in this study reported the ease of using the CICO Goal Sheet. The sheet was designed to not overwhelm supervisors and to allow for flexibility in use. The CICO Goal Sheet can be easily be modified to fit the needs of individual interns or employees with disabilities. For example, if an intern was responsible for the same tasks each day then the CICO Goal Sheet could have those tasks listed prior to the start of work. The intern would still check-in with their supervisor to ensure there are not any additional tasks but this would save the

supervisor time in not having to write the same tasks each work shift. Some interns or employees with disabilities may struggle with reading a task list. In this instance, the CICO Goal Sheet can easily be modified to include picture symbols.

In addition, if an intern or employee with ID has longer work shifts, professionals may want to consider adding a check-up session in the middle of the work shift to provide more frequent feedback. Check-in, check-up, check-out has shown promising results (Boden et al., 2018) but professionals will need to stay mindful of the additional time commitment the supervisor or facilitator would have to provide. Furthermore, if the intern with a disability is doing really well at their job and has a good relationship with their supervisor, the professional may want to modify the CICO Goal Sheet to once a week. This would allow for the intern to meet with their supervisor to discuss their overall performance for the week and set new goals for the following week.

Research continues to show the importance of building natural supports at work for individuals with ID (Flores et al., 2011; Hedley et al., 2017; Mautz et al., 2001). Communication between the employee with ID and the supervisor is key in building a working relationship and natural support (Akkerman et al., 2016; Amado et al., 2013). Studies show that the more involved the supervisor is in training the employee with a disability, the more invested they become in the success of the employee (Cramm et al., 2008; Simonsen et al., 2015; Tilson & Simonsen, 2013). This study shows that the CICO intervention could be an effective intervention strategy for increasing communication and as a result, creating a natural support where the supervisor is invested and comfortable in working with an employee with a disability. Transition teachers, vocational rehabilitation counselors, job coaches, and other professionals may want to

consider using the CICO intervention in assisting the supervisor in providing feedback and to possibly assist in building natural supports on the job.

Conclusion

Researcher Brené Brown described it best in her book, *Dare to Lead: Brave Work, Tough Conversations, Whole Hearts* (2018) when she stated, “Clear is kind. Unclear is unkind” (p. 48). Brown stated that brave leaders who are uncomfortable communicating with an employee often feed the employee half-truths to make them feel better, which is unkind. “Not getting clear with a colleague about your expectations because it feels too hard, yet holding them accountable or blaming them for not delivering is unkind” (2018, p. 48). What Brown (2018) described can be applied to situations with supervisors who work with employees with disabilities. Supervisors are often reluctant to communicate constructive feedback to employees with disabilities yet they still hold the employee accountable for their work. This lack of intention is unkind because it is not doing the supervisor or employee with a disability any good. The need for supervisors to provide frequent and consistent performance feedback to individuals with disabilities receiving job training cannot be overemphasized (Chadsey & Beyer, 2001; EllenKamp et al., 2016; Hagner & Cooney, 2003). Employees with disabilities in gainful employment and in vocational training need explicit instruction on ways to improve (Wehman, 2006). However, very few articles have investigated effective strategies that can be used to change the behavior of the supervisor in communicating and collaborating effectively with employees with disabilities (Akkerman et al., 2001; Hedley et al., 2017).

This study used the CICO intervention as a way of facilitating performance feedback from a supervisor to an individual with ID. The results from this study determined that there was a functional relationship between the CICO intervention and the rate of performance feedback

statements given by a supervisor to an intern with ID during vocational training. Supervisors stated that they found the CICO intervention helpful in providing feedback to interns with ID and that the CICO Goal Sheet was easy to complete. In addition, how supervisor's identified challenges in providing feedback to an employee with a disability changed from disability-focused to supervisor-focus. Future research should continue to examine the use of the CICO intervention as a strategy to use in assisting supervisors in providing more frequent feedback to their employees or interns with ID.

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APPENDIX A:
INSTITUTIONAL REVIEW BOARD APPROVAL



December 13, 2018

Kagendo Mutua, Ph.D.
Professor
Department of ESPRMC
College of Education
The University of Alabama
Box 870231

Re: IRB # 17-OR-425-R1 "CrossingPonds: A Crimson Tide Model and Pipeline for Inclusive Higher Education"

Dear Dr. Mutua,

The University of Alabama Institutional Review Board has granted approval for your proposed research. Your renewal application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 5 and 7 as outlined below:

(5) Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected, solely for non-research purposes (such as medical treatment or diagnosis).

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your approval will expire on December 12, 2019. If the study continues beyond that date, you must complete the IRB Renewal Application. If you modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure (Investigator) form.

Please use reproductions of the IRB approved informed consent form to obtain consent from your participants.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB approval number.

Good luck with your research.

Sincerely,

A black rectangular box redacting the signature of Carpentato T. Myles.

Carpantato T. Myles, MSM, CHM, CIP
Director & Research Compliance Officer
Office for Research Compliance

358 Rose Administration Building | Box 870127 | Tuscaloosa, AL 35487-0127
205-348-8461 | Fax 205-348-7189 | Toll Free 1-877-820-3066

APPENDIX B:
CHECK-IN/CHECK-OUT GOAL SHEET

Interns Name: _____

Date: _____

Check-In:

Today's Task(s):

-
-
-
-
-

-
-
-
-
-

Check-Out:

Exceeding:

Needs Improving:

Tomorrow's Overall Goal:

Signature of Supervisor: _____

Date: _____

Signature of Intern: _____

Date: _____

Signature of Teacher: _____

Date: _____

APPENDIX C:

CHECK-IN/CHECK-OUT OBSERVATION DATA SHEET

Interns Name _____ Date _____
 Supervisor's Location _____ Observer _____
 Label of Audio Tape: _____

Circle one: Check-In Check-Out

Circle one: Baseline Intervention Maintenance

Occurrence	Time MM:SS
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Occurrence	Time MM:SS
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Occurrence	Time MM:SS
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

Additional Comments

Duration of CICO Session: ____ Minutes ____ Seconds

Calculation of rate for both check-in and check-out sessions:

$$\frac{\text{Total Tally}}{\text{Total Time (minutes and seconds)}} = \text{Rate of Performance Feedback}$$

APPENDIX D:
CONSENT FORM FOR PARTICIPANTS

CONSENT FORM FOR RESEARCH PARTICIPANTS

Dear Supervisor:

As part of CrossingPoints, we collect data on various instructional strategies to learn what is most effective for teaching young people with intellectual disabilities. As part of your participation with employment training for our students, you are invited to take part in a study for employers of young adults with intellectual disabilities. The study will evaluate the effectiveness of an instructional technique in the workplace on the performance of students with intellectual disabilities.

The primary investigator is Dr. Kagendo Mutua, a Professor of Special Education at The University of Alabama. Olivia Robinson, a graduate student from The University of Alabama who is also a graduate assistant in the CrossingPoints program is assisting Dr. Mutua with this research.

What is the study about?

This study seeks to understand how to improve the work performance of individuals with intellectual disabilities. More specifically, the investigator would like to examine an instructional technique implemented by the onsite supervisor in increasing the work performance of an individual with intellectual disabilities who is receiving vocational training.

Procedure

If you agree to be in this study, you will participate in a short 20-minute training with the investigator on how to implement an instructional technique. Trainings will be scheduled at your convenience. During the training, you will also be asked to complete a small demographic survey addressing the following areas: (a) gender, (b) age, (c) ethnicity, (d) occupation, (e) number of years in your current job, (f) highest degree earned, (g) number of years working with the transition program, and (h) previous experience working with people with disabilities.

Following training, you will be implementing the technique at the beginning and end of the student's work shift. This should only take up to 5-minutes per work shift. The duration of this study is one semester (no more than 12-weeks). The investigator would like to audio record the implementation of the technique to be sure that the data is collected accurately. However, if you do not want to be audio recorded, simply tell the investigator, who will then take handwritten data.

Risks and Benefits of Participating in the Study

We do not think there are any risks or harm from participating in this study.

There is no monetary reimbursement for participating in this study. However, participants in this study will receive training on techniques they may find useful in increasing the work performance of youth with intellectual disabilities. Participants in this study may

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 12/13/18
EXPIRATION DATE: 12-12-19

also find the technique increases the work performance and accuracy of an individual with intellectual disabilities in their workplace. In addition, you will be providing data that may benefit people with intellectual disabilities. The results from this study may help professionals in the field of special education and disability in identifying and understanding strategies that could increase the effectiveness of vocational training programs and employment training for individuals with intellectual disabilities.

Confidentiality

The investigator will keep all records from this study in a secure location. If the researcher publishes any part of the report, the published materials will not include any data that would make it possible to identify a participant.

Voluntary Nature of the Study

Being in this study is totally voluntary. It is your free choice. You may choose not to be in it at all. If you start the study, you can stop at any time. Not participating or stopping participation will have no effect on your relationship with The University of Alabama and CrossingPoints.

Contacts and Questions

This project has been approved by the Institutional Review Board at The University of Alabama IRB #: 17-OR-425, titled, "CrossingPoints: A Crimson Tide Model and Pipeline for Inclusive Higher Education." If you have any questions about this project, please ask me now. If you have questions later, you can call Dr. Kagendo Mutua at (205) 348-2609.

If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066.

You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at <http://ovpred.ua.edu/research-compliance/prco/> or email the Research Compliance office at rscompliance@research.ua.edu.

Statement of Consent

I have read the above information. I have asked all questions that were necessary. I am prepared to participate in this study.

Signature of Participant: _____ Date: _____

Signature of Investigator: _____ Date: _____

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED: 12-13-18
EXPIRATION DATE: 12-12-19

APPENDIX E:

ASSENT FORM FOR CROSSINGPOINT INTERNS

**ASSENT STATEMENT FOR
PARTICIPATING IN A CROSSINGPOINTS PROJECT**

Dear Student,

The CrossingPoints Transition Program is a college program for young people like yourself who might sometimes need supports to be successful in college, independent living, and employment. We are trying to help the other programs and agencies in the country be able to do what we do in CrossingPoints so that everyone with an intellectual disability who wants to obtain employment, attend college, and/or life on their own can do so. This project has been approved by the Institutional Review Board at The University of Alabama IRB #: 17-OR-425, titled, "CrossingPoints: A Crimson Tide Model and Pipeline for Inclusive Higher Education."

We will be collecting information about CrossingPoints, about you, and other students in the program during employment internships. We will be working closely with your supervisor to provide you with specifics on how well you are doing in your internship and some ways that you can improve. We will audio record these sessions with your supervisor but only for the use of accurate data collection. These recordings will be destroyed following the study. If you do not wish to be audio taped, you should not be in the study. We will be using this information for research, publication, and/or sharing that information with the Federal Government to help the country know what to do to make competitive employment available to as many students with intellectual disabilities as possible. When we use the information, we will not use your name or any information that might make someone know that is you. Your parents know I am asking you to do this and it is OK with them.

Your information will not identify you personally. You are helping others know how to create programs like CrossingPoints. We do not think there are any risks or harm to you in this study. If you have any questions about this project, please ask me now. If you have questions later, you can call Dr. Kagendo Mutua at (205) 348-2609. If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at <http://ovpred.ua.edu/research-compliance/prco/> or email the Research Compliance office at rscompliance@research.ua.edu.

If you agree to be in this project, please write your name/make an X below. You can have a copy of the letter to keep.

Thank you very much for your interest.
Sincerely,
Investigator

Name of Participant

Date

Person Obtaining Assent

Date

UA IRB Approved Document
Approval date: 12-13-18
Expiration date: 12-12-19

APPENDIX F:

PARENT NOTIFICATION FORM FOR CROSSINGPOINT INTERNS

Dear CrossingPoints Parent/s,

As part of CrossingPoints, we collect data on various instructional strategies to learn what is most effective for teaching young people with intellectual disabilities. As part of your son/daughter's participation in the CrossingPoints program, you sign a consent form allowing your child to participate in research projects. This semester, we are evaluating the effectiveness of frequent feedback from the onsite supervisor to our students during employment training. Research shows that regular feedback from a supervisor increases work performance, motivation, and job satisfaction for employees with disabilities. We will be working closely with supervisors at the jobsites on strategies for providing frequent feedback to our students.

Since we will be using an intervention at your son/daughters job site to increase the rate of performance feedback, we are writing to inform you that the data we collect will be used for research, publication, and/or sharing that information with the Federal Government to help the country to know what to do to make obtaining and maintaining competitive employment available to as many students with intellectual disabilities as possible. When we use the information, we will not use your son/daughter's name or any information that might make someone identify him/her personally. We will audio record these sessions that the student has with the supervisor but only for the use of accurate data collection. These recordings will be destroyed following the study. If you do not wish for your son/daughter to be audio taped then they should not be in the study.

This project has been approved by the Institutional Review Board at The University of Alabama IRB #: 17-OR-425, titled, "CrossingPoints: A Crimson Tide Model and Pipeline for Inclusive Higher Education." We do not think there are any risks or harm to your son/daughter in this study. If you have any questions about this project, please ask me now. If you have questions later, you can call Dr. Kagendo Mutua at (205) 348-2609. If you have questions about your rights as a person in a research study, call Ms. Tanta Myles, the Research Compliance Officer of the University, at 205-348-8461 or toll-free at 1-877-820-3066. You may also ask questions, make suggestions, or file complaints and concerns through the IRB Outreach website at <http://ovpred.ua.edu/research-compliance/prco/> or email the Research Compliance office at rscompliance@research.ua.edu.

If you give consent for your son/daughter to be in this project, please write your name/make an X below. You can have a copy of the letter to keep.

Sincerely,
Investigator

Name of Participant

Date

Person Obtaining Consent

Date

UNIVERSITY OF ALABAMA IRB
CONSENT FORM APPROVED 12-13-18
EXPIRATION DATE: 12-12-19

APPENDIX G:

DEMOGRAPHIC SURVEY FOR PARTICIPANTS

What sex do you most identify with?

Male

Female

Please enter your age.

Choose one or more races that you consider yourself to be:

White

Black or African American

American Indian or Alaska Native

Asian

Native Hawaiian or Pacific Islander

Other _____

What is the highest level of school you have completed or the highest degree you have received?

- High School
- Some College
- Associates (2-year)
- Bachelor's degree in college (4-year)
- Master's degree
- Specialist in Education
- Doctoral

Place of employment:

How long have you been working there?

Current Position/Title (example: Supervisor or General Manager):

How long have you been working with CrossingPoints students in providing vocational training?

Do you have any other experience with individuals with disabilities (such as a family member or another co-worker)?

Describe how you communicate feedback to an employee with a disability.

What challenges might there be in communicating feedback to an employee with a disability?

What are some ways you approach these challenges of communicating feedback to an employee with a disability?

End of Block: Default Question Block

APPENDIX H:
FIDELITY CHECKLIST

Enter a date:

Student Interns Name

Supervisor's Location

- Bryant Conference Center
- Hilliard
- Women's Resource Center
- Alabama Museum of Natural History

Your Name

- Researcher
- IOA

End of Block: Default Question Block

Start of Block: Fidelity Checklist

Baseline

	Observed	Not Observed
Provided task direction, "Go check-in with your supervisor."	<input type="radio"/>	<input type="radio"/>
Student Intern addressed supervisor prior to their work shift	<input type="radio"/>	<input type="radio"/>
Provided task direction, "Go check-out with your supervisor."	<input type="radio"/>	<input type="radio"/>
Student Intern addressed supervisor before leaving	<input type="radio"/>	<input type="radio"/>
Observer completed data based on supervisors performance	<input type="radio"/>	<input type="radio"/>



Training	Observed	No Observed
Researcher explains rational	<input type="radio"/>	<input type="radio"/>
Researcher explains the steps to CICO	<input type="radio"/>	<input type="radio"/>
Researcher reviews CICO Goal Sheet	<input type="radio"/>	<input type="radio"/>
Researcher models completing the CICO Goal Sheet for checking-in	<input type="radio"/>	<input type="radio"/>
Researcher models completing CICO Goal Sheet for checking-out	<input type="radio"/>	<input type="radio"/>
Researcher provides examples of specific praise feedback	<input type="radio"/>	<input type="radio"/>
Researcher provides examples of specific constructive feedback	<input type="radio"/>	<input type="radio"/>
Supervisor role-plays with researcher on filling out CICO Goal Sheet for checking-in	<input type="radio"/>	<input type="radio"/>
Supervisor completed the needed areas of the Goal Sheet for checking in	<input type="radio"/>	<input type="radio"/>
Supervisor role-plays with researcher on filling out CICO Goal Sheet for checking-out	<input type="radio"/>	<input type="radio"/>
Supervisor completed the needed areas of the Goal Sheet for checking out	<input type="radio"/>	<input type="radio"/>
Researcher addresses any questions and/or concerns of the supervisors prior to ending training session	<input type="radio"/>	<input type="radio"/>
Observer completed data based on supervisors performance	<input type="radio"/>	<input type="radio"/>

Check-In

	Observed	Not Observed
Did the student intern receive the task direction, "Go check-in with your supervisor?"	<input type="radio"/>	<input type="radio"/>
Did the student intern check in with the designated supervisor before their work shift?	<input type="radio"/>	<input type="radio"/>
Did the student intern give the clipboard with previous and new CICO Goal Sheets?	<input type="radio"/>	<input type="radio"/>
Was the check in implemented with the student intern on an individual basis?	<input type="radio"/>	<input type="radio"/>
Did the supervisor discuss the student intern's task goals?	<input type="radio"/>	<input type="radio"/>
Did the supervisor end the discussion with a positive statement?	<input type="radio"/>	<input type="radio"/>
Observer completed data based on supervisors performance	<input type="radio"/>	<input type="radio"/>

Check-Out

	Observed	Not Observed
Did the student intern receive the task direction, "Go check-out with your supervisor?"	<input type="radio"/>	<input type="radio"/>
Did the student intern give the clipboard with the CICO Goal Sheet to the supervisor?	<input type="radio"/>	<input type="radio"/>
Did the student intern check out with the designated supervisor at the end of the work shift?	<input type="radio"/>	<input type="radio"/>
Was the check out implemented with the student intern on an individual basis?	<input type="radio"/>	<input type="radio"/>
Was the student intern given negative verbal reinforcement of things they can improve on?	<input type="radio"/>	<input type="radio"/>
Was the student intern given positive verbal reinforcement of things they did well on?	<input type="radio"/>	<input type="radio"/>
Did the supervisor end the discussion with a positive statement?	<input type="radio"/>	<input type="radio"/>
Observer completed data on supervisors performance	<input type="radio"/>	<input type="radio"/>



Completing the CICO Goal Sheet

	Observed	Not Observed
Student intern's name is complete	<input type="radio"/>	<input type="radio"/>
Date is complete	<input type="radio"/>	<input type="radio"/>
Task list was written	<input type="radio"/>	<input type="radio"/>
Employee checked off tasks as they were completed	<input type="radio"/>	<input type="radio"/>
Job coach initialed beside the tasks lists	<input type="radio"/>	<input type="radio"/>
Supervisor completed "Exceeding" area	<input type="radio"/>	<input type="radio"/>
Supervisor completed "Needs Improving" area	<input type="radio"/>	<input type="radio"/>
Supervisor and student intern established an overall goal for the next work shift	<input type="radio"/>	<input type="radio"/>
Supervisor signed and dated the bottom	<input type="radio"/>	<input type="radio"/>
Student intern signed and dated the bottom	<input type="radio"/>	<input type="radio"/>
Teacher signed and dated the bottom	<input type="radio"/>	<input type="radio"/>

Comments/Observations

APPENDIX I:

TRAINING GUIDE FOR PARTICIPANTS

1. Rationale for providing feedback and using CICO

The check-in/check-out intervention is widely used in schools across the country and addressing problematic behavior. However, CICO has never been used in the employment setting. I am interested in using the CICO in the vocational employment setting to see if it improves the students work performance. I am interested to see what regular feedback and communication with a supervisor, like you, can have on the student work performance.

2. Steps to CICO:

The CICO intervention has five main steps to the intervention. The student (i.e., employee) checks in with a facilitator or in this case a supervisor. The employee and supervisor set goals for the day and discuss what needs to be done and how they can achieve those goals. The employee then uses the goal sheet to monitor their progress throughout work. The job coach will help the student by checking their work halfway through the work shift. The job coach will initial beside the tasks to confirm and to provide an additional reinforcement. At the end of the work shift, the employee then checks out with the supervisor and they go over things the employee did well on and things they need to still improve on. The employee and supervisor decide on one overall goal for the next work shift. Both sign and the employee takes the form back to their transition teacher to review and sign. They return with the form the next day and it can be used to decide on goals for that next work shift.



Adapted from: Crone, Horner, & Hawken (2004) as cited by Ennis & Swoszowski (n.d.)

3. Review Goal Sheet

Go over each step of the goal sheet including signing in and how the student will be bringing the sheet to them before and after every work shift.

Show completed CICO Goal Sheet example

4. Model completing goal sheet for check-in

5. Model completing the goal sheet for check-out

6. Provide examples of specific praise feedback

-Michael, I like how today you swept using small strokes and the dustpan.

-I thought you came in today very well dressed and I like how you wore a belt.

-I liked how you told the customer today that you were not sure but that your co-worker would know and then you went and got your co-worker.

7. Provide examples of specific constructive feedback

-I noticed you were not focusing today folding shirts.

-When you were cleaning the windows, I noticed you were using close to four sprays of Windex. We only need to use one spray of Windex per window.

- When we are folding shirts, we have to make sure that we review our work before moving on. There were a few shirts today that we needed to refold.

8. Supervisor role-plays with researcher on filling out CICO Goal Sheet for checking-in

Provide feedback to the supervisor as they are completing the form.

9. Supervisor role-plays with researcher on filling out CICO Goal Sheet for checking-out

Provide feedback to the supervisor as they are completing the form.

10. Researcher addresses any questions or concerns

Are there any questions or concerns you have for me?

Following the training, the supervisor will be asked to complete a quick demographic survey using Qualtrics.

APPENDIX J:

TRAINING GUIDE FOR JOB COACHES

1. Rationale for providing feedback and using CICO

The check-in/check-out intervention is widely used in schools across the country and addressing problematic behavior. However, CICO has never been used in the employment setting. I am interested in using the CICO in the vocational employment setting to see if it improves the students work performance and the communication of performance feedback from the supervisor.

2. Steps to CICO:

The CICO intervention has five main steps to the intervention. The student (i.e., employee) checks in with a facilitator or in this case a supervisor. The employee and supervisor set goals for the day and discuss what needs to be done and how they can achieve those goals. The employee then uses the goal sheet to monitor their progress throughout work. The job coach will help the student by checking their work halfway through the work shift. The job coach will initial beside the tasks to confirm and to provide an additional reinforcement. At the end of the work shift, the employee then checks out with the supervisor and they go over things the employee did well on and things they need to still improve on. The employee and supervisor decide on one overall goal for the next work shift. Both sign and the employee takes the form back to their transition teacher to review and sign. They return with the form the next day and it can be used to decide on goals for that next work shift.



Adapted from: Crone, Horner, & Hawken (2004) as cited by Ennis & Swoszowski (n.d.)

3. Review Goal Sheet

Go over each step of the goal sheet including signing in and how the student will be bringing the sheet to them before and after every work shift. Show how the student will check-off on their tasks as they complete them.

Show completed CICO Goal Sheet example

4. Data Collection

-I need your help in implementing this intervention

-You will need to start bringing your iPad everyday to job sites with you to audio record the CICO sessions. I have gone ahead and set-up your iPads and have downloaded the UA Box Application.

-We will be using Voice Memos App for recordings. Each audio recording will be labeled by the date they were taken followed by if they were checking in or checking out and the job sites location. For example, “1212019 CheckIn SupeStore” or “1212019 CheckOut SupeStore.””

-Following every work shift, please upload the audio recording onto UA Box. We will practice doing this later in the training.

-If you have any trouble with uploading or don't feel comfortable, please let me know and I can upload them for you.

5. Discuss specifics

-All supervisors and students and parents have signed off on consent and/or assent forms for participating in the study and being audio recorded.

-Baseline (prior to intervention- normal as usual)

Before work start audio recording and provide a prompt, “Go check-in with your supervisor.” Continue audio recording through the student checking-in. This may look like the student just saying good morning and that is fine.

After work start audio recording and provide the prompt, “Go check-out with your supervisor.” Continue audio recording through the student checking-out. This may look like the student just saying goodbye or see you tomorrow.

Upload audio recordings onto UA Box following every work shift.

-Intervention (supervisor has received training and student has been taught what they need to do for their CICO goal sheet)

Continue baseline until I let you know when intervention will start for your supervisor.

Before work start audio recording and provide a prompt, “Go check-in with your supervisor.” Continue audio recording through the student checking-in.

Halfway through the work shift, please initial on the goal sheet that the student is following the task list and using the sheet. Provide positive reinforcement.

After work start audio recording and provide the prompt, “Go check-out with your supervisor.” Continue audio recording through the student checking-out.

Upload audio recordings onto UA Box following every work shift.

-Maintenance (following intervention- I will let you know when this will occur)

After intervention has concluded, continue with the same prompts and using the CICO Goal sheet but you do not need to audio record. There will be at least three days following the end of intervention that I will ask you to audio record one last time.

6. Job coaches role-play with researcher on audio recording during check-in and providing prompt.

7. Job coaches role-play with researcher on audio recording during check-out and providing prompt.

8. Job coaches uploaded role-plays onto UA Box with researchers assistance.

9. Please try not to discuss this study with supervisors. They do not know that I am more interested in their behavior than the students.

10. Researcher addresses any questions or concerns

Are there any questions or concerns you have for me?

APPENDIX K:

TRAINING GUIDE FOR INTEROBSERVER AGREEMENT

Storing Data:

- Everything will be kept on UA Box in the folder labeled, “Robinson Data for Dissertation.”
- Audio recordings will also be kept in UA Box and will be sorted in folders by the supervisors name and phase of the study. Each audio recording will be labeled by the date they were taken followed by if they were checking in or checking out and the job sites location. For example, “1212019 CheckIn SupeStore” or “1212019 CheckOut SupeStore.”
- Any paper copies will be kept in the locked filing cabinet in the GA Office.
- Scan paper copies into UA Box and put in the correct folder. Label by date.
- An Excel file will be kept up-to-date on the UA Box
- Demonstrate by pulling up UA Box together and reviewing the documents in the folder.

Performance Feedback Statements:

- Performance feedback is defined as a praise statement or constructive statement given by an employer that explicitly identifies a work behavior of the employees (Holderness, Olsen, & Thornock, 2017).
- Examples of praise statements:
 - Michael, I like how today you swept using small strokes and the dustpan.*
 - I thought you came in today very well dressed and I like how you wore a belt.*
 - I liked how you told the customer today that you were not sure but that your co-worker would know and then you went and got your co-worker.*
- Examples of constructive statements:
 - I noticed you were not focusing today folding shirts.*
 - When you were cleaning the windows, I noticed you were using close to four sprays of Windex. We only need to use one spray of Windex per window.*
 - *When we are folding shirts, we have to make sure that we review our work before moving on. There were a few shirts today that we needed to refold.*

Observation Sheet:

- Example the observation sheet
- A blank copy is in UA Box but I also have a bunch of paper copies for you.
- Sessions include the checking in and checking out session. Be sure to listen to both audiotapes and fill out an observation sheet for each. I will go back and add the check in and check out sessions together to get one score.
- Discuss using a stopwatch on their phone to determine the length of the session. The start of the session begins when you hear that the employee is speaking to the supervisor or the supervisor acknowledges the employee.

- When listening to the audio recording, place a time stamp of when you heard the performance feedback statement. There is a ten-second interval that will be used to compare time stamps. I will use the sheets to compare our time stamps and enter them into the Excel document.
- You can use additional comments to write anything you think would be helpful or something you feel needs to be noted.
- You will calculate the rate of performance feedback at the bottom of the observation sheets using seconds.

Fidelity:

- Used to ensure all steps were completed accurately.
- This checklist is broken into the various stages of the intervention.
- This checklist will be on Qualtrics. Review checklist on Qualtrics going over each phase and question on the checklist. You can use the same survey for the check-in and check-out sessions if that is easier for you.
- Fidelity Checklist: At least 25% of the data for the baseline, training, intervention, and maintenance phases. Fidelity will be calculated by dividing the total number of observed steps by the total number of expected steps and multiplying by 100%.
- Data that needs to be completed for fidelity will be highlighted on the Excel document. Show Excel document with examples.

Role-Playing:

- Independently listen to example audio recordings and practice filling out the observation sheet and fidelity checklist.
- Compare results and discuss any disagreements.

Interobserver Agreement:

- The researcher and second observer must meet an IOA of 85% or above for three consecutive trials before the conclusion of training.
- During all stages of data collection, IOA between the two independent observers will be recorded for at least 25% of the data for each participant and across conditions. Percentage agreement must be 85% or above to account for instrumentation and procedural infidelity. Point-by-point will be calculated by dividing the total number of exact agreements plus disagreements and multiplying by 100%.
- Scan and upload each completed IOA observation sheet onto UA Box by supervisor name and phase. Look for the folder labeled "Completed Observation Sheets." Complete one sheet per check-in session and one per check-out session.
- For IOA, a second observer will conduct 25% of the fidelity checks using point-by-point agreement. Point-by-point will be calculated by dividing the total number of agreements plus disagreements and multiplying by 100%.
- Data that needs to be completed for IOA will be highlighted on the Excel document. Show Excel document with examples.

APPENDIX L:

SOCIAL VALIDITY QUESTIONNAIRE FOR PARTICIPANTS

For each statement, select the best answer that describes how you feel about the check-in/check-out intervention. All answers are anonymous and confidential.

The check-in/check-out intervention was worth the time and effort.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The one-on-one training was helpful in discussing disability and ways to help support vocational training of young adults with disabilities.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The check-in/check-out goal sheet was easy to complete.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The check-in/check-out goal sheet served as a guide for giving the individual with a disability feedback.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

I feel more comfortable talking to the individual with a disability following the intervention.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I feel more comfortable giving feedback (both positive and negative) to the individual with a disability following the intervention.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

I saw the benefit of meeting with the individual with a disability before and after work.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The performance of the individual with a disability improved following the intervention.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

If I had the opportunity, I would participate in the check-in/check-out intervention again.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

Describe how you communicate feedback to an employee with a disability.

What challenges might there be in communicating feedback to an employee with a disability?

What are some ways you approach these challenges of communicating feedback to an employee with a disability?

Additional comments:

End of Block: Default Question Block

APPENDIX M:

SOCIAL VALIDITY QUESTIONNAIRE FOR CROSSINGPOINTS INTERN

For each statement, select the best answer that describes how you feel about the check-in/check-out intervention. All answers are anonymous and confidential.

The check-in/check-out intervention was worth the time and effort.

- Agree
- Disagree
-

The check-in/check-out goal sheet was helpful to follow my progress in my job.

- Agree
- Disagree
-

The check-in/check-out goal sheet was easy to complete.

- Agree
- Disagree
-

I liked receiving feedback from my supervisor every day.

Agree

Disagree

I feel more comfortable talking to my supervisor following the intervention.

Agree

Disagree

Following the intervention, I feel more comfortable asking my supervisor for help or if I have a question.

Agree

Disagree

I improved in my work performance by meeting with my supervisor before and after work.

Agree

Disagree

My performance improved following the intervention.

Agree

Disagree

If I had the opportunity, I would participate in the check-in/check-out intervention again.

Agree

Disagree

Additional comments:

APPENDIX N:

SOCIAL VALIDITY QUESTIONNAIRE FOR TRANSITION TEACHER

For each statement, select the best answer that describes how you feel about the check-in/check-out intervention. All answers are anonymous and confidential.

The check-in/check-out intervention was worth the time and effort.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The check-in/check-out goal sheet was helpful to keep up-to-date on the performance of each individual with a disability.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The check-in/check-out goal sheet was easy to complete.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The check-in/check-out goal sheet served as a guide for giving the individual with a disability feedback.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The intervention helped me (the teacher) provide feedback to the individual with a disability about how they can improve their performance.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

Following the intervention, I feel more informed on what the individual with a disability is doing at work and areas they are exceeding as well as things they still need to work on.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

I saw the benefit of meeting with the individual with a disability after work.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

The performance of the individual with a disability improved following the intervention.

- Strongly disagree
 - Somewhat disagree
 - Neither agree nor disagree
 - Somewhat agree
 - Strongly agree
-

If I had the opportunity, I would participate in the check-in/check-out intervention again.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Additional comments: