

Review Article

Customized employment: A review of the literature

Tim Riesen^{a,*}, Robert L. Morgan^a and Cary Griffin^b

^a*Department of Special Education and Rehabilitation, Utah State University, Logan, UT, USA*

^b*Griffin-Hammis Associates, Florence, MT, USA*

Revised/Accepted July 2015

Abstract.

BACKGROUND: Customized employment (CE) is a strategy that has shown promise in improving poor employment outcome for individuals with disabilities. The term customized employment was first used in 2001 and originated from efforts by the Department of Labor, Office of Disability Employment Policy to provide access to One-Stop centers and improve employment outcomes for people with disabilities. More recently, the Workforce Innovation and Opportunity Act of 2014 (WIOA) contained a number of provisions and modifications to the Rehabilitation Act that more formally recognized CE as service delivery option. Specifically, WIOA modified the definition of supported employment to include CE and provided a formal definition in the statute. Given its recognition at the federal policy level, it is increasingly important to ensure that practitioners and adult service systems are implementing evidence-based practices associated with CE service delivery.

OBJECTIVE: The purpose of this review, therefore, is to examine the existing literature to identify the underlying conceptual and empirical basis for CE and to make recommendations for future research.

CONCLUSIONS: Findings from this review indicate that CE is contributing to positive integrated employment outcomes for individuals with disabilities. More research is needed to replicate, validate, and establish the evidence base for CE.

Keywords: Customized employment, disability, research, literature review

1. Introduction

Integrated employment for people with disabilities translates to improved quality of life (Bayer, Brown, Akandi, & Rapley, 2010), improved self-esteem (Petrovski, 1997; Wehman, Inge, Revell, & Brooke, 2007), and improved wages (Cimera, 2012; Cimera & Burgess, 2011). For example, Cimera (2012) reviewed the literature on the economics of supported employment and found that wages of individuals with disabilities had increased by 31.2% since the 1980s while wages of

sheltered workshop employees had decreased by 40.6% during the same period.

Unfortunately, competitive integrated employment for many people with disabilities continues to be an infrequent outcome. An examination of employment of people with disabilities over a 30-year timeframe revealed no growth and even declines in overall numbers of individuals in competitive integrated employment (The National Organization on Disability: NOD, 2010). In successive time periods, NOD (2010) reported 34% of Americans with disabilities were employed (i.e., full or part-time) in 1986, 29% in 1998, 35% in 2004, and only 21% in 2010. These data are congruent with employment status information compiled by the American Community Survey, which

*Address for correspondence: Tim Riesen, Utah State University, Salt Lake Center, 2500 South State Street, Salt Lake City, UT 84115, USA. Tel.: +1 385 646 7776; Fax: +1 385 646 5572; E-mail: Tim.Riesen@usu.edu.

reported only 21.7% of adults with disabilities were employed compared to 64.9% of adults without disabilities (U.S. Census, 2012). Integrated employment rates for individuals with more significant disabilities have remained consistently low and even appear to be declining for some populations. For example, in recent years, Butterworth et al. (2014) found a troubling 6.2% decline in integrated employment placements for people with intellectual and developmental disabilities receiving day supports from state agencies with only 18.4% of this population currently working in integrated employment.

Customized employment (CE) is a strategy that has shown promise in assisting individuals with more significant disabilities to obtain meaningful employment. CE first emerged in 2001 when the U.S. Department of Labor, Office of Disability Employment (ODEP) began to examine methods to improve employment outcomes for people with disabilities who accessed One Stop Career centers (Wehman et al., 2007). The initial definition of CE highlighted the importance of individualizing the relationship between employees and employers so both needs were being met. The definition also stated that CE was “based on individual determination of the strengths, needs, and interests of the person with a disabilities, and is designed to meet the specific needs of the employer” (Federal Register, 2002, p. 43154-43149).

Recently, the Workforce Innovation and Opportunity Act of 2014 (WIOA) contained amendments designed to improve employment outcomes for people with disabilities. Specifically, WIOA amended the Rehabilitation Act to define competitive integrated employment as full or part-time work at minimum wage or higher where workers with disabilities were fully integrated with workers without disabilities. WIOA also modified the definition of supported employment to include CE. The statute defined CE as “competitive integrated employment, for an individual with a significant disability that is based on an individualized determination of the strengths, needs, and interests of the individual with a significant disability, and is designed to meet the specific abilities of the individual with a significant disability and the business needs of the employer.” (p. 1634). The Act also outlined specific strategies for implementation of CE including (a) exploring jobs with the individual; (b) working with employers to facilitate placement including, customizing a job description based on current employer needs or on previously unidentified and unmet employer needs; (c) developing a set of job duties, a work schedule, and

job arrangement, along with specifics of supervision (including performance evaluation review), and determining a job location; (d) representing a professional chosen by the individual, or self-representation of the individual in working with an employer to facilitate placement; and (e) providing services and supports at the job placement (P. L. 113–128).

Indeed, from a policy perspective, CE is considered a viable strategy leading to integrated employment. Additionally, recent and ongoing actions by the Department of Justice (e.g. U.S. v. Rhode Island, 2014) indicated a clear preference for providing employment supports and services to individuals with disabilities in the most integrated employment setting. Employment First initiatives required that integrated employment placements be the first service option for individuals with disabilities, including those with severe disabilities (Hoff, 2013). As of 2015, there were 32 states with formal policy actions and 46 states with some type of policy action related to Employment First (APSE, 2015). Given the legal and policy initiatives calling for more integrated employment options for individuals with significant disabilities, it is increasingly important for researchers and practitioners to be apprised of empirically substantiated practices that promote integrated outcomes. Since CE has emerged as a strategy to support people with more significant disabilities obtain employment, one would assume that it has undergone extensive research showing reliable evidence for improving integrated employment outcomes. The purpose of this review, therefore, was to examine the existing literature on CE to identify the underlying conceptual and empirical basis.

2. Method

We conducted an electronic search of articles on CE published between 2001 and 2015 using Academic Search Premier and the PsychINFO, ERIC, and Education Abstract electronic databases using the key words *customized employment* and *disability*. Abstracts were screened to be included in the review using the following criteria: (a) publications in a peer-reviewed journal in the U.S., (b) description of CE for people with disabilities, including components of the CE procedures, (c) elucidation of policy related to CE, and (d) procedures implemented in the U.S. We classified articles into two categories: non-data and data-based research. Non-data articles included descriptions of CE models or practices but without methods, participant,

or outcome data summaries. Data-based research articles included those generating descriptive data outcome summaries or individual, group experimental, or quasi-experimental data.

3. Results

Based on the search and screening criteria, we reviewed 25 articles. Fifteen of these articles were non-data articles. That is, they described models, characteristics of CE, or implementation of programs but without supplying data on effects or outcomes. The remaining articles were pre-experimental or survey studies yielding data on some aspect of CE. Table 1 provides information about all articles reviewed.

3.1. Non-data based articles on CE

A total of 15 non-data based articles were published between 2006 and 2015. Five of the articles described how CE was implemented with transition-aged individuals, nine provided a general overview customized employment practices and one provided a description of a CE systems change initiative.

CE and transition. Brown (2009) described the Individualized Career Planning Model developed for youth with developmental and/or physical disabilities adapted to meet the unique needs of youth with psychiatric disabilities. The goals of the model were as follows: (a) use customized transition planning, work experiences, and employment opportunities to promote paid community-based employment; (b) develop and incorporate alternative resources that increase consumer and family choices over specific services into transition planning; and (c) develop linkages between agencies such a vocational rehabilitation, developmental disabilities, workforce services, and schools. The author described the process of discovery which consisted of developing a vocational profile for the youth with a disability and conducting customized planning meetings. Information about developing a representational portfolio, negotiating a job, planning for ongoing supports, and analyzing benefits was also described. Brown provided a description of the model in action for one student in a small rural town. Importantly, Brown recommended future research including evaluation of randomized trials of the Individualized Career Planning Model and development of a fidelity scale to measure implementation of CE.

Certo and Luecking (2006) described a model of transition service delivery for transition-aged youth with significant disabilities using CE strategies. The model called for a blend of resources to help students obtain employment prior to exiting school and to maintain employment after exit through ongoing support. The article described how pairing the service integration model with CE strategies would improve outcomes. Specifically, the authors recommended that customized job development be used to negotiate with employers the jobs for transition-aged students with disabilities. Certo and Luecking also provided a case study of a transition-aged youth who used a blend of resources to find a customized job. No outcome data were reported in the case study. The authors discussed a number of implications for practitioners. First, connections and planning between vocational adult service agencies and schools must occur early. Second, collaboration between agencies and school systems must “stretch” the resources of each system. Third, both vocational rehabilitation and community service providers should benefit when they work with consumers who were employed. Fourth, collaboration eliminated referrals to sheltered employment. Finally, identifying and negotiating customized work tasks created more employment opportunities for transition-aged youth who were perceived to be unemployable.

The Individualized Career Planning Model (Condon & Callahan, 2008) was designed for transition-aged youth with disabilities between ages of 14 and 21. The salient features of the model included: (a) CE opportunities, (b) entrepreneurial options or self-employment opportunities, (c) utilization of Social Security Work Incentives, and (d) linkages with adult agencies. The model was designed to align and be implemented within the existing school system structure. The authors described the discovery process and how to develop vocational profiles, conduct CE planning meetings, include discovery information in the Individualized Education Program (IEP), use representation portfolios, and develop a training and support plan. Condon and Callahan provided a description of how the model was implemented in Montana schools with recommendation on how to improve the model.

Phillips et al. (2009) described a project designed to implement customized employment for six rural special education transition students. The project trained special education teachers, occupational therapists, and vocational rehabilitation professionals to implement CE. Specifically, individuals were trained to conduct discovery, work exploration, strength-based profiles,

Table 1
Published articles on customized employment

| Author (year) | Title | Journal | Article Type | |
|--|--|--|--------------|------------|
| | | | Non Data | Data-Based |
| Brown, K. (2009). | Connecting youth and communities: Customized career planning for youth with psychiatric disabilities. | <i>Journal of Sociology & Welfare</i> , 36, 93-110. | X | |
| Callahan, M., Griffin, C., & Hammis, D. (2011). | Twenty years of employment for persons with significant disabilities: A retrospective | <i>Journal of Vocational Rehabilitation</i> , 35, 163-172. | X | |
| Certo, N, J. & Luecking, R. G. (2006). | Service Integration and School to Work Transition: Customized Employment as an Outcome for Youth with Significant Disabilities. | <i>Journal of Applied Rehabilitation Counseling</i> , 27 (4), 29-35. | X | |
| Citron, T., Brooks-Lane, N., Crandell, D., Brady, K., Cooper, M., & Revell, G. (2008). | A revolution in the employment process of individuals with disabilities: Customized Employment as the catalyst for system change. | <i>Journal of Vocational Rehabilitation</i> , 28, 169-179. | | X |
| Condon, E., & Callahan, M. (2008). | Individualized Career Planning for Students with Significant Support Needs Utilizing the Discovery and Vocational Profile Process, Cross-Agency Collaborative Funding and Social Security Work Incentives. | <i>Journal of Vocational Rehabilitation</i> , 28, 85-96. | X | |
| Elinson, L., Frey, W. D., Li, T., Palan, M. A., & Horne, R. L. (2008). | Evaluation of customized employment in building the capacity of the workforce development system. | <i>Journal of Vocational Rehabilitation</i> , 28, 141-58. | | X |
| Fesko, S., Varney, E., DiBiase, C., & Hippensiel, M. (2008). | Effective partnerships: Collaborative efforts that support customized employment. | <i>Journal of Vocational Rehabilitation</i> , 28, 159-168. | | X |
| Griffin, C., Hammis, D., Geary, T., & Sullivan, M. (2008). | Customized Employment where we are; where we're headed. | <i>Journal of Vocational Rehabilitation</i> , 28, 135-139. | X | |
| Harvey, J., Szoc, R., Rosa, M.D., Pohl, M., & Jenkins, J (2013). | Understanding the competencies need to customize jobs: A competency model for customized employment. | <i>Journal of Vocational Rehabilitation</i> , 38, 77-89. | | X |
| Heath, K. L. Ward, K. M., & Reed, D. (2013). | Customized self-employment and the use of discovery for entrepreneurs with disabilities. | <i>Journal of Vocational Rehabilitation</i> , 39, 32-27. | | X |
| Jorgensen S. T., Dillahunt-Aspillaga, C., & Kenney, C. (2015). | Integrating customized employment practices with the vocational rehabilitation system | <i>Journal of Vocational Rehabilitation</i> , 42 (3), 201-208. | X | |
| Inge, K. (2006). | Customized employment: A growing strategy for facilitating inclusive employment. | <i>Journal of Vocational Rehabilitation</i> , 24, 191-193. | X | |
| Inge, K. J. (2007). | Demystifying customized employment for individuals with significant disabilities. | <i>Journal of Vocational Rehabilitation</i> , 26, 63-66. | X | |
| Inge, K. J. (2008). | Choice and customized employment: A critical component. | <i>Journal of Vocational Rehabilitation</i> , 28, 67-70. | X | |
| Inge K., & Targett, P. (2006). | Identifying job opportunities for individuals with disabilities. | <i>Journal of Vocational Rehabilitation</i> , 25, 137-139. | X | |
| Inge, K. J., Targett, P. (2008). | Customized employment and disclosure. | <i>Journal of Vocational Rehabilitation</i> , 28, 129-132. | X | |
| Luecking, R., Cuzzo, L., & Buchanan, L. (2006). | Demand-side workforce needs and the potential for job customization. | <i>Rehabilitation Counseling</i> , 37 (4), 5-13. | | X |
| Luecking, R. G., Cuzzo, L., Leedy, M. J., & Seleznow, E. (2008). | Universal one-stop access: Pipedream or possibility. | <i>Journal of Vocational Rehabilitation</i> , 28, 181-189. | | X |

(Continued)

Table 1
(Continued)

| | | | |
|---|---|--|---|
| Luecking, D. M., Gumpman, P., Saecker, L., & Cihak, D. (2006). | Perceived quality of life changes of job seekers with significant disabilities who participated in a customized employment process. | <i>Journal of Applied Rehabilitation Counseling</i> , 37, 22-28. | X |
| Luecking, D. M., & Luecking, R. G. (2006). | A descriptive study of customizing the employment process for job seekers with significant disabilities. | <i>Journal of Applied Rehabilitation Counseling</i> , 37, 14-21. | X |
| Nicholas, R. B., Luecking, R. G., & Luecking, D. M. (2006). | Customized employment: from policy to practice. | <i>Journal of Applied Rehabilitation Counseling</i> , 37, 36-41. | X |
| Phillips, W. L., Callahan, M., Shumpert, N., Puckett, K., Petrey, R., Summers, K., & Phillips, L. (2009). | Customized transitions: discovering the best in us. | <i>Journal of Vocational Rehabilitation</i> , 30, 49-55. | X |
| Rogers, C. Lavin, D., Tran, T., Gantenbein, T., & Sharpe, M. (2008). | Customized employment: changing what it means to be qualified in the workforce for transition-aged youth and young adults. | <i>Journal of Vocational Rehabilitation</i> , 28, 191-207. | X |
| Revell, W. G., & Inge, K. J. (2007). | Customized employment Q and A: funding consumer-directed employment outcomes. | <i>Journal of Vocational Rehabilitation</i> , 26, 123-127. | X |
| Targett, P., Young, C., Revell, G., Williams, S. & Wehman, P. (2007). | Customized employment in one stop career centers. | <i>Teaching Exceptional Children</i> , 40, 6-11. | X |

and job development activities using the CE framework. The project was implemented as part of a 10-year follow-up study so no outcome data were included in the report.

Finally, Targett, Young, Revell, Williams, and Wehman (2007) described how youth in transition used One Stop Career Centers to support customized career development. The authors explained how students used the resources from centers to obtain employment. These resources included career club curricula, mentoring programs, and internships. In addition, they described how students had access to CE resource staff who provided individualized representation and negotiation with employers.

General CE articles. Nine articles provided a general overview of the CE model and one article described a systems change initiative. First, Griffin, Hammis, Geary, and Sullivan (2008) provided background information about CE and described specific practices associated with implementation including discovery, resource ownership, and informational interviews. The authors described discovery as an assessment phase which served to understand the person with a disability and identify skills, talents, and interests. The culmination of the discovery process was a vocational profile describing ideal working conditions for the individual.

Several descriptive articles on CE were published in the *Journal of Vocational Rehabilitation* between 2006 and 2011. Inge (2006) provided a brief history of CE and an overview of funding and technical assistance. Inge (2007) described how people with significant disabilities could utilize CE to obtain employment through a series of questions and answers. Revell and Inge (2007) presented a series of questions and answers related to the funding of CE and consumer-driven funding. Inge (2008) described how informed choice empowered individuals to move from segregated facility-based programs to integrated community employment. The author articulated how informed choice was embedded in the customization process. Inge and Targett (2006) described the negotiation process, again through a series of questions and answers. Finally, Inge and Targett (2008) provided questions and answers on disability disclosure and CE. Each of these articles provided information about practical strategies to fund and implement CE with individuals with more significant disabilities.

Nicholas, Luecking, and Luecking (2006) examined the implications of CE strategies for improving employment outcomes of individuals with disabilities. The authors explored the potential inhibitors and facilitators of wider scale adoption of CE and recommended five critical practices to improve CE including: (a) career centers to develop more capacity to offer CE services,

(b) career centers to be linked to reliable community rehabilitation providers who were familiar with CE, (c) job seekers with significant support needs who obtained employment especially those who are at risk of waiting for services or are receiving segregated services, (d) braided funds and services to provide CE, (e) business leaders to facilitate and develop CE.

Callahan, Griffin, and Hammis (2011) provided a retrospective covering 20 years of employment for persons with significant disabilities. The authors provided a brief history of customized wage employment and provided information about customized self-employment and discovery. The authors also discuss how CE job development practices should be implemented in small businesses.

Finally, Jorgensen, Dillahunt, and Kenney (2015), described a systems change initiative implemented by the Florida Division of Vocational Rehabilitation. The initiative was a capacity-building project specifically designed to add the discovery component of CE to the VR evaluation process. The authors described the pilot programs, course training modules, technical assistance procedures, infrastructure and sustainability efforts, and evaluation and monitoring systems.

3.2. Data-based research articles

Ten data-based articles were published between 2006 and 2013. Citron et al. (2008) described and analyzed a 7-year systems change effort focused on developing CE opportunities through community rehabilitation programs. The project served 198 adults with disabilities including mental illness, developmental disability, and physical disability. Overall, 141 project participants obtained employment working an average of 15–20 hours a week and were paid an average of \$8.00 an hour. Seventy-three participants used CE to negotiate job duties, 59 were self-employed, and nine obtained a job where negotiation was not used. The authors identified six points of analysis on organizational development and change that helped facilitate the CE process, including: (a) staff development, (b) community partnerships and diversified funding and diversified funding strategies, (c) sustainability, (d) shift in managerial approaches and supervision, (e) changes in human resource processes, and (f) expansion of CE to diverse population. The authors provided detailed information on the systems change process and also provided two cases studies to exemplify the CE outcomes.

Luecking and colleagues conducted two studies on CE and provided outcome information for two CE

model demonstration projects. First, Luecking, Cuozzo, and Buchanan (2006) conducted a telephone survey with nine employers who hired individuals with significant disabilities into CE. The survey was designed to ascertain information about each employer's reaction to hiring people with disabilities. The results indicated that job customization met employers needs, helped meet production goals, and improved customer satisfaction. All respondents indicated they would recommend the customized approach to other employers. Second, Luecking, Gumpman, Saecker, and Cihak (2006) examined quality of life changes of job seekers with significant disabilities who participated in the CE process. Study participants included 30 job seekers with cognitive, physical, psychiatric, learning, or multiple disabilities between the ages of 25 and 45. Thirty-nine percent of the job seekers had never worked and 50% were not currently working. The authors adapted the Quality of Life Changes Scale (Conroy, 2001) to measure changes in life quality across two intervals in time and used one-way repeated measures analysis of variance to determine whether there was a relationship between the CE process and quality of life indicators. The authors reported participants attained significantly higher quality of life ratings on 12 of the 13 indicators across time. In addition, the average hourly wage for job seekers was \$6.36 (minimum wage in most states in 2006 was \$5.15) and customized employees worked an average of 16.45 hours per week. Third, Luecking and Luecking (2006) described the employment outcomes of 135 participants in a CE model demonstration project funded by ODEP. The ages of participants ranged between 16–56 years, 54% had a cognitive/intellectual disability, and the remaining participants reported other disabilities such as physical, psychiatric, autism, or specific learning disabilities. Seventy-one individuals obtained a customized job as a result of the model demonstration project. The average hourly wage at placement was \$6.65 and average hours worked per week was 19 hours a week. The mean duration from intake to job placement was 128 days (range = 11 to 374 days). The authors also provided case examples of customized jobs in a variety of employment settings. Finally, Luecking, Cuozzo, Leedy, and Seleznow (2008) described the Maryland customized employment partnership funded by the ODEP from 2003–2007 and designed to assist individuals with significant disabilities with obtaining integrated employment using CE strategies. Sixty-two individuals with a variety of disabilities participated in the project. The authors reported 89% of the participants

achieved employment working an average of 22 hours per week at an average of \$9.31 an hour. The average time to achieve employment was 5.25 months.

Rogers, Lavin, Tran, Gantenbein, and Sharpe (2008) described a 5-year transition project where staff was trained to implement CE. The project served 475 transition-aged students. Most common disabilities were psychiatric, intellectual or development, or specific learning disabilities. The authors reported 287 participants obtained competitive employment. Participants averaged 28 work hours a week with a mean wage of \$8.17. In addition, 75% of those who obtained employment maintained their position for 6 months and 66% for 1 year.

Elinson, Frey, Li, Palan, and Horne (2008) evaluated ODEP-funded CE demonstration projects that were part of the one-stop system. A total of 6,555 individuals were served with 2,936 of these participants obtaining employment (44.8%). Most program participants reported psychiatric or emotional, cognitive, and physical disability. The authors collected both qualitative and quantitative data from CE demonstration projects. Qualitative data were collected from interviews and examination of quarterly reports. Quantitative outcome data were collected at three periods of time over a 2-year period and included information about competitive employment and retention rates, demographic and work-related characteristics, and program services received by participants. The researchers examined numerous outcome factors including duration of employment and wage, and found that individuals who obtained CE maintained consistent wage and hours over the 2-year period. The authors noted that while project sites were successful at assisting persons with disabilities develop job leads and preparing for interviews, only a few project sites successfully negotiated or carved new employment positions. Researchers also indicated that programs were successful at implementing components of CE but did not sustain after demonstration funding ended.

Fesko, Varney, DiBiase, and Hippensiel (2008) described numerous CE partnership models developed among workforce development systems and disability providers who received CE grants through the ODEP, Working for Freedom, Opportunity, and Real Choice Through Community Employment (WorkFORCE) actions grant initiative. The 26 CE and WorkFORCE action grantees were required to submit individual reports which were reviewed and cross referenced to identify themes related to developing partnerships. Emergent themes from qualitative data

included (a) understanding partners, (b) building on preexisting partnerships, (c) identifying shared values and common vision, (d) creating collaborative service delivery, (e) developing multilevel partnerships, (f) creating collaborative partnerships, (g) developing customized support teams, and (h) systematizing service delivery collaboration. The review suggested collaboration was the primary innovation for all grant sites. The authors provided several recommendations for improving partnerships at both local and federal levels, such as positioning one-stop career centers as a “hub” of collaboration, encouraging disability providers to engage with one stops, and creating interagency work groups.

Harvey, Szoc, Rosa, Pohl, and Jenkins (2013) developed and described a CE competency model. The authors conducted a series of panel reviews with 26 subject matter experts to develop and refine a competency model including knowledge, skills, abilities, and other characteristics necessary to provide CE. The subject matter experts included researchers, trainers, and other individuals who provided CE to individuals with disabilities. One wave of interviews was conducted with 11 experts using a set of questions covering topics such as characteristics of their organization, experience with CE, implementation of CE, and activities performed during each component of the customized process. The qualitative data obtained from these interviews was compiled and used to refine a task list outlining knowledge, skills, activities, and other characteristics (KSAOs) of CE. The authors subsequently asked content experts to rate, sort, and verify competency model items for the previously identified KSAOs and tasks list. Based on this review, the authors identified 31 task items divided into components (discovery, job search planning, job development and negotiation, post-employment support). A total of nine competencies and 83 KSAOs for each competency were outlined. Competencies included: (a) positive and open approach to life; (b) customized job development; (c) CE components and process; (d) demonstration of respect and willingness to relate to others; (e) business and employment practices; (f) business networking; (g) information collection, interpretation, and use; (h) communication with others; and (i) development of plans and organization. The authors discussed implications for the CE competency model and suggested it be a tool for setting and implementing standards for CE services.

Heath, Ward, and Reed (2013) described a 4-year Startup Alaska research demonstration project whose purpose was to identify promising practices

in customized self-employment. The study included 71 participants with disabilities with non-cognitive mental impairment or physical impairment who received services from the StartUp project and other resources such as vocational rehabilitation, disability program navigators, small business development centers, school districts, and client assistance programs. The salient features of the model included a dedicated self-employment facilitator, discovery, access to a virtual incubator (monthly online business training and reviews of draft business plans) and business plan development. Project site staff received training and technical assistance from two national consulting firms who are experts on CE. The researchers developed and distributed a survey to participating facilitators and virtual incubators. The survey asked specific information about participant and program characteristics, and outcomes. The criterion variables for the study were business launch outcomes and the research documenting whether participants did or did not launch a business. Predictor variables included gender, age, disability, education level, wage, access to discovery, among others. The authors used a chi-square analysis to determine if there was an association between participating in the CE process and launching a business. The results suggested that the CE discovery process was associated with successful self-employment.

4. Discussion

Fifteen non-data articles and 10 data-based studies on CE were reviewed. We find it noteworthy that although we identified 10 studies with descriptive data, there were no group experimental/quasi-experimental or single-subject research studies. While these descriptive studies provided general information about CE strategies, they did not sufficiently establish the efficacy of CE in research with experimental controls. Specifically, researchers have yet to conduct studies that systematically compare CE (or specific components) to other procedures to determine relative effectiveness. Without this research, we do not know what components of CE account for successful placements, nor in what circumstances certain aspects must be emphasized or finessed to be effective. For example, we may hypothesize that discovery is an iterative processes that leads to successful placement. We may hypothesize that for individuals with significant disabilities, CE works better when negotiated with small business owners who can dedicate time working with a service provider to

learn how to support the employee with disabilities. Unfortunately, no validation data are available to support the hypotheses.

Moreover, researchers have yet to describe CE intervention(s) using fidelity measures with sufficient detail to allow replication across studies. Without systematic replication, an empirical basis for an intervention cannot be sufficiently established. Only when a series of replicated studies demonstrate the effectiveness of CE interventions will we adequately inform services providers, vocational rehabilitation counselors, transition teachers, and others about how to effectively implement CE with individuals with disabilities. A validated fidelity scale or flowchart with CE-based decision making framework would greatly improve implementation of CE across programs.

The lack of studies to establish empirical evidence supporting the efficacy of CE is surprising given the attention CE received at the Federal policy level. While descriptive research can enhance the field's understanding of CE and associated outcomes, model descriptions and outcome wage and hour data alone do not fully capture the necessary evidence to establish the utility of CE. In order to expand the field's knowledge about evidence-based CE practices, we suggest more research to examine in detail the effects of individual components and processes. This research should be designed to meet quality indicators for both group experimental/quasi-experimental research (Gersten, Fuchs, Coyne, Greenwood, & Innocenti, 2005) and single-subject research (Horner, Carr, McGee, Odom, & Wolery, 2005). These indicators include descriptions of (a) the participants and setting, (b) the intervention (independent variable) and outcome measures (dependent variables), (c) the fidelity of implementation measures, (d) the social validity measures and (e) the appropriate data collection and analyses. In addition, continued systematic peer reviews of research will help ensure a sufficient level of evidence supporting the interventions associated with CE (e.g. discovery, negotiation, training and support).

5. Recommendations for future research

Based on the authors' examination of existing research and what we consider weaknesses in the empirical base, we make five recommendations for future research: (a) validation on the effects of CE, (b) a CE fidelity of implementation scale, (c) research on employer engagement, (d) sustainability, and

(e) implementation of CE in the context of transition from school to employment. Other recommended research could be added to this list, but we will cover only these because they are considered most basic and important given the current development of CE.

5.1. Validation research on the effects of CE

Consistent with Brown's (2009) recommendation, we suggest randomized trial research on the effects of CE or its components in producing desired outcomes, i.e., discovery, negotiation, and maintenance. Similar to Cook et al. (2005) who analyzed randomized trials of supported employment interventions with individuals who had severe mental illness, CE needs large-scale research to randomly assign participants to experimental groups (e.g., CE, supported employment) or control groups (e.g., searching of want ads) while analyzing dependent measures such as job acquisition, wages, hours, and self-satisfaction. Similarly, Wehman et al. (2014) conducted a randomized trial involving 18–21 year old individuals with autism spectrum disorder working in competitive employment. Like Wehman et al., CE needs research examining retention of jobs across time and the services necessary for sustaining employment. While such experimentation is expensive and meticulous, collaborations across research centers may produce the cumulative resources necessary.

5.2. Development and validation of a CE fidelity scale

Because CE is a process driven strategy that involves a number of critical components (e.g. discovery, negotiation, follow-along), we recommend that a fidelity scale be developed and validated to determine the degree to which programs are adhering to high quality CE standards. For example, Bond, Becker, Drake, and Vogler (1997) developed a 15 item Scale instrument designed to assess the fidelity and implementation of the Individual Placement and Support model of supported employment for people with server mental illness. The development and validation of a CE fidelity scale would help capture essential practices and procedures used in service delivery. A CE fidelity scale would guide practitioners to systematically implement CE and also serve as an objective measure of performance during training on the critical features. In addition, a validated fidelity scale would assist funding agencies determine which community rehabilitation

agencies were aligning their practices with those outlined on the scale.

5.3. Employer engagement

An interesting finding from this review was the paucity of research on how to effectively engage employers during the CE process. Given that one of the major attributes of CE is working directly with employers to negotiate or create a customized job, more research should be conducted to determine how best to engage and develop relationships with employers that result in placement and maintenance of employees with disabilities. Research should also examine how employer policies and practices influence (a) employer decisions to customized jobs, (b) formal policies and procedures that impede customizing a job, and (c) how on-the-job training and supports can be developed.

5.4. Sustainability

Ellison et al. (2008) reported that model CE programs had difficulty sustaining CE after demonstration funds were terminated. Clearly, more research needs to be conducted in this area so that researchers can identify different funding streams to support and maintain CE. Specifically, research should examine how time-limited funding agencies (VR) and long-term agencies (IDD) can braid funding to meet the individual support needs of the customized employee.

5.5. Transition from school to employment

Given that paid employment experiences during the transition years are positively correlated to post-school outcomes (e.g., Benz, Lindstrom, & Yovanoff, 2000), it seems reasonable to expect that CE should be utilized in transition settings. Researchers should, therefore, examine how to effectively implement CE in schools. Specifically, research should examine how transition teachers can conduct discovery activities with their students and how embed discovery information into IEP goals to be carried out. Research should also examine how to effectively implement CE with high-school age youth with disabilities in community-based settings. Specifically, research should examine school and district facilitators and barriers to CE implementation, and how to effectively train special education teachers, paraeducators, and others involved in customized service delivery.

6. Conclusions

Findings from this review indicate that CE is contributing to positive integrated employment outcomes for individuals with disabilities. Indeed, there is heuristic value in both the non-data and data-based articles we reviewed because they (a) helped establish a conceptual framework for CE, (b) provided descriptions on how to implement CE in a variety of contexts and (c) provided descriptive evidence that CE practices are improving integrated employment outcomes such as wages, hours worked, and quality of life. Despite the value of this information, there still remain questions about the evidence base for effectively implementing CE at both the practitioner and systems levels. Because CE is a process that uses numerous strategies (e.g., discovery, negotiation, job carving, informational interviews, self-employment, systematic instruction) and requires meaningful coordination and cooperation across agencies to produce employment outcomes, the likelihood of implementing CE with high fidelity across different agencies may be diminished without more research that can directly translate to practice.

Because CE is now recognized and defined at the federal policy level, we advocate for additional research to replicate, validate and establish the evidence base for CE. Without more validation research, we run the risk of adopting an under-defined model with poor fidelity of implementation. This could lead to a variety of non-evidence based practices implemented by poorly informed practitioners all operating under the guise of “customized employment.” More rigorous research will deepen our understanding of the complexities of CE and help us implement and improve CE. This information will assist us to create more buy-in and promote sustainability from various stakeholders such as vocational rehabilitation, intellectual and developmental disability state agencies, and special education transition programs. Most important, in-depth research on CE will lead to more efficient, effective, and individually tailored service to people with significant disabilities.

7. Acknowledgement of other relevant literature

While this review focused on articles published in peer-reviewed journals, we acknowledge other valuable non-peer reviewed materials that describe components and process of CE. For example, Keeton, Brooks-Lane, Griffin, and Cassidy (2015) developed a rural

employment replication manual based on the Florida Rural Routes to Employment Project. The manual provided comprehensive information about the process components of CE including discovery, negotiation, and supports. The manual included information about barriers, resources and solutions used to facilitate improved employment outcomes. In addition, national consultants such as Marc Gold and Associates and Griffin-Hammis and Associates have been engaged in CE development and capacity building projects around the United States. As a result of their work, they developed a number non-peer reviewed white papers, manuals, fact sheets and resources related to customized employment service delivery. These publications provided information that can help researchers identify variables related to effective CE service delivery.

References

- APSE (2015). *Employment first across the nation*. Retrieved from http://www.apse.org/wp-content/uploads/2014/10/employment-First_Infographic.pdf
- Bayer, S., Brown, T., Akandi, R., & Rapley, M. (2010) A comparison of life outcomes for people with disabilities in supported employment, day services, and employment enterprises. *Journal of Applied Research in Intellectual Disabilities*, 23, 290-295.
- Benz, M.R., Lindstrom, L., & Yovanoff, P. (2000). Improving graduation and employment outcomes of students with disabilities: Predictive factors and student perspectives. *Exceptional Children*, 66, 509-529.
- Bond, G. R., Becker, D. R., Drake, R. E. & Vogler, K. (1997). A fidelity scale for the Individual placement and support model of supported employment. *Rehabilitation Counseling Bulletin*, 40, 265-284.
- Brown, K. (2009). Connecting youth and communities: Customized career planning for youth with psychiatric disabilities. *Journal of Sociology & Welfare*, 36, 93-110.
- Butterworth, J., Smith, F. A., Hall, A. C., Migliore, A., Winsor, J., & Domin, D. (2014). *StateData: The national report on employment services and outcomes 2013*. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.
- Callahan, M., Griffin, C., & Hammis, D. (2011). Twenty years of employment for persons with significant disabilities: A retrospective. *Journal of Vocational Rehabilitation*, 35, 163-172.
- Certo, N., J. & Luecking, R. G. (2006). Service integration and school to work transition: Customized employment as an outcome for youth with significant disabilities. *Journal of Applied Rehabilitation Counseling*, 27, 29-35.
- Cimera, R. (2012). The economics of supported employment: What new data tell us. *Journal of Vocational Rehabilitation*, 37, 109-117.
- Cimera, R., & Burgess, S. (2011). Supported versus sheltered employment; cumulative cost, hours worked, and wages earned. *Journal of Vocational Rehabilitation*, 35, 85-92.

- Citron, T., Brooks-Lane, N., Crandell, D., Brady, K., Cooper, M., & Revell, G. (2008). A revolution in the employment process of individuals with disabilities: Customized Employment as the catalyst for system change. *Journal of Vocational Rehabilitation*, 28, 169-179.
- Condon, E., & Callahan, M. (2008). Individualized career planning for students with significant support needs utilizing the discovery and vocational profile process, cross-agency collaborative funding and social security work incentives. *Journal of Vocational Rehabilitation*, 28, 85-96.
- Conroy, J. W. (2001). Personal life quality protocol: Generic complete version 4.8. Narberth, PA: The Center for Outcome Analysis.
- Cook, J. A., Leff, S., Blyler, C. R., Gold, P. B., Goldberg, R. W., et al. (2005). Results of a multisite randomized trial of supported employment interventions for individuals with severe mental illness. *JAMA Psychiatry*, 62, 505-512.
- Elinson, L., Frey, W. D., Li, T., Palan, M. A., & Horne, R. L. (2008). Evaluation of customized employment in building the capacity of the workforce development system. *Journal of Vocational Rehabilitation*, 28, 141-58.
- Fesko, S., Varney, E., DiBiase, C., & Hippensiel, M. (2008). Effective partnerships: Collaborative efforts that support customized employment. *Journal of Vocational Rehabilitation*, 28, 159-168.
- Gersten, R. Fuchs, L. S., Coyne, M., Greenwood, C., & Innocenti, M. (2005). Quality indicators for group experimental and quasi-experimental research in special education. *Exceptional Children*, 71, 149-164.
- Griffin, C., Hammis, D., Geary, T., & Sullivan, M. (2008). Customized employment where we are; where we're headed. *Journal of Vocational Rehabilitation*, 28, 135-139.
- Harvey, J., Szoc, R., Rosa, M.D., Pohl, M., & Jenkins, J. (2013). Understanding the Competencies need to customize jobs: A competency model for customized employment. *Journal of Vocational Rehabilitation*, 38, 77-89.
- Heath, K. L., Ward, K. M., & Reed, D. (2013). Customized self-employment and the use of discovery for entrepreneurs with disabilities. *Journal of Vocational Rehabilitation*, 39, 32-27.
- Hoff, D. (2013). Employment first resource list. Boston, MA: Institute for Community Inclusion Retrieved from <http://www.apse.org/wp-content/uploads/docs/Employment%20First%2012-13%20%28SELN%20version%29.pdf>
- Horner, R. H., Carr, E. G., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, 71, 165-179.
- Inge, K. J. (2006). Customized employment: A growing strategy for facilitating inclusive employment. *Journal of Vocational Rehabilitation*, 24, 191-193.
- Inge, K. J. (2007). Demystifying customized employment for individuals with significant disabilities. *Journal of Vocational Rehabilitation*, 26, 63-66.
- Inge, K. J. (2008). Choice and customized employment: A critical component. *Journal of Vocational Rehabilitation*, 28(1), 67-70.
- Inge, K. J., & Targett, P. (2006). Identifying job opportunities for individuals with disabilities. *Journal of Vocational Rehabilitation*, 25, 137-139.
- Inge, K. J., & Targett, P. (2008). Customized employment and disclosure. *Journal of Vocational Rehabilitation*, 28(2), 129-132.
- Jorgensen S. T., Dillahunt-Aspillaga, C., & Kenney, C. (2015). Integrating customized employment practices with the vocational rehabilitation system. *Journal of Vocational Rehabilitation*, 42(3), 201-208.
- Keeton, B., Brooks-Lane, N., Griffin, C. C., & Cassidy, P. (2015). *The florida routes to employment replication manual*. St. Petersburg, FL: Center for Social Capital.
- Luecking, D. M., Gumpman, P., Saecker, L., & Cihak, D. (2006). Perceived quality of life changes of job seekers with significant disabilities who participated in a customized employment process. *Journal of Applied Rehabilitation Counseling*, 37, 22-28.
- Luecking, D. M., & Luecking, R. G. (2006). A descriptive study of customizing the employment process for job seekers with significant disabilities. *Journal of Applied Rehabilitation Counseling*, 37, 14-21.
- Luecking, R., Cuozzo, L., & Buchanan, L. (2006). Demand-side workforce needs and the potential for job customization. *Rehabilitation Counseling*, 37, 5-13.
- Luecking, R. G., Cuozzo, L., Leedy, M. J., & Seleznow, E. (2008). Universal one-stop access: Pipedream or possibility. *Journal of Vocational Rehabilitation*, 28, 181-189.
- National Organization on Disability/Kessler Foundation (2010). Survey of Americans with disabilities. Retrieved http://nod.org/assets/downloads/01-2011_Exec_Summary.pdf
- Nicholas, R. B., Luecking, R. G., & Luecking, D. M. (2006). Customized employment: From policy to practice. *Journal of Applied Rehabilitation Counseling*, 37, 36-41.
- Petrovski, P. (1997). The relationship between job satisfaction and psychological health on people with intellectual disability in competitive employment. *Journal of Intellectual and Developmental Disability*, 22, 199-211.
- Phillips, W. L., Callahan, M., Shumpert, N., Puckett, K., Petrey, R., Summers, K., & Phillips, L. (2009). Customized transitions: Discovering the best in us. *Journal of Vocational Rehabilitation*, 30, 49-55.
- Rogers, C. Lavin, D., Tran, T., Gantenbein, T., & Sharpe, M. (2008). Customized employment: Changing what it means to be qualified in the workforce for transition-aged youth and young adults. *Journal of Vocational Rehabilitation*, 28, 191-207.
- Revell, W. G., & Inge, K. J. (2007). Customized employment Q and A: Funding consumer-directed employment outcomes. *Journal of Vocational Rehabilitation*, 26, 123-127.
- Targett, P., Young, C., Revell, G., Williams, S. & Wehman, P. (2007). Customized employment in one-stop career centers. *Teaching Exceptional Children*, 40, 6-11.
- U.S. Census Bureau (2012). *2012 American community survey*. Retrieved from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_1YR_S1811&prodType=table
- U.S. V. Rhode Island, 1:14 -cv- 00175 (D.R.I.2014).
- Wehman, P., Inge, K., Revell, G.W., & Brooke, V. A. (2007). *Real work for real pay: Inclusive employment for people with disabilities*. Baltimore, MD: Brookes.
- Wehman, P., Schall, C. M., McDonough, J., Kregel, J., Brooke, V., Molinelli, A., et al. (2014). Competitive employment for youth with autism spectrum disorders: Early results from a randomized clinical trial. *Journal of Autism and Developmental Disorders*, 44, 487-500.
- Workforce Innovation and Opportunity Act of 2014, Pub. L. 113-128 128, STAT, 1634.