Vocational Evaluation and Work Adjustment Association Journal

Editor: Michael J. Millington, Ph.D., CRC; 6524 Old Main Hill, Utah State University, Logan, UT 84322-6524; (435) 797-3488 (office); (435) 797-7537 (Fax); michael.millington@usu.edu
Co-Editor: Andrea Perkins, Ph.D., CRC, CVE; 143 Hagedorn Hall, Hofstra University, Hempstead, NY 11549; (516) 463-6492; andrea.perkins@hofstra.edu
James Soldner, Ph.D., CRC, BCBA-D; Utah State University; (435) 797-3241; james.soldner@usu.edu
Editorial Assistant & Journal Designer: Chenyong (Jessie) Zhu, M.S.; 6524 Old Main Hill, Utah State University, Logan, UT 84322-6524; (435) 797-3445 (office); (435) 797-7537 (Fax); jessie.zhu@usu.edu

Mission
The Vocational Evaluation and Work Adjustment Association (VEWAA) Journal advocates for the advancement of an evidence based practice for the disciplines of vocational evaluation and work adjustment, specifically as applied to the field of vocational rehabilitation. Our primary audiences are the practitioners of these crafts. We seek a knowledge and skill base that will improve service delivery, improve VR client access to employment and career outcomes, define and legitimate evaluation and adjustment roles, and encourage a community that recognizes the unique value of vocational evaluation and work adjustment in the spectrum of VR service.

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Editorial: Parting Words for a Journal in Transition

Michael J. Millington

My thanks to the VEWAA board for the opportunity to serve as the journal editor. This issue marks my departure from this role and I believe that my short tenure has been a good one. In the past three years we have sought a new direction, more community involvement, and higher energy. To a degree we have succeeded. We imposed a new vision for the journal that opens up possibilities. We have managed to generate a new issue in each year, which was a step in the right direction. We have increased the number of submittals, if only slightly. We have attracted new talent in Andrea Perkins and James Soldner. They speak for a new generation of professionals with a vision of their own and a will to build. Through them, we are beginning to attract more people to the cause. We have opened a dialog with VECAP on future collaboration. While the division between our organizations remains, it seems less and less an obstacle for getting things done. These are promising green shoots that augur a reinvigorated future for vocational evaluation, work adjustment, and the professionals who have long advocated for our discipline.

I regret leaving on principle, but strategically it’s for the best. I have accepted a position at the University of Sydney and will be relocating soon. The enormity of this career move will monopolize my attention and resources for months. Sustaining this humble growth deserves more than my good intentions. And so focus shifts to the transition. Andrea Perkins will be taking the lead and I will be transferring all in-process work to her. The VEWAA Journal is in good hands. Parting words are cheap, given my short tenure and the fact that I am not so much leaving as taking a smaller role on the review board. Still, I have to write something in this editorial space, and I always have an opinion:

• Be proud to be VEWAA. We represent an essential voice of the profession. There is no counseling without evaluation. There is no outcome without adjustment.

• Because you are proud, advocate. We are breaking out of a model that has too long relegated us to an undeserved ancillary status. Speak out. Work for change.

• Because you advocate, unify. There is no stronger voice than union. Find common ground in shared values. Reify them in collaborative work.

• Because you are unified, reach out. We do not exist for ourselves, but for the service we provide to others. True power comes from empowering others. Model inclusion in everything you do.

• For all of this, do not fear change but embrace it. We honor the profession by creating space for the new: new dialog, new ideas, new practice, new research, and new editors.

My role as editor has been a transitional one. I may have encouraged a conversation about the future, but I am not the person who will lead us there. The responsibility for cultivating these green shoots belongs to Andrea and James, my colleagues of late; the assistant professors and students that I have engaged at poster sessions; and the new evaluators that I have met on the job. It falls to these young lions to reinvent the profession in this brave new world of information economies, constantly evolving technology, and uncertain politics. With that, let me say welcome Andrea, and welcome to all who follow. You have a challenge before you, but one I am sure you will master. Good luck with the VEWAA Journal and know that I am forever at your service.
Vocational evaluation is an integral piece of the vocational rehabilitation process in that it establishes the basis for “planning needed services, resources, and support” (Commission on Rehabilitation Counselor Certification [CRCC], 2008, p. 1) to meet the vocational goals of clients. It is a comprehensive service that identifies vocational interests, aptitudes, abilities, strengths and weaknesses by integrating and synthesizing medical, functional, psychological, social, economic, and cultural information about the client and interpreting the resultant schema into the vocational rehabilitation planning process (Canadian Assessment, Vocational Evaluation, and Work Adjustment Society [CAVEWAS], 2009). Regardless of the particulars, good vocational evaluation is based on knowledge of the world of work, knowledge of the individual, and the skill to synthesize the two.

Vocational evaluation is less effective when the impact of any disabling condition on the life of the client is not known. In the case of problem gambling, there is a near complete lack of guidance available to the evaluator. There is no research in the vocational evaluation literature on the subject, indeed there is little to offer in the rehabilitation literature in general. This may be in part because problem gambling is not recognized as a legitimate disability, at least from the perspective of eligibility in the state vocational rehabilitation (VR) system. Despite this, problem gambling can and does cause profound damage in any life. The extent to which it affects the rehabilitation process and its outcomes is as yet unexplored. We assert that if people with disabilities gamble they are at least as likely to experience problems with this pastime as the general public, and if problem gambling exists within this community, it is worthy of study. To this end, we will address the lack of research into the vocational issues of problem gambling for people with disabilities by developing an empirically conceptualized domain upon which to build theory.

Problem Gambling

The gambling research literature uses a variety of terms to describe the troubles resulting from an individual’s gambling. The most widely used terms are pathological and problem gambling (Volberg & Moore, 1999). Pathological gambling refers to the disease recognized by the American Psychiatric Association (APA) depicting behavior that meets at least five of the APA’s ten criteria (2000). These behaviors include continuous or periodic loss of control over gambling behavior, a preoccupation with gambling and obtaining money to gamble, tolerance that requires larger or more frequent wagers, withdrawal symptoms associated with attempts to cease or reduce gambling, chasing losses, irrational thinking that gambling will solve all problems, breaking the law to
continue gambling, continuation of the behavior despite adverse consequences, and asking others for financial bailouts. Alternately, some researchers have classified individuals whose gambling behavior have damaged, or disrupted personal, family, or vocational pursuits, but does not meet the full five criteria, as problem or potential pathological gamblers (Cox, Lesieur, Rosenthal, & Volberg, 1997). Currently as many as 1 to 3 percent of the adult population in the United States meet the diagnostic criteria for problem and pathological gambling (Shaffer, Hall, & Bilt, 1999). We will use the term problem gambling to encompass both problem and pathological gambling.

Problem gambling negatively impacts the individuals that gamble and anyone who depends upon them (National Research Council [NRC], 1999). Problem gambling results in increased likelihood of legal problems (NRC) and unemployment for the individual (Ladouceur, Bopisvert, Loranger, & Sylvain, 1994; Lesieur, 1998; Potenza, Fiellin, Heninger, Rounsaville, & Mazure, 2002; Thompson, Gazel, & Rickman, 1997; Wiebe, Single & Falkowski-Ham, 2001). Families of pathological gamblers face a host of financial, physical and emotional problems including divorce, domestic violence, child abuse and neglect. Family systems are often stressed by significant financial burdens imposed by gambling, resulting in bankruptcy, loss of housing and possessions, etc. (NRC, 1999). Spouses of problem gamblers experience depression and anxiety, severe and chronic headaches, stomach problems, dizziness and breathing difficulties, and often turn to alcohol, smoking, and overeating to cope (Lorenz & Yaffee, 1988; Lorenz & Shuttlesworth, 1983). The children of problem gamblers have increased risk of developing gambling problems, as well as greater incidences of smoking, drinking, and drug use. Problem gambling is more than a major impediment to continued employment; it erodes the social network upon which vocational restoration depends.

**Problem Gambling and Disability**

Vocational Evaluators will encounter problem gambling even though it is not a recognized disability under the Americans with Disabilities Act. Research suggests people with mental health disorders, attention deficit hyperactivity disorder, depression, anxiety, substance abuse, and substance dependence have higher incidences of problem gambling than the general population (Hawley, Glenn & Diaz, 2007; Ladd & Petry, 2003; Hall et al., 2000; Cunningham-Williams, Cottler, Compton, & Spitznagel, 1998; Specker, Carlson, Edmonson, Johnson, & Marcotte, 1996). Accordingly, people with gambling related problems are overrepresented within the disability benefit’s system (NRC, 1999). A study of users of a free or reduced cost dental care program reported that participants collecting disability met the criteria for problem gambling nearly twice as often as the general population (Morasco & Petry, 2006). Gambling helpline demographics reported that roughly 15% of working age callers collected Social Security Disability Income or a related disability compensation (Hawley, Glenn & Diaz, 2007). It is clear that people with disabilities, as a service population, experience gambling problems.

Research demonstrates that individuals with gambling related problems face numerous stressors. However, it is not apparent how these stressors affect the vocational rehabilitation process. There is a need to understand what factors vocational evaluators should be cognizant of when assessing work goals. To establish an empirical foundation for future study, we will develop a multidimensional model of problem gambling through a multivariate research strategy known as Concept Mapping / Pattern Matching (CMPM).

**Concept Mapping / Pattern Matching**

CMPM is a form of structural conceptualization used to assess complex issues from the perspective and needs of a diverse group of stakeholders (Trochim & Linton, 1986). It utilizes a six step process to generate a visual representation of the domain in question. Convening experts familiar with the domain of interest, CMPM utilizes group processes (brainstorming, sorting, rating, and interpretation) with the multivariate statistical methods of multidimensional scaling and hierarchical cluster analysis, to result in a concept map or pictorial graph that can be used to guide treatment planning, evaluation, and measurement (Trochim & Kane, 2005). CMPM has been used within the rehabilitation arena (Donnelly, Donnelly & Grohman, 2005; Trochim, Cook, & Setze, 1994; Trochim & Cook, 1992; Johnsen, Biegel, & Shafran, 2000), and can be particularly useful for vocational evaluation in that it defines specific issues of concern for clients who are problem gamblers.

CMPM should not be confused with more conventional inferential statistical processes. Its purpose
is not to compare differences among groups (i.e., t-tests or ANOVA), nor to create predictive models (i.e., regression), nor to compare categorical frequencies (i.e., Chi-Square). Its primary purpose is instead to help a group of stakeholders quickly reach consensus as they work to conceptualize a given construct or domain of knowledge. In this respect, the purpose of CMPM is similar to that of the Delphi Method, since both are used to help groups of stakeholders reach consensus. CMPM differs from the Delphi Method, however, in that as opposed to using an iterative rating process to establish consensus, it instead utilizes statistical methods for aggregation. For this reason, CMPM is not a single statistical method, but instead is a broader methodology that employs multiple statistical and qualitative methods (e.g., focus groups, multidimensional scaling, and cluster analysis). Unlike conventional inferential methodologies, CMPM does not employ null hypothesis testing by establishing hypotheses a priori. The sampling approach of CMPM is also rather unconventional since the process can be carried out with less than 15 stakeholders.

The goal of this study was to conceptualize a model to guide and plan for the vocational rehabilitation of problem gamblers by (1) compiling an exhaustive list of the issues related to the vocational rehabilitation of problem gamblers, and (2) structuring this item set as a model to inform the vocational rehabilitation of clients who are problem gamblers to improve their employment outcomes and wellbeing.

**Methodology**

This study utilized CMPM methodology to assess the vocational rehabilitation concerns of individuals who are problem gamblers. Specifically, the research question was: What are the vocational rehabilitation issues germane to clients who are problem gamblers?

**Participants**

The participants of this study (n=14) were leading service experts in the field of problem gambling and were all members of the Board of Directors the National Council on Problem Gambling. They represented four distinct groups in the field, recovering problem gamblers, treatment professionals, vocational rehabilitation counselors, and employers who operate responsible gaming or problem gambling employee support services.

**Procedures**

**Item generation.** Following orientation and consent to the study, participants engaged in a focus group/brainstorming session focused on the research question. As experts and stakeholders, focus group participants were encouraged to generate a list of approximately 100 items in direct response to the research question. Participants produced ninety-four statements during the 1.5-hour brainstorming session reflecting a diverse set of issues relevant to clients who are problem gamblers. In a few instances, some of the generated items were repetitious. When group members noted this phenomenon, a consensus process was used to collapse the multiple items into a single item.

**Structuring of items.** The structuring of the items involved two tasks for participants. In the first, each was provided the list of items generated during the focused brainstorming session, and was asked to individually sort items into separate “piles” of meaningfully related items. While working on this first task, study participants worked individually and each generated a unique number of piles, each pile having a unique combination of items. The second task, also performed on an individual level, was to then rate the relative importance of each of these items to the vocational rehabilitation of individuals who are problem gamblers (Extremely Important; Very Important; Important; A Little Important; Not at All Important).

**Data Analysis**

The aggregate “sort” among all participants was determined by first utilizing multidimensional scaling to create a two-dimensional plot of the 94 items generated. Data for multidimensional scaling was input as a similarity matrix. That is, each cell of the matrix indicated the frequency with which two particular items were placed in the same pile among all participants. Multidimensional scaling then yielded coordinates for a plot of the 94 statements generated. The relative Euclidean distance between individual items indicates the relative frequency with which the items were located in the same or similar piles. In other words, the closer two items appear on this plot, the more participants perceive them to be meaningfully similar to one another (i.e., the more often participants placed them in the same pile). Based on the relative Euclidian distances, hierarchical cluster analysis was then
used to establish groups of similar items. Hierarchical cluster analysis results in a range of solutions (i.e., 10-cluster solution, 9-cluster solution, etc.). Clusters are interpreted and labeled according to the theme they represent. Next, the data gathered from participants’ ordinal responses were used to determine the average level of perceived importance for each cluster.

Reliability and Validity

Although reliability for CMPM has been established (Trochim, & Kane, 2005; Trochim, 1989; Davis, 1989), its calculation departs from conventional test theory in which there are correct or incorrect answers. Since correct answers do not exist for CMPM, reliability focuses on the consistency of the maps produced as opposed to the individual items (Trochim, 1989). Overall, research on the reliability of CMPM has focused on two primary efforts: (a) providing an accurate representation of what people were thinking, and; (b) integrating the concept maps into scientific theory building and experimentation (Trochim, 1989). Pattern matching itself is used as a methodology for establishing reliability and validity (Davis, 1989; Marquart, 1989).

Results

Participants generated 94 statements (N = 94) in response to the research question. To establish the aggregate sorting of the 94 items, multidimensional scaling was utilized using SAS software. Euclidean distances between individual items in the Point Map reflect the relative frequency with which participants grouped items together. The utility of the Point Map is enhanced by finding meaningful clusters among the 94 points. Using SPSS software, Hierarchical Cluster Analysis involved an iterative process where 2 to 12 clusters were identified and analyzed for interpretability (Trochim, 1989). Similar to factor analysis, decision making regarding the choice cluster involves bridging values, as well as cluster coherence as determined by the analyst (Donnelly, Donnelly, & Grohman, 2005).

The 7-cluster map was determined to be the most optimal based on statistical and interpretive analysis. The following titles were chosen for the 7 clusters, and a brief subjective description of the common theme among cluster items follows:

1. Psychological Issues – Person with the Problem (n = 22). This cluster involves issues that reside within the individual. Items include: lack of self-confidence; lack of focus/motivation – unable to change; lying; depression; self-implosion; lack of self respect; lack of planning; never being too hungry, angry, lonely, tired (HALT); holier than thou – judging others’ behaviors; stress related ailments; having a co-existing disability; having co-occurring disorders; spiritual bankruptcy; grief over loss of fantasy; not meeting expectations – “imposter syndrome”; transferring addiction to another addiction; loss of fantasy; feelings of hopelessness; accepting responsibility; recreation- having a lack of alternatives other than gambling; recovery management- empowerment- sustaining recovery; and engagement in supportive recovery.

2. Family and Related Support Issues that Impact Recovery (n = 5). This cluster represents the issues within an individual’s support system. Items include:
anger within family; lack of family support: family;
need for new friends; and secretiveness within family
(hiding finances).

3. Community Knowledge and Perception Issues
Related to Support of Intervention and Recovery
(n = 13). Many of the items in this cluster suggest
the lack of community and professional knowledge
about the condition. Items include: health and social
services provider education; lack of professional
education about problem gambling; lack of
knowledge/involvement of judicial system; cultural
issues – inhibiting treatment; the condition not
appropriately assessed or identified – viewed as other
condition; gamblers not educated about predatory
credit counselors vs. ethical credit counselors; credit
counseling agencies not aware/educated of problem
gambling; cultural views of gambling, some cultures
it is approved of; developing treatment/incarceration
programs; faith based interventions; limited
awareness of insurance representatives of coverage
for gambling; case management advocacy; and social
stigma surrounding condition.

4. Treatment and Recovery Support Issues (n = 6).
This cluster consists of needs related to treatment
and recovery. Items include: provision of relapse
prevention services; outpatient treatment; providing
mentoring or case management activities designed
to enhance re-entry; childcare; lack of insurance
coverage; and lack of housing.

5. Basic Independent Living Issues (n = 14). This
cluster contains independent living concerns. Items
include: cultural – treatment providers need to
be familiar with spirituality of client; not seeking
outside help (cultural differences in approaching
treatment); pressure to maintain standard of living
(or perception of) either personally or by the family;
having poor money management skills; not able to
manage money; debt/financial issues; need to balance
the short term and long term financial issues; having
credit problems; immediate need/push to address
financial issues so not concentrating fully on recovery;
having to provide restitution; representative payee –
someone monitoring finances; legal issues; standard
of living changes; and loan sharks.

6. Workplace Environmental Barriers and Issues (n
= 23). Cluster 6 generated the most content items
and deals with workplace barriers. Items include:
workplace discrimination; employee gatherings at
gaming establishments; work within family business
– new career; ignorance of employers about the
issues; employer not wanting to retain employee
– needing education on reasons why should –
restitution; pathological gambling not included
within the Americans with Disabilities Act (ADA) so
employers not obligated to provide accommodations;
work release programs; gambling in the workplace;
providing a job center to assist with basic job skills
(i.e., résumé writing, interviewing, etc.); having no
email address; positions with power over finances
– regaining trust; lack of transportation; working
within a banking industry; work compromised – not
productive; working within a gaming industry; having
flex time or doing shift work; not passing a security
clearance; sustaining employment – wardrobe,
transportation, waiting for check; time loss from
work for treatment; workplace disclosure, should
the individual reveal past gambling problem; having
lost professional licensure; being self-employed – no
checks or balances on behavior; and bookies within
workplace.

7. Internal Work-Related Issues (n = 11). This cluster
represents perceived work related limitations that
reside within the individual. Items include: lack of
basic work skills; needing adjustments within current
job to sustain it, so escape and seek new employment
– not wanting to deal with issues; being “in action”,
job is a trigger; having transferable skills; résumé
rehab; age of the gambler; over self-disclosure in the
workplace; self-exclusion; personality traits inhibiting
workplace retention; having a felony status; and
internet gambling – ease of access.

Figure 1 illustrates the seven clusters superimposed
on the point map coordinates. The borders and shape
of the individual clusters are determined by item placement
within the multi-dimensional scaling analysis. Therefore
there is diversity in polygon size, representing the degree
of common sorting of items within the cluster (Donnelly,
Donnelly, & Grohman, 2005). The point cluster map
indicates that clusters #6 and #7 in the upper left deal
with work issues, while clusters #2 and #5 in the bottom
right deal more specifically with personal and family
issues. While clusters #1, #3, and #4 seem to bifurcate
the two areas, and deal with issues that transcend both
personal and work aspects of life.

The data illustrated in the point cluster map is given
further dimension based on participants’ importance
ratings of each of the 94 items. Missing data points were computed using the rounded mean of the other respondents’ ratings for that item. Cluster scores were computed for each respondent using the sum of all ratings for items within a particular cluster (See Table 1). Clusters are shown in decreasing order of perceived importance; lower mean scores represent a higher perceived importance rating. The items comprising Cluster #5 – Basic Independent Living Issues, received overall the highest rating of importance related to the vocational rehabilitation of clients who are problem gamblers (mean = 2.05), while Cluster #1 – Psychological Issues – Person with the Problem, received the lowest rating of importance (mean = 2.33).

**Table 1**

*Importance ratings by cluster (n = 6)*

<table>
<thead>
<tr>
<th>Issues</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>StD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 5: Basic Independent Living</td>
<td>6</td>
<td>1.57</td>
<td>2.93</td>
<td>2.0476</td>
<td>.49830</td>
</tr>
<tr>
<td>Cluster 7: Internal Work-Related</td>
<td>6</td>
<td>1.73</td>
<td>3.27</td>
<td>2.1061</td>
<td>.58187</td>
</tr>
<tr>
<td>Cluster 4: Treatment &amp; Recovery Support</td>
<td>6</td>
<td>1.50</td>
<td>2.83</td>
<td>2.1667</td>
<td>.55777</td>
</tr>
<tr>
<td>Cluster 6: Workplace Environmental Barriers</td>
<td>6</td>
<td>1.83</td>
<td>3.04</td>
<td>2.2101</td>
<td>.45219</td>
</tr>
<tr>
<td>Cluster 2: Family &amp; Related Support Issues</td>
<td>6</td>
<td>1.60</td>
<td>3.60</td>
<td>2.2333</td>
<td>.70899</td>
</tr>
<tr>
<td>Cluster 3: Community Knowledge &amp; Perception</td>
<td>6</td>
<td>1.69</td>
<td>3.46</td>
<td>2.2692</td>
<td>.66484</td>
</tr>
<tr>
<td>Cluster 1: Psychological</td>
<td>6</td>
<td>1.64</td>
<td>3.41</td>
<td>2.3258</td>
<td>.63468</td>
</tr>
</tbody>
</table>

**Discussion**

This study is an initial attempt to assess the myriad of issues affecting the vocational rehabilitation process of someone who is a problem gambler. From a group of stakeholders representing four types of roles, an extensive list of concerns was developed, creating a seven-cluster model of item similarities.

The final cluster map that is produced is interesting on several accounts, for one, clearly delineated on the left hand side are issues related to work and the workplace (#6, Workplace Environmental Barriers and Issues; #7 Internal Work-Related Issues). On the right hand side are issues concerning the individual and family (#1 Psychological Issues – Person with the Problem; #2 Family and Related Support Issues that Impact Recovery). While the center clusters straddle them both suggesting their relatedness to the other clusters (#3 Community Knowledge and Perception Issues Related to Support of Intervention and Recovery; #4 Treatment and Recovery Support Issues; #5 Basic Independent Living Issues).

Furthermore, participants were asked to rate items on their level of importance to the vocational rehabilitation process. It is not surprising then that the Basic Independent Living Issues cluster (#5), received the highest rating of importance while cluster #1 – Psychological Issues – Person with the Problem, received the lowest rating. Problem gamblers have often exhausted their financial resources and some may have to pay restitution. Thus, it is understandable that people’s financial and legal concerns, and all they affect (i.e., shelter, food, transportation, clothing, etc.), are viewed as having a greater impact than their psychological ones.

We can begin to hypothesize that addressing the basic human need issues are essential for effective recovery. This is not surprising given our attention to the hierarchy of human needs first proposed by Maslow (1954). Before we can self-actualize, a feature necessary in long term recovery, we need to meet our basic human needs of shelter, food, and bodily comforts. So, it makes sense that we find people prioritizing meeting basic independent living needs as a priority in treatment for problem gambling. They recognize the need to strengthen the foundation for higher ordered thinking required for recovery. Recommendations made by vocational evaluators could assist individuals with problem gambling in identifying structures that will support their work to address the problems created by their gambling.

In keeping with the vein of attending to this issue according to Maslow’s hierarchy of needs, one can turn to the work of Norwood (1999; see also Huitt, 2007). He proposed that this hierarchy identified the type of information needed by the individual. Problem gamblers
entering treatment or early recovery will be dealing with the basics of safety and security, so information not attending to short term issues will not be used by the clients. They need coping and helping information. Vocational evaluators would be served to ensure short term and long term plans are addressed in their analyses.

The majority of items outlined by the study participants focus on the financial implications of problem gambling. These are areas that can be addressed by a counselor or independent living specialist. Concerns include (a) interpersonal stress related to maintaining a standard of living, (b) being overwhelmed by the need to balance short and long term financial issues and not having the skills to do so; and (c) feeling the immediate need to address these issues and not being able to concentrate on treatment or recovery. Problem gamblers most likely will have credit problems and could be dealing with loan sharks and/or the implications that are associated with poor credit, inability to obtain loans, or not passing background checks in a job search, to name a few. They may have legal problems and may need to pay restitution. In addition, they may have poor money management skills. They may require a representative payee to monitor their finances and credit counseling to resolve financial issues and create budgets. In all of this, service providers will need to be cognizant of cultural backgrounds and their orientation to asking for and receiving help from outsiders.

Vocational Evaluators can become more proficient at identifying a range of workplace and environmental issues common to clients who are problem gamblers. Problem gambling does not fall under the aegis of the Americans with Disabilities Act. Employers are not obligated to provide accommodations. The stress, time, resource depletion and related legal issues associated with problem gambling compromises productivity, so a work history may be damaged and employers may not be aware of or knowledgeable about the disorder. They may be questioning whether to retain an employee or not even be aware of the triggers that may exist in their workplace. For instance there has been an increase in the number of gaming establishments and they are frequently the site of employee gatherings. Often there is gambling occurring in the workplace, from football pools to bookies. Many individuals with a gambling problem may not be able to pass a security clearance, have lost a professional license, or have worked in a financial institution or the gaming industry. Thus, vocational options may be limited requiring retraining or a repurposing experience. In addition, self-employment should be scrutinized in early recovery because there are no checks and balances on financial behavior. Lack of transportation and general job seeking skills are problems for some. There is also the question of whether to reveal past gambling problems to potential employers. It is also essential to remember that the advent of internet gambling limits the recovering gambler’s ability to use email and online job seeking avenues.

**Implications for Vocational Evaluators**

Given the prevalence of people developing gambling problems and the potential impact on the job placement process, it would be worthwhile in the initial interview to ask general screening questions about gambling behavior. Does the person gamble? Has the person received treatment or is in recovery from problems related to gambling? Are they experiencing problems at present?

The screening could involve use of an instrument as simple as the Lie-Bet Screening Instrument (Johnson, Hamer, Nora, Tan, Eisenstein, & Englehart, 1988) which asks (1) “Have you ever felt the need to bet more and more money?” and (2) “Have you ever had to lie to people important to you about how much you gambled?” If a history of problematic behavior appears, a referral for further diagnostic assessment would be a helpful part of the functional living skills assessment.

The functional living skills assessment portion of a vocational evaluation involves a person’s ability to be independent in various life situations. The results of the current study can be a useful tool for organizing issues of concern in a vocational evaluation. The following information provides a guide for addressing the topic domains.

**Psychological issues – person with the problem.**

Depression accompanies both the disorder and the process of recovery, it may be clinical in nature or situational. This would include a referral for assessment for ongoing counseling and possibly medication. The individual may need counseling to address the consequences of the behavior associated with the disorder, ways to develop confidence and the ability to manage recovery.

**Family and related support issues that impact recovery.** Social capital is often depleted for people who have lived with an addiction, including problem gambling. Addiction treatment programs have found families can be
a support in recovery but they can also sabotage efforts. Anger and guilt are examples of the feelings generated, and families need their own recovery support, including counseling. Social capital includes friends and recovery support systems. People approaching recovery need to reorder much, including their friendships and related activities. For this, referral to self-help groups is essential. The National Council on Problem Gambling provides information on Gamblers Anonymous as well as Gam-Anon for family members and loved ones. If a person is able to manage the Internet, online programs and support are also available.

Community knowledge and perception issues related to support of intervention and recovery. Vocational evaluators must gain knowledge of the issues related to recovery, not to gain expertise but to recognize the signs and symptoms of a potential problem as well as the issues for recovery. The same recommendation can be made for the rehabilitation counselor, client and the client's family.

Treatment and recovery support issues. Treatment availability is sporadic and may not be plentiful in the client's area. General counseling supported by self-help programs can make a difference. In addition, case management support appears to have an effect in recovery. There are practical guides that can help where expertise in the treatment community is not available.

Basic independent living issues. Meeting basic independent living needs was prioritized by the participants in this study as essential for problem gambling recovery. They recognize the need to strengthen the foundation for higher ordered thinking required for this endeavor. Recommendations made by vocational evaluators could assist individuals with problem gambling in identifying structures that will support their work to address the problems created by their gambling. They most likely will have credit problems and could be dealing with loan sharks and/or the implications that are associated with poor credit, inability to obtain loans, or not passing background checks in a job search, to name a few. They may have legal problems and may need to pay restitution. In addition, they may have poor money management skills. They may require a representative payee to monitor their finances and credit counseling to resolve financial issues and create budgets. In all of this, service providers will need to be cognizant of cultural backgrounds and their orientation to asking for and receiving help from outsiders.

There is also a stigma attached to many of the behaviors problem gamblers exhibit before they go into treatment and recovery. Since money is at the core of gambling, many have legal histories that involve embezzlement or theft. So, criminal histories can limit the vocational options. This and the impact their behavior has had on families and other support systems can lead to the need for community resources for housing, transportation, etc.

Workplace environmental barriers and issues. Working with employers and maintaining confidentiality is always a concern for rehabilitation professionals. Yet, employers are part of the support structure for people in recovery. There is a need for support in the workplace as well as knowledge of what it looks like when a person is approaching a relapse. People dealing with their gambling disorder also need to learn workplace related triggers which may mean a dysfunctional response. For instance, there are gambling behaviors which exist in workplaces of all sorts. How many of us can identify football pools, wagering on corporate decisions, etc? A person who developed problems which involved slot machines may not recognize these as actual gambling actions because they exist in legitimate workplaces, not in a casino, limited video lottery venue or race track. In an effort to be included, clients can make the decision to engage in the activities. Yet, the reactions to the activity will likely be the same ones that helped create the problem in the first place.

Evaluators would be served to check on disclosure skills. By asking how the client would explain their history with gambling problems, the evaluator can assess if this is a potential barrier to employment. They also need to be able to talk about need for a schedule that allows for participation in essential treatment and self-help sessions. Recommendations for job seeking skill development in this area would be necessary.

Retraining or transferable skills analysis may be a needed recommendation. A person who worked in banking but now has a felony on record for embezzlement is not going to be able to return to the banking industry. There are other, less obvious, effects of treatment or criminal records on a person's ability to continue in their former occupation or utilize a professional licensure. A lawyer may lose the license to practice, teachers their teaching certifications, etc. The question needs to be posed for everyone entering vocational evaluation because the referral process in vocational rehabilitation may not. Vocational evaluators must keep in mind that most
Vocational evaluators do not recognize this disorder as a disability and as a result, may not include related questions. And clients fear stigma-based reactions so they will likely not offer the information.

**Internal work-related issues.** Vocational evaluators can recommend supportive employment initiatives similar to those used for people with other mental health and addiction-related disorders. Situational assessment procedures for observing, recording, and interpreting job performance and work-related behaviors can support a client’s understanding of how residual behaviors and automatic reactions can be problematic. For instance, if a person is under stress due to credit and legal problems they may be more reactive in the workplace, resist criticism, or develop a defeatist perspective.

**Summary**

Several methodological limitations affect the generalizability of the study. For one, a select group of participants was chosen to represent the various stakeholders. Thus, questions remain whether results would change with a different member composition. Future research should focus on replicating the study with similarly composed groups and comparing the results.

However, we believe that the results of this initial study have generated some useful findings relevant to vocational evaluators. Significantly, a comprehensive list of issues were developed contributing to our understanding of how problem-gambling impacts return to work efforts. These concerns must be addressed during the assessment and recommendation process. Furthermore, the rated importance of clusters provides a prioritization for attending to needs to maximize vocational outcomes. As such, future studies should identify specific interventions that reduce the impact of problem gambling on employment. Tailoring interventions to the issues that are known to affect the vocational rehabilitation process is imperative.

Vocational evaluators are charged with preparing written functional evaluation reports, properly interpreting them to the individuals, and disseminating them to appropriate agencies or individuals. The reports focus on the issues related to more than just the presenting disabilities or disorders. They can, and should, include all behaviors and perceptions that have an impact on rehabilitation and employment. Problem gambling behaviors or recovery issues are part of the scenario for a number of people with other disorders or disabilities. The issue crosses socioeconomic, geographic, racial and gender lines. The increased availability of gambling means we must increase the number of “gambling sensitive” helping professionals engaged in the promotion of awareness, screening, diagnosis, treatment, case management and job placement activities.

**References**


Assessment of Job Preferences of Young Adults with Intellectual Disabilities: Are Preferences Consistent over Time?

Robert L. Morgan
Katherine A. Crowell
Utah State University

A primary component of self-determination for young adults with intellectual disabilities is selecting preferred employment. We assessed the extent to which job preference selections were consistent over time. Twenty-five participants ages 18-21 with intellectual disabilities selected preferred jobs using a job preference web site, then repeated the same selection processes at 30- and 90-day intervals. We examined (a) jobs selected in the original assessment, (b) number of identical jobs selected in 30- and 90-day reassessments compared to original assessment, (c) new jobs selected in 30- and 90-day reassessments, and (d) previously selected jobs that were discarded. Results indicated participants were generally consistent in selection of preferred jobs over time. Findings are discussed in regards to self-determination of job placements.
The role of job preference assessment in transition programs raises important questions. How often should job preference assessment be conducted? The answer to this question is predicated on another one: How consistent are job preferences for young adults with intellectual disabilities? Further, is preference identification reliable such that it serves as a stable foundation for career development and planning? Or is it variable, suggesting that frequent retesting and modification of career development should occur? Finally, what factors co-vary with degree of consistency (e.g., degree of self-determination, experience in employment or job training, success on previous jobs, support from family and transition team)?

Our purpose in this study was to assess job preferences of 18 to 21 year-old young adults with intellectual disabilities, then re-assess preferences using the same instrument at 30-day and 90-day intervals to determine degree of consistency. We chose a video assessment (Morgan et al., 2006) because it used a selected job as the metric of preference (as opposed to a standard score or a qualitative measure). Thus, consistent selection over time was defined as an identical job selected in 30 and 90 day reassessments. In addition, we examined factors related to degree of consistency, and teachers’ and job coaches’ perceptions of an individual’s consistency of preference selection.

Method

Participants and Settings

Participants were 25 young adults with intellectual disabilities ages 18-21 (Mean=19.84, sd=0.90), including 17 males and 8 females. Twenty-four participants were Caucasian and one was Hispanic. No participant was an English-language learner. Based on assessments from various intelligence tests, IQ scores ranged from 40 to 67 (Mean IQ=61.9, sd=9.71). Standard scores from the Vineland Adaptive Behavior Scales-II (Sparrow, Cicchetti, & Balla, 2006) ranged from 14 to 89 (Mean=60, sd=19.66). All participants were participating in special education post-high school services. Community-based work training experience ranged from 3 to 24 months (Mean=16.4 months). Nine of the 25 participants were currently or previously employed part-time in community jobs (ranging from 6-12 months duration). Most participants with employment experience were employed in their first job; two participants reported being employed in two jobs.

We selected participants based on nominations from their post-high school special education teachers given the following criteria: (a) correct responses to verbally presented one-part instructions, (b) correct responses to questions indicating familiarity with computer operation, (c) correct responses to questions about items/equipment (e.g., broom, bottle of cleaner, truck) and tasks (e.g., which picture shows someone cleaning a table?) presented on a computer screen, (d) visual and auditory acuity within normal limits, and (e) expressed interest in employment and directing one’s job planning efforts.

Two post-high school programs participated in this research. One program was located on a university campus. The first author and participant carried out assessments on the teacher’s computer at her desk. The second program was located in a community setting. The first author and participant carried out assessments in a computer lab with four computers and a printer. Participants worked individually on separate computers with internet connections.

Job Training and Curriculum

A study of the consistency of job preference assessment should take into account the job training and curricula of the post-high school programs in which the young adults participated. Both programs emphasized community-based job training and self-determination. Participants spent 4-10 hours per week (Mean=6.0) in community job training sites. Work training tasks ranged widely across participants and included assisting in retail sales, preparing food in a bakery and deli, arranging and stocking items in a shoe store, cleaning classrooms and bathrooms in a school, and facing products and dusting shelves in supermarkets. Teachers asked individual participants to identify preferred jobs prior to starting each placement. The university post-high school program rotated job training placements every two months. The large suburban program rotated placements every 3 months unless the participant expressed the desire to stay in an existing placement. No participants were paid for their services during job training.

To augment community job training, both programs involved participants in a variety of curricular activities, targeting academic topics (Downing, 2005), functional
life skills (Halpern, Herr, Doren, & Wolf, 2000), self-determination skills (Martin, Mithaug, Oliphint, Husch, & Frazier, 2002), and numerous employment-related skills (e.g., Farr & Ryan, 2007; Jist Works, 2006; Wright, 2004).

Job Preference Web Site and Selection Procedures

Individual participants positioned themselves in front of a computer terminal and manipulated a mouse to make selections. The first author began by opening a link to the Internet site of the job preference assessment (www.yesjobsearch.com). Initially, a participant viewed 16 icons representing types of job tasks (e.g., animal care, auto repair or cleaning). Tasks were presented on a series of four screens, each with four icons. Figure 1 presents the four task icon screens. A narrator’s voice described the selection process by directing the participant to “click on the pictures of jobs you would like to do”. The narrator directed a participant to choose none, one, two, three, or all four icons, and then proceed to the next screen. Clicking on a task icon produced the word “OK” superimposed. After the participant responded to four screens, a new screen appeared listing the participant’s task icons and associated jobs.

Figure 1.

Four screens, each showing four tasks. A participant selects from 16 icons representing types of preferred job tasks.

Task icons and associated jobs. In the original development of the job preference assessment, task icons and their associated jobs were selected based on information from the O*NET Online Job Families (2010). Web site icons and job tasks were associated with a list of jobs for which video and narration had been produced in the original development of the program. Each icon was associated with a different number of jobs, ranging from 4 (Animal Care) to 73 (Customer Assistance). Table 1 lists a sample of the jobs associated with each icon. The entire video job preference web site consisted of 120 entry-level jobs. Development of the web site, decision rules, and identification of the entry-level jobs is described elsewhere (Morgan et al., 2006).

Job videos and selection process. After selecting task icons, participants watched videos of associated jobs. Each job was presented in 2-4 min of motion video with the narrator describing critical job tasks and work conditions. Motion video of the job comprised about 80% of the computer screen. At the bottom of the screen, a menu bar appeared with buttons symbolizing stop, play, fast forward, and reverse. Also, a More Info button was linked to additional information (average wage, training requirements, qualifications, etc.) associated with each job. A participant was instructed by the narrator to use these icons to pause or move through the video. Additionally, thumbs up and thumbs down buttons allowed the participant to keep or discard jobs from his/her list. The first author encouraged the participant to use the fast forward and thumbs down buttons to discard undesired jobs, but only after watching the video for at least 60 seconds to become familiar with each job. After a participant played all job videos, a new screen showed the list of jobs for which the participant had selected thumbs up. Participants completed the assessment in about 45 min.

Response Measurement

We assessed two primary dependent variables relative to consistency of job preferences. First, preferred tasks were defined as one or more task icons selected by the participant from a list of 16 available icons. Second, preferred jobs were defined as one or more jobs selected by the participant from the available jobs after watching the corresponding job video. Typically, participants selected 3-6 preferred jobs. The first author asked each participant to identify his/her favorite job, second favorite, and
### Table 1

*Task icons, number of associated jobs, and sample jobs*

<table>
<thead>
<tr>
<th>Task Icon Name</th>
<th>Number of Jobs</th>
<th>Sample Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Care</td>
<td>4</td>
<td>Farmer-Dairy, Farmer-Grain, Pet Care Worker, Veterinary Assistant</td>
</tr>
<tr>
<td>Auto/Vehicle - Repairing or Cleaning</td>
<td>9</td>
<td>Auto Body Repairer, Auto Detailer, Auto Mechanic, Farm Equipment Mechanic</td>
</tr>
<tr>
<td>Children - Service or Supervision</td>
<td>20</td>
<td>Child Care Worker, Licensed Practical Nurse, Occupational Therapist Assistant, Paraeducator</td>
</tr>
<tr>
<td>Cleaning: Facilities, Equipment, or Clothes</td>
<td>36</td>
<td>Child Care Worker, Licensed Practical Nurse, Carpet Cleaner, Domestic Housekeeper</td>
</tr>
<tr>
<td>Computer Use</td>
<td>66</td>
<td>Auto Mechanic, Auto Parts Salesperson, Copy Center Worker, Customer Service Representative</td>
</tr>
<tr>
<td>Crops and Plants</td>
<td>8</td>
<td>Farmer-Dairy, Farmer-Grain, Floral Designer, Gardener</td>
</tr>
<tr>
<td>Customer Assistance</td>
<td>73</td>
<td>Airport Passenger Assistant, Baggage Porter, Bank Teller, Bicycle Repairer, Customer Service Rep</td>
</tr>
<tr>
<td>Electrical Installation/Repair</td>
<td>21</td>
<td>Electrician, Electronics Assembler, Equipment Operator, Heating/Air Conditioning Mechanic</td>
</tr>
<tr>
<td>Food Preparation, Cooking, or Serving</td>
<td>12</td>
<td>Baker, Fast Food Cook, Food Preparation Worker, Restaurant Cook</td>
</tr>
<tr>
<td>Heavy Equipment Operation</td>
<td>50</td>
<td>Tool and Die Maker, Utility Cable Worker, Warehouse Worker, Woodshop Assistant</td>
</tr>
<tr>
<td>Human Services, Exercise or Training/Personal Care</td>
<td>38</td>
<td>Human Service Worker, Library Worker, Licensed Practical Nurse, Medical Assistant</td>
</tr>
<tr>
<td>Mechanical Assembly, or Adjustment</td>
<td>52</td>
<td>Machinery Maintenance Worker, Machinist, Plumber, Print Press Machine Operator</td>
</tr>
<tr>
<td>Merchandise, Money, and Credit</td>
<td>22</td>
<td>Auto Parts Salesperson, Copy Center Worker, Customer Service Representative, Department Store Clerk</td>
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<tr>
<td>Office Equipment and Records</td>
<td>49</td>
<td>Hotel Desk Clerk, Human Service Worker, Library Worker, Order Clerk</td>
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<tr>
<td>Painting and Building</td>
<td>33</td>
<td>Brick Mason, Building Painter, Carpenter, Cutting Machine Operator</td>
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<tr>
<td>Telephone Work</td>
<td>49</td>
<td>Receptionist, Rental Clerk, Secretary, Telemarketer</td>
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</table>
third favorite (i.e., top three). Therefore, preferred jobs included the participant’s top three selections and, in some cases, additional selections. Consistency of job preference was determined by using the top three job selections, and then calculating the percentage of jobs selected that were also selected in the original assessment (similar to percent agreement).

We included two additional measures: accuracy of icon identification and teacher/job coach rating of participant consistency. First, one author conducted an informal assessment to ensure that individual participants correctly identified icons prior to initial assessment. The first author asked each participant “what is this?” while pointing to each of the 16 task icons. Icon comprehension was defined as a verbal response from the participant correctly describing the pictorial icon or correctly reading the text associated with the icon. Second, the first author presented a rating scale to both a teacher and job coach familiar with an individual participant. Instructions prompted the rater to rate the extent to which he/she predicted that the participant’s job preferences would remain consistent over 90 days. Each rating was based on a five-point Likert scale that ranged from very inconsistent (all preferences would likely change) to very consistent (all preferences would likely remain the same). We compared teacher/job coach ratings to individual participant’s selections in 30- and 90-day reassessments.

Assessment Procedures

After opening the Internet link, the first author initiated the icon comprehension assessment with individual participants. A participant responded verbally to identify each of 16 icons. All participants correctly identified each of the 16 icons, except for one who misidentified the Human Services, Exercise or Training/Personal Care icon. After a brief correction and explanation, the participant correctly identified the icon.

The first author conducted assessment sessions with one to four participants at a time. Each participant worked from a separate computer. At the beginning of each assessment, the first author provided the following directions to the participant(s):

This is a web site that shows video of jobs. You can pick jobs that you are interested in. It does not mean that you will get the job, but we will know more about your interests. This is not a test; it is just a way to find out more about jobs and what you like. It takes about an hour. We can take a break at any time. Let me know if you have questions about any jobs.

To begin the assessment, participants initially selected task icons followed by preferred jobs. Headphones were provided when multiple participants were present to allow participants to work in privacy. Assessment was completed when a screen appeared with the list of jobs for which the participant had selected thumbs up. The first author recorded each participant’s selected icons and preferred jobs.

After the initial assessment, identical procedures were followed to conduct 30 and 90 day reassessments. One participant was unavailable for the 90 day reassessment because he had relocated.

Procedural Integrity

In three of 13 assessment sessions (23.1% of total sessions), an observer scored the first author conducting assessments on the extent to which procedures were correctly followed. Across three observed sessions, seven participants were present. The observer responded Yes or No to five questions: (a) “Did the researcher read the directions to all participants?”; (b) “Did the researcher answer all participant questions?”; (c) “Did the researcher ask ‘what is this?’ and receive a response from the participant to identify each task icon?”; (d) “Did the researcher name each job in the participant’s preferred job list?”; and (e) “Did the researcher prompt the participant to redirect attention to the video if distracted for 5 seconds?”. These five questions were scored for each of seven participants. Of 35 possible integrity checks (seven participants times five questions), the observer responded Yes to 34 of 35 items (97.1%). The observer marked No when the researcher did not prompt a participant to redirect attention to the video at an interval of 5 seconds.

Data Analysis

Primary data analysis involved comparison of a participant’s 30 and 90 day selections (icons and jobs) with the original assessment. We examined (a) the number of selected task icons in each assessment, (b) the number of identical icons selected in 30 and 90 day reassessments compared to original assessment, (c) new icons selected in 30 and 90 day reassessments, and (d) previously selected icons discarded in subsequent assessments. The same descriptive measures were computed for preferred jobs selected. In reviewing original, 30 day, and 90 day
assessments, researchers noted each participant’s top three jobs. Job preference analysis was conducted solely using the top three jobs. Consistency of task icons was also evaluated by calculating the observed percentage of agreement as described by Araujo and Borns (1985):

\[ P\% = \frac{\text{agreements}}{\text{agreements} + \text{disagreements}} \times 100 \]

where agreements were the number of icons selected at 30 day or 90 day assessments that were identical to icons selected at the original assessment, and disagreements were the sum of discarded and/or newly selected icons in the respective reassessment. Consistency of preferred task icons and jobs was initially conducted by performing bivariate correlations between original assessment selections and those selected in 30 day and 90 day assessments.

### Results

Results are presented in regards to selection of preferred

<table>
<thead>
<tr>
<th>Table 2</th>
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<tr>
<td><strong>Frequencies and Percent Agreement for Preferred Task Icon Selection Organized by Assessment</strong></td>
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</table>

Note: T1= original assessment, T2= 30 day reassessment, T3= 90 day reassessment; % Agree = percent agreement with T1. Ident. = Identical selections. ID = Participant number.
task icons, preferred jobs, teachers’ and job coaches’ perceptions of consistency, and anecdotal observations.

Preferred Task Icons

Table 2 presents descriptive data on frequencies of icons selected and/or discarded at each respective assessment. Results indicated that task icons selected after 30 days were strongly associated with icons selected in the original assessment, \( r(23) = .83, p < .01, r^2 = .69 \). At 90 day reassessment, task icon selections were less consistent, \( r(23) = .64, p < .01, r^2 = .41 \). Although a statistically significant correlation coefficient (\( \alpha = .05 \)) was found with a medium effect size, these results should be interpreted cautiously as they are likely reflective of the small sample size (\( N=25 \)). However, task icon selection was relatively consistent among some participants. Overall, 12 participants (48% of the total) made identical selections of originally selected icons in both 30 and 90 day assessments. As indicated in Table 2, participants demonstrated an average 81% agreement on preferred task icon selection 30 days following the initial assessment, and 75% agreement after 90 days.

In order to determine if the degree of consistency for selected job task icons was associated with any of the included demographic variables (i.e. IQ, achievement scores, adaptive behavior assessment scores, or training or employment experience), bivariate correlations were computed. Table 3 presents a summary of all correlations. Findings from these analyses indicated that all correlations were small, however employment experience demonstrated a moderate, positive correlation with percent agreement at both 30-day, \( r(23) = .44, p = .03, r^2 = .19 \), and 90-day assessments, \( r(23) = .43, p = .03, r^2 = .18 \). Teacher ratings of participant consistency were highly correlated with adaptive behavior, \( r(23) = .76, p < .05 \). However, it should be noted that teachers were raters of individual participants’ adaptive behavior as well as raters of preference consistency.

Preferred Jobs

In a preliminary review of the reassessment results, we found that many participants selected the same top three jobs but changed the order of some (e.g., Auto Mechanic selected as second preference instead of first preference). Therefore, we created a measure of job match, i.e., jobs were considered matched as long as the same top three jobs were selected in reassessments as the original top three (even if the order of ranking was not identical). Additionally, although most participants ranked at least three job preferences, two participants ranked only two preferences, which were then used to calculate the percent agreement for job match. Table 4 presents a summary of the percentage of jobs matched at each reassessment. In the 30 day reassessment, participants’ job selections were 88% matched to original preferences. In the 90 day reassessment, participants’ selections were 81% matched to original preferences. Fourteen participants (56% of the total) had identical matches with originally selected jobs in both 30 and 90 day reassessments.

As described above, consistency of job preferences was also analyzed using bivariate correlations in order to evaluate relationships between job selection rankings

<table>
<thead>
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<th>Table 3</th>
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<tr>
<td>Correlation Coefficients for Teachers’ and Job Coaches’ Perceptions of Participant Consistency and Other Variables</td>
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<tr>
<td>30-day Icon % Agreement</td>
</tr>
<tr>
<td>90-day Icon % Agreement</td>
</tr>
<tr>
<td>30-day Job Selection Match</td>
</tr>
<tr>
<td>90-day Job Selection Match</td>
</tr>
<tr>
<td>Teacher Rating</td>
</tr>
</tbody>
</table>

Note: * \( p < .05 \); ** \( p < .01 \).
and relevant demographic variables. As indicated in Table 3, consistency of preferred job selections in the 30 day reassessment was significantly associated with participants’ intellectual, \( r(23) =.62, p<.01, r^2=.38 \), and adaptive functioning, \( r(23) =.61, p<.01, r^2=.38 \), as well as with their current level of academic achievement, \( r(23) =.47, p=.03, r^2=.22 \). Interestingly, unlike selection of preferred job task icons, consistency regarding job preference selections was generally unrelated to applied training or employment experience. Lastly, correlations for the 90 day job preference reassessment yielded a significant positive relationship for IQ, \( r(23) =.52, p=.02, r^2=.27 \), however all other demographic variables were not significant.

**Teachers’ and Job Coaches’ Perceptions of Consistency**

A final series of bivariate correlations were computed using the previously mentioned demographic variables, and ratings obtained for teachers’ and job coaches’ perceptions of target participants’ consistency on identified tasks (i.e. icon selection or job preference selection), 90 days after the original assessment. We found that teachers’ and job coaches’ ratings were not related to participants’ percent agreement for task icon selection, \( r(21) =.17, p=.47, r^2=.03 \), or percentage of preferred job selections after 90 days, \( r(21) =.20, p=.40, r^2=.04 \). Findings suggest that teachers’ perceptions of participants’ consistency is generally not associated with the participants’ actual observed consistency in selecting preferred employment tasks or jobs. Table 3 shows that IQ, academic achievement and applied training experience were not related to teachers’ and job coaches’ perceptions of their participants’ consistency. However, teacher’s perceptions were correlated with participant’s level of adaptive functioning.

**Anecdotal Notes from Interviews**

Selected participants whose data revealed consistent or inconsistent selections were interviewed after the 90 day assessments. Not all participants were interviewed due to time constraints. Six participants with consistent selections indicated that they became interested in a job through training or employment experience. Four participants became interested in a job through parent involvement in an occupation (e.g., dairy farming, welding) or association with a friend who performed a job that appeared interesting (e.g., licensed practical nurse). In many cases, participants with consistent selections were emphatic about their preferred jobs. One such participant indicated, “I love being around animals, like horses and cows. I really want to work with animals.” Participants with inconsistent selections revealed no pattern for responses, only idiosyncratic reasons. One participant who had selected Nursery Worker, Greenhouse Worker, and Dairy Farmer in the original

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**Table 4**

**Percent of Matched Top Three Job Preference Selections by Assessment Interval**

<table>
<thead>
<tr>
<th>ID</th>
<th>30 day Job Matches (f)</th>
<th>Matched</th>
<th>90 days</th>
<th>% Matched</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0.67</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
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Note: Job Matches are out of 3, * indicates job matches out of 2; % Matched = percentage of job selections matched with original assessment; ID = Participant number.
and 30 day assessments selected Bicycle Repairer, Welder, and Equipment Operator in the 90 day assessment. That is, his 90 day selections were unmatched with original and 30 day selections. He explained, “I got a new bike this summer. I want to work on bikes now.” Another participant whose 90 day selections were different from previous ones did not recall his selections in the original or 30 day assessments.

Discussion

The purpose of this study was to assess job preferences of young adults with intellectual disabilities, then reassess preferences at 30 and 90 day intervals to determine degree of consistency. In comparison to original selections, participants were generally consistent in their selection of task icons and preferred jobs at 30 and 90 day intervals. For task icons, 30 and 90 day reassessment results showed that 81% and 75% of selections were identical, respectively. For matched jobs (i.e., the top three jobs but potentially in different rank order), 30 and 90 day results showed that 88% and 81% of selections were consistent, respectively. The same icons and jobs were selected in all assessments by 48% and 56% of total participants, respectively.

These findings lend credibility to the consistency of self-determining job placements because young adults with intellectual disabilities generally remained consistent in their preferences over time. The results suggested that individuals with intellectual disabilities can be relied upon to identify consistent preferences, thus facilitating short-term job placement efforts and perhaps, long-term career planning. Young adults with disabilities and their transition specialists may want to reassess job preferences periodically to determine the degree of consistency, which, in turn, will provide a gauge of stability of career planning efforts.

One relatively surprising finding was that employment training or experience did not correlate more highly with consistency of job preferences. Although these variables demonstrated a moderate, positive correlation with percent agreement and job matches, one might assume that they would be key variables in establishing consistency of preferences. That is, one might expect that the more an individual has experience with a job, the more consistent the preferences would be. One explanation for this result may be that job experience produces not only preferences but also aversions (i.e., disliked jobs to be avoided in the future). If an individual learns, through experience, about jobs that should be avoided in the future, he/she eliminates those jobs from further consideration but fails to gather information on attributes of alternative jobs that are attractive. From a job preference assessment standpoint, this individual may appear inconsistent in preference selection when he/she is perhaps “searching for new preferences”.

Our findings indicate that teachers reported participants would be generally less consistent in job preferences than they actually were. These findings are perplexing given that both teachers and job coaches reported working closely with participants on job sites, frequently conversing about preferences and career pathways. Perhaps the findings can be explained either as a perception of participants’ preferences as inconsistent or changeable over time. Alternatively, the findings may suggest problems with interpreting the labels of the rating scale (e.g., very consistent to very inconsistent). In any event, the findings compel teachers and job coaches to acknowledge student preferences as potentially consistent over time and to reassess them periodically if verification is necessary.

Findings in this study should be interpreted with caution for several reasons. First, our sample size of 25 prohibits generalization of results. Future research should replicate this study with a larger sample size to test findings of relatively high preference consistency. Second, we did not reassess preferences for periods of longer than 90 days. In practical terms, many transition specialists may be interested in longer reassessments (e.g., annual) to determine consistency of preferences. Therefore, future research should examine long-term reassessment. Third, we did not study preferences with experimental controls for training or experience in work environments. Participants were actively involved in job training during this study and may have encountered events that altered preferences. Providing controls for experience would have allowed more fine-grained analysis of consistency of preferences over time. Fourth, because task icons were selected prior to selecting jobs, inconsistent icon selection across assessments may have prevented consistent job selection. Although multiple icons were often associated with the same job, selection of icons was critical in determining the preferred job list. A participant who failed to choose a previously selected icon may have been prevented from selecting a previously preferred job because it did not appear in the list. Therefore, the programming
of the assessment itself may have decreased consistency of preferences. Fifth, researchers did not systematically examine degree of satisfaction with employment training or experience and its relationship to consistency because numbers of experienced participants were small and their experience was limited. Future research should examine the relationship between satisfaction and consistency with particular attention to whether aversive experiences alter preferences. Finally, we examined only the consistency of job preferences over time, and did not directly attempt to identify variables accounting for consistency. We did not directly investigate variables such as family or teacher influence on preferences, degree of self-determination, or other factors. Using an assessment of the degree of self-determination, such as the Arc Self-Determination Scale (Wehmeyer & Kelchner, 1995) as a correlate to consistency measures, would have strengthened results of this study and should be considered in future research.

Additionally, although the job preference assessment was theoretically based in its construction, we recommend that future research evaluate relevant psychometric properties associated with the measure. Specifically, although the various jobs associated with each task icon were relevant in theory, it would be beneficial to evaluate such associations statistically in order to verify the current measure’s structure and items included (e.g. implementing factor analysis procedures in order to determine the pattern and factor structure for jobs included in the measure). Factors and items loadings (i.e. specific jobs) yielded from such analysis could then be compared with patterns of task icons (factors) and associated jobs included in the current version. Such analysis would be beneficial in revising future versions of the measure as well as helping to inform researchers of prospective inferences and conclusions in future studies.

This study begins to address questions about consistency of job preferences selected by young adults with intellectual disabilities. Although findings suggest relatively high consistency in preferences over time, limitations in sample size and limited latency of reassessment call for future research. Yet, the findings are consistent with previous research results (Wehmeyer, 2002) indicating that a young adult is not only the key determinant in future planning, but a credible, relatively reliable informant of job preference. For vocational evaluators, transition specialists, parents and family members, and other support team members, this study provides data to further solidify the role of a young adult with intellectual disability as the key role player in self-determined job preference identification.

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Consistency of Job Preferences


VOICES FROM THE FIELD

Securing the Site: Locating and Negotiating Community-Based Assessments

Andrea Perkins Nerlich
Hofstra University

“The voices from the Field” submissions are intended to be brief, practitioner-focused articles highlighting a topic of interest to the VEWAA Journal readership. Each piece explores a practice issue with a small cohort of high-quality practitioners. Based on continued interest in that topic, further investigation will be conducted for a subsequent empirical article using a larger sample and/or other research methods. In this way, the VEWAA Journal can be more responsive to the needs and preferences of its readers. Please direct comments regarding further interest in this topic to the VEWAA Journal forum at the National Clearinghouse for Rehabilitation Training Materials (NCRTM) at www.ncrtm.org.

The purpose of this study was to explore the process of locating, negotiating, and securing community-based situational assessment sites. Interviewees were six rehabilitation professionals who were nominated as a “quality practitioner” providing community-based vocational evaluation services. Findings of the study indicate the need for an approach that balances the strengths and preferences of the consumer with the business needs of the employer. Themes driving the community-based site development process included (a) establishing relationships with employers, (b) using an individualized approach to assessment, (c) communicating effectively, (d) being business minded, (e) having clear expectations, and (f) addressing liability issues. Implications for practice and pre-service training are discussed.

Author Note: Dr. Nerlich is an assistant professor of rehabilitation counseling at Hofstra University (NY). She is a nationally certified rehabilitation counselor, vocational evaluator, and co-editor of the VEWAA Journal.

Vocational evaluation is a critical step in the rehabilitation process. It promotes self-awareness on the part of the consumer, provides an estimate of the potential of the individual as a worker, and guides vocational plan development (Institute on Rehabilitation Issues [IRI], 2003; Power, 2006). The science and practice of vocational evaluation has responded to the legislative mandates and changing scope of service delivery to favor models that advance consumer choice and empowerment, serve those with more significant disabilities, and apply a holistic career development orientation (Hagner, 2010) to the process of evaluation. Most notably, the ecological model of disability, which emphasizes the interaction between the individual and his/her environment, serves as a guiding premise in evaluation (Parker, Hansmann, & Schaller, 2010). Current practice recognizes the need to design assessment services that are oriented toward understanding this interaction.

Contemporary vocational evaluation practice takes assessment beyond the walls of the agency. Community-based assessments are emphasized in the standards for rehabilitation agencies (Commission on the Accreditation of Rehabilitation Facilities [CARF], 2011). Situational and work-based assessments are identified as valued approaches for individuals with significant disabilities (Grasso, Jitendra, Browder, & Harp, 2004), individuals with psychiatric disabilities (Peer & Tenhula, 2010), and those from other cultures (IRI, 2003). These practical approaches allow the consumer to understand and interact with the environment and demonstrate his or her total work function (Power, 2006).

The benefits of naturalistic techniques include an emphasis on functional over verbal skills, an opportunity for immediate feedback, increased motivation to participate, and flexibility in assessment design. Consumers have more opportunity to engage in the situational assessment process as an active participant, supporting the philosophy of consumer choice. This in turn has a positive impact on career self-efficacy through realistic feedback on vocational strengths and support needs (Scroggin, Kosciulek, Sweiven, & Enright, 1999).

As an ecological class of evaluation techniques, trial work experiences, job shadowing, situational assessments, and job tryouts incorporate a period of time where a consumer is observed performing an actual job in a community setting (Hagner, 2010; Power, 2006). These techniques offer robust data related to abilities, behaviors, and tolerances as observed by the evaluator, on-site.
supervisor, and/or co-workers. The triangulation of expert stakeholder observations yields the most immediate, valid, and useful information possible about the person and job experience. In the hands of a properly trained evaluator, quality ecological data can be instrumental in improving counselor expectations of the client (Grasso et al., 2004), generating situationally specific recommendations, and ultimately producing better vocational outcomes. Community-based assessments are accepted practice in vocational rehabilitation (Hamilton & Shumate, 2005) and their protocols are advanced in counseling curricula (Bolton & Parker, 2008; Council on Rehabilitation Education, 2011; Power, 2006). It is apparent from these sources that the practice of community-based assessment is well addressed and valued in the field of contemporary vocational rehabilitation.

Best practice in actually securing the site where a community-based assessment will occur has received no such attention. Before the assessment can be conducted, a relationship and agreement must be developed with a local employer who will serve as the community site. Hamilton and Shumate (2005) noted the importance of effective professional relationships with businesses, and yet found that evaluators identified “Professional Networking and Coordination” as the knowledge domain they were least prepared to employ. Most evaluation texts offer little in the way of advice for this stage in the assessment process. Power (2006) offers suggestions for developing situational assessment sites, including seeking out large companies with multiple positions and working with human resources personnel to market supported employment and assessment services. Techniques for job placement offer some guidance (see Hagner & Breault, 2010), but the short-term and temporary nature of community-based assessments creates a unique barrier to be surmounted. These conditions may leave practitioners asking the question, “How do I get a site or employer to agree to take on a consumer for a community-based assessment?” This question frames the following study.

Methodology

This investigation utilized a qualitative method for data collection as the purpose was to gather in-depth perspectives of practitioners in relation to exploring, negotiating, and securing community-based assessment sites. Semi-structured, open-ended questions were used to explore the practices and opinions of participants.

Participants

Participants were six rehabilitation counseling professionals who were identified as “quality practitioners”. Two individuals worked in university-affiliated assessment programs, one was a private contractor for the state agency, one worked for a proprietary agency, and two other individuals worked in non-profit agencies serving individuals with disabilities. Participants had an average of 18 years of experience in the rehabilitation counseling field (range = 3 to 35).

Interview Protocol

An interview protocol was developed by the author. The protocol included: (1) an introduction related to the nature of the investigation and the intended audience for results, (2) consent form with demographic questions, and (3) seven open-ended questions. The introduction defined community-based situational assessment as “…evaluation periods where the person is in the community but is not going to be hired by that site.” Research participants initially completed a consent form, granting permission to publish their names and agency affiliations. The demographic questions on the consent form requested professional credentials, current job title, agency employed, and years worked in the rehabilitation counseling field. The seven open-ended questions were developed based on the procedure for developing and securing community-based assessment sites (Figure 1). Interviews ended with an invitation to offer comments or additional information.

Figure 1

Interview Protocol

1. Describe the situational assessments that your agency performs.
2. When the need arises for a new community-based assessment site, describe how you consider and select potential sites.
3. Describe your approach for making initial contact and developing the new site.
4. What do you consider to be the necessary elements for an ideal community-based site?
5. What barriers do you experience in the process? What is your technique for overcoming these?
6. Once you have developed the site, what is your process for securing the site? In other words, what is
necessary for “formalizing” the service?

7. What advice can you give for other professionals who are developing situational assessments in the community?

Procedure

Given that little attention has been given in the rehabilitation counseling and vocational evaluation literature to the development community-based assessment sites, the purpose of this investigation was to explore the current practices of quality professionals in the field. A purposive sampling frame was used to select research participants for this study. This technique utilizes expertise about a target group to select subjects who best represent a population (Berg, 2004). To achieve this, participants were sought through referrals from rehabilitation counselor education (RCE) faculty at CORE-accredited universities in targeted geographic areas. Based on the referrals, the author contacted each of the practitioners with investigation information and arranged a time for a telephone interview. Each interview was conducted by the author.

Data Collection and Analysis

Interviews were transcribed verbatim. The transcripts were read independently by two rehabilitation counseling educators who coded participant statements to identify emerging themes within each question. A third rehabilitation counseling educator reviewed the identified themes for consistency; no additional themes emerged. This data analysis technique, called “analyst triangulation”, uses multiple reviewers for the same data set to reduce bias in conclusions and authenticate results in qualitative research studies (Patton, 2002). Major themes that reached consensus for inclusion following this procedure were included in the preliminary manuscript. To further validate these themes and findings, a copy of the preliminary manuscript was returned to participants for commentary to check for accuracy and completeness (Patton, 2002). Feedback from participants was considered in the final manuscript.

Results

Six overarching themes were identified that spanned the assessment site development process: (a) establishing relationships with employers, (b) using an individualized approach to assessment, (c) communicating effectively, (d) being business minded, (e) having clear expectations, and (f) addressing liability issues. Based on information gathered from participants, it was evident that these were the foundational elements used to guide service provision, as well as conceptualize community-based assessments as a service, in general.

In regards to the nature of the evaluation services that each person provided, all participants indicated that community-based, naturalistic assessment was the preferred method for evaluating individuals with more significant disabilities, many choosing it as the primary method of assessment with transition-aged youth to enhance vocational exploration. Overall, community-based assessment sites were not pre-determined but were chosen to match the individual based on one’s skills, preferences, and background. In most cases, multiple sites and job functions were used for each individual to provide a diversity of experience.

Each question of the protocol related to a particular aspect of community-based site development. Individual questions were further content analyzed for themes. Subthemes were developed for each step to elucidate the specific skills and elements considered essential practices. These are presented below.

Site Selection

In considering and selecting potential sites, participants indicated the following as the most important elements: (a) convenience/location of the site, (b) making a physical appearance at the potential site, and (c) the importance of networking and relationship building. Issues of location of the site related to transportation and geographic proximity to the consumer, as well as the physical accessibility of the site. Public transportation weighed heavily on the decision to select a site. In addition to getting to the site, the site itself needed to be favorable for a consumer with a disability in terms of the business operation, workers, and customers. One respondent stated:

*When considering a new site, I want to take a look in person and do a site visit without talking to anyone about the site. It isn't detective work, but I'm trying to glean if the site is conducive to a person with a disability and, especially if there is a consumer in mind, with what their preferences and strengths are. I will spend 30-60 minutes to look at the environment inside and out and see who the patrons are, is it a busy environment, and...*
what the dynamics of the place are.

Networking for a new site could be internal to the agency or community-based. Common practice was to use previous assessment and placement sites for new consumers, although assuring that the approach was not “cookie cutter”. Agency staff routinely shared leads with one another, and one participant stated that the agency maintained a database of previous sites. Other helpful sites included volunteer agencies and non-profit agencies that have a light duty program. One participant shared a creative solution to developing a new site:

Use of word of mouth. Ask your employers if there is someone in their industry who might be willing to do the same things and put in a good word for you.

Approaching Sites

When approaching a new site, participants felt the following were necessary: (a) making a good first impression, preferably in person; (b) speaking to the decision maker; (c) using a business-minded approach; and (d) emphasizing strengths, not “charity”. Telephone or electronic methods were suggested for initial contact to conserve time and energy, but the majority of respondents agreed that there was no substitute for visiting the site directly. One respondent emphasized the benefit of the on-site meeting:

Cold calls work and some businesses have email and a website, but there is no substitution for (an) in person (visit). With that longer meeting comes a tour to see their operation first hand and express interest and appreciation for what they do and how they would be good for a community-based assessment.

The overwhelming response from participants was “speak to the manager” and “identify the person who can make a decision” when making that first contact to increase efficiency with the process. The conversation with this person is about selling the benefits of the service. The initial approach was characterized as guarded, to speak generally about working with people with a range of disabilities but not offer specific information about individual consumers for confidentiality reasons. The community-based assessment is pitched as a mutually beneficial opportunity, not only for the consumer, but as a way for the business to gain from the presence of the consumer and agency staff. One participant demonstrated this focus:

I talk about the things that they as a business would find appealing about what we do. I approach a situational assessment looking for ways where possibly we help that business to be more efficient. I am looking to meet their needs too.

In creating this interest on the part of the employer, most respondents indicated that the emphasis of the message should not be one of charity or “doing the right thing”. While it was acknowledged that potential supervisors might agree to the placement because of their own personal experience with a person with a disability, this should not be exploited to gain the site, as it undermines the philosophy of consumer direction. One participant described a strengths-based message to promote:

One of the things I tell new employees is to remember ‘you’re not selling snake oil’ and you have to be proud of your consumers and what they can do. Don’t focus on what they can’t do. You are not asking employers „do me a favor”. It needs to be a benefit to the employer. A favor is one time and you want to develop the relationship. You need to build up a relationship and a valuable service, for what our consumers can do.

Necessary Elements

Participants agreed that the necessary elements for an ideal community-based site included (a) ensuring there is “real work” to do, (b) making certain of accessibility and safety, and (c) determining employer receptivity and cooperation. The purpose of the evaluation was solidly portrayed as an assessment of skills in relation to real work demands. While accommodations could be made for the work, it was stressed that the tasks were not meant to be “busy work” or the mundane aspects of a position. One participant emphasized the need to progress the skills presented in the evaluation, stating:

This is not making up a task; they should be contributing to operations of the work site.

The environment of the assessment was viewed as a primary consideration on two fronts: (a) physical access and (b) integration of the person. Overwhelmingly, participants felt that the site would need to be close by for transportation reasons, accessible, and free of safety hazards. To the greatest extent possible, the person should have full access to the functions and materials of the job, to further support the expectations of the job. Workplace culture was another frequently cited element to a quality situational assessment. Openness to and
respect for people with disabilities, above and beyond a mere presence in the environment was considered critical and cited as necessary from the managerial level down to the working ranks. One participant commented on the integral nature of this openness:

*If the people are supportive of the person, even if it’s a basic task, then that is ideal... As long as there is not a safety concern, I will bet on the natural supports over everything else.*

**Barriers**

The barriers that were prevalent in securing a community-based assessment included (a) liability, (b) reluctance to work with people with disabilities, and (c) employer concern over a “disrupted” work environment; although it was apparent that creativity and approach go a long way in overcoming these obstacles. Given the litigious nature of our society, liability issues were cited by the majority of respondents as an employer concern. Most of the agencies with which participants were affiliated provided insurance, used a temporary agency to cover the insurance, or discussed with the employer how general liability carried for patrons could be used, given the unpaid nature of the assessment. One participant also suggested another way to solidify this business approach:

*...and liability [is a concern], what if they fall, get hurt, or damage an employer’s product. We provide proof of insurance and certificates of insurance and references of other companies who have been open to working with the agency.*

Continuing the theme of workplace culture, participants noted that they experience hesitation on the part of employers toward working with people with disabilities. Use of videos of people with disabilities engaged in work was suggested as a way to sell employers on the capabilities of consumers. While some instances can be viewed as teachable moments for disability advocacy, several respondents indicated that walking away from pursuing certain placements might be the best alternative. Additionally, if a high level of discomfort or a strong negative opinion is detected, it is best to put energy into a more receptive work site. One respondent summarized this theme well:

*You may get a lack of receptiveness and sometimes you can’t go further, or they make excuses or are hostile. In those situations, you need to ask yourself, ‘do you ever want a consumer in that environment?’ But questions and concerns might be something to work with, especially those with some experience with disability. You may get “I don’t do charity” or “we don’t work with those people”. But, if you hear, “how do we do that?” that’s a time for learning.*

The last barrier related to employer concern over persons with disabilities disturbing their business operation. It appeared this concern can be remedied through consultation and creative planning, such as suggesting activities that the evaluatee can perform. Foremost, employers again can be educated to the capabilities of individuals with disabilities using a strengths-based approach. Counselors/evaluators can use their knowledge of work to co-plan a meaningful evaluation with the employer. As with job placement techniques, highlighting the dependability and expertise of staff can also allay employer fear.

**Formalizing Agreements**

With a quality site selected and proper consultation provided, the following were recommended for “sealing the deal”: (a) keeping communication and options open, (b) assuring liability insurance is available, and (c) holding an in-person meeting. Several respondents stressed that, despite hard work and good intentions, sometimes “things come up” and the evaluator may need to take a new direction or find a new site. Many complications can be avoided if the details of the service are well communicated. But, in the event of unforeseen difficulties, evaluators do not want to lose valuable days with the consumer:

*A strong line of communication is the number one thing that secures the site and you can avoid problems if the two decision makers are the ones talking together... Never stop setting up the site until the assessment starts and always have a plan B and C in case the first site changes their mind.*

As stated previously, liability was cited as a significant barrier to securing community-based sites. Written contracts/agreements for the service(s) provided were only reported by one of the respondents, but most noted that proof of insurance was provided to satisfy the work site. Handshakes were more of a common practice than formal agreements. The opportunity to meet in-person was seen as the final step to orient the employer, agency staff, and consumer to the expectations and logistics of
the evaluation. Having everyone “on the same page” solidified the process and put all involved more at ease.

Suggestions

Respondents noted the following in their final thoughts for practitioners providing community-based assessment services: (a) network and develop relationships, (b) professionalism, and (c) take your time and do not get discouraged. The overarching message among these was the need to be part of the community and represent the profession well. Patience was considered critical—that a long-term relationship with the employer is the goal, not just securing the short-term placement. Affiliations with other agencies or universities were seen as a strength in lending additional credibility in the eyes of employers. Personal work ethic and its reflection on the profession cements positive perceptions of working with human services agencies and rehabilitation counselors/vocational evaluators:

Professionalism. Build the relationship, be professional, dress professional, and assure them you will be with the consumer the whole time and you are up with the client and participating and not sitting and observing. You need to build up your integrity in the town.

Negotiating a community-based assessment is viewed as a skill set, and a bit of an art form; even seasoned vocational evaluators reported that it can be a humbling experience that requires time. One respondent summarized the perseverance that is required for this task:

You can spend double or triple the time on the front side and that's what's going to give you the lasting results. You can get in the door and be smooth, but if you set it up quickly and don't take the time, that's when problems can happen and you're in crisis management mode. Slow down up front even though it's time sensitive; this is something you want to take your time with. There is no excuse for poor planning. And even if you're good at negotiating, you will [sic] might not get it all the time.

Discussion

The purpose of this study was to investigate the process of locating, negotiating, and securing community-based situational assessment sites. Results of this study suggest that practitioners in the field are indeed taking a consumer-focused, strengths-based approach with community-based assessment, consistent with the current trends in best practice. Participants emphasized that high expectations were set for the quality of assessment experiences and that due diligence on the part of the evaluator is necessary to ensure that the tasks, work culture, and location are highly amenable to consumers with disabilities. The means for achieving these outcomes were based on a business-minded approach, where practitioners were seeking to create a “win-win” situation that enhances service to both the consumer and employer.

The findings of this study suggest that practicing evaluators are attuned to the benchmarks for quality community-based assessments. Section 3.E of the CARF Standards Manual outlines the standards for best practices in the area of comprehensive vocational evaluation services. Substandard 8 of this section describes the optimal requirements for community-based sites used for situational assessments, to ensure that the evaluator/agency manages any risks to participating:

Employment exploration sites that are used for evaluations are assessed as to their appropriateness for the person seeking employment with regard to:

a. Adequacy of supervision.
b. Safety.
c. Specific work-site requirements.
d. Potential job accommodations.
e. Accessibility.
f. Expectations for quality and quantity of work.
g. Job/task analysis.
h. Potential employment opportunity.
i. Other considerations identified as appropriate to the individual. (2011, p. 176)

This substandard speaks to the need to maximize the assessment experience for the individual by maintaining a safe, structured, and supportive work environment, elements echoed by study participants. Agencies can implement suggestions offered in these findings to strengthen their evaluation program for accreditation review.

The findings of this study corroborate the body of literature that supports a business-minded approach to vocational rehabilitation services. Hagner and Breault (2010) call attention to establishing employer partnerships as the first phase in job development by communicating the potential for a mutual benefit from the relationship. Practitioners should take employers’ needs and perspectives into account, emphasize the contribution of workers with disabilities, and deemphasize or neutralize fear of risk. The transient nature of community-based assessments makes it even more critical to counteract
the perception of risk or misconception regarding the capabilities of consumers with disabilities. Strategies posited in this study to achieve this include consultation with managers/workers, supplying proof of liability insurance, and providing experienced staff before and during the evaluation.

A subset of themes emerging from this study also dealt with intangible aspects of the work environment felt to be essential in site selection. The importance of organizational culture was evident in themes related to employer receptivity, surveying the work environment, and employer reluctance. Participants stressed the need to determine the openness of the manager or “point person”, but also that of co-workers and patrons of the establishment. Ideally, one should seek out a culture of integration, where differences are preferred and valued because of the richness of perspective they provide (Spataro, 2005). Professionals need to tune their evaluation skills into the “feel” of the site as much as the tasks and work produced to optimize a quality selection.

Implications for Training

Findings of this study point to critical areas for knowledge and skill development for vocational evaluations and rehabilitation counselors engaged in these tasks. Essential to vocational evaluation knowledge are: (a) communication, (b) the use of occupational information, and (c) the implications of disability on work. In addition, frequently performed tasks include: (a) professionalism, (b) clinical skills to analyze and synthesize, and (c) vocational counseling (Hamilton & Shumate, 2005). The current study supports the need for these knowledge and skill areas specifically to be applied specifically to situational assessment development and provision. Participants consistently reiterated the importance of presenting oneself in a professional manner, communicating effectively, and understanding the complexities of work in order to secure a meaningful assessment experience.

The essential areas that developed out of the current study really speak to the “how” of securing a situational assessment site, rather than “what” is involved. Hamilton and Shumate (2005) called for evaluation education to be congruent with growing trends in the field, especially related to authentic assessment; they call for curriculum and professional development training to be competency-based rather than content-based. This need is apparent in the results of this study, as most of the themes focused on relationship development and critical thinking—meta-skills for an evaluation practitioner. Rehabilitation counselors and vocational evaluators typically demonstrate high levels of knowledge regarding theory and principles of vocational assessment. Pre-service and continuing education training programs should focus on developing the communication, negotiating, and professionalism skills to best prepare professionals for success in securing community-based assessment placements.

Limitations

Participants for this study were selected based on the recommendation of an RCE faculty member and the participants’ willingness to complete the interview. Although the criterion for recommendation was that the individual nominated should be a “quality practitioner” engaged in community-based assessments, no other selection criteria were utilized.

Conclusion

The present study provided preliminary insight into the experience of locating and securing community-based situational assessment sites. The findings indicate that individualized and consumer-focused approaches should be used in the selection of sites, consistent with hallmark principles of vocational rehabilitation. More importantly, vocational evaluators and rehabilitation counselors need to incorporate employer-focused approaches highlighting consistent communication, the strengths of workers who contribute to the bottom line, and low risk to liability. The driving force behind the development of community-based assessments should be on creating relationships with employers that will serve the professional and his/her agency beyond the singular placement. Through the provision of professional, high quality services, evaluators will solidify partnerships with sites to potentially benefit future consumers and raise awareness regarding the capabilities of workers with disabilities. This combination of consumer- and employer-focused approaches creates a win-win situation for optimizing satisfaction of all stakeholders.
References


Acknowledgements

The author would like to thank the panel of highly qualified professionals who contributed to this study: Jeremy Burwell, Vocational Rehabilitation Specialist (The Corporate Source, New York, NY); Joel Johnson, Clinic Coordinator (Utah State University, Logan, UT); Miriam B. McGill, Director (Transitional Employment Unlimited Inc., Torrington, CT); Jack R. Musgrave, Interim Director (Evaluation and Developmental Center, Southern Illinois University/Carbondale, IL); Kenneth Paxton, Director of Disability Services (Magnolia Enterprises, Memphis, TN); and Amy Rumrill, Vocational Specialist (VOC Works, Dublin, OH). Your expertise and collaboration were much appreciated.
Predicting Driver’s Licensure Using the Ruff 2 & 7 Selective Attention Test

Jon Geiger
Matthew E. Sprong
William Kosma
Thomas D. Upton
Southern Illinois University/Carbondale

Obtaining a driver’s license is a significant component to gaining independence. Specialized programs are available to provide driving rehabilitation services for PWD. The issue that arises is entering PWD for these services before they are prepared, which will lead to unsuccessful closures. The purpose of the study was to determine if the Ruff 2 & 7 Selective Attention Test can be used to screen PWD that need additional services prior to entering Driver’s Rehabilitation services. The goal was to identify a minimum cutoff score to screen individuals who need pre-driver’s rehabilitation services before entering a driver’s rehabilitation program. The results of the study indicate that a minimum Automatic Detection Accuracy score of 89.26 is needed to have a higher chance of obtaining licensure after completion of driving rehabilitation services, Pearson $\chi^2 (2, N = 124) = 4.00, p = .045$, Cramér’s $V = .18$. Discussion and Implications are provided.

Author Note: Direct correspondence regarding this article to Matthew E. Sprong; Evaluation & Developmental Center; Southern Illinois University; 500 C. Lewis Lane; Carbondale, IL 62901 Matthew54sprong@gmail.com

Transportation has been a persistent barrier for individuals with disabilities with particularly negative ramifications for employment. In the United States, having the ability and license to drive is a key feature of independence (Ferran, 1996). For people with disability, it is also a key to improved quality of life (Galski, Bruno, & Ehle, 1992). Specialized Driver Rehabilitation Programs serve people with a wide range of disabilities (e.g., mental retardation or traumatic brain injury, spinal cord injury) offering accessibility accommodations for vehicles and customized training to suit individual needs. Maximizing the effectiveness of driver training ensures that access to a driver’s license is not unfairly denied. It is just as important to assure the public of the driving competence of those who are licensed. Evaluation within this context focuses on these two equally important needs.

In the following exploratory study, we consider the potential application of the Ruff 2 & 7 Selective Attention Test (Ruff & Allen, 1996) as an indicator of training needs and potential success. We propose that selective attention is a critical yet unexamined variable that impacts driver training process and outcomes. We will briefly connect selective attention to existing models and make the case for its importance to training.

Selective and Sustained Attention

Along with Visuo-spatial analysis (ability to visually track the environment and differentiate objects from field) and Visuo-motor coordination (motor response to visual cues; Russo, Martinez, & Hillyard, 2003), attention is an essential aptitude for driving mastery. Attention is the ability to identify and attend to critical stimuli while disregarding background distraction (Gunzelmann, Moore, Gluck, Van Dongen, & Dinges, 2008), focus attention upon and apply cognitive skills to the critical stimuli in context (Barkley, Murphy & Kwasnik, 1996), and maintain focused cognitive performance in this effort over time (Ruff & Allen, 1996). Two instrumental aspects of attention are selectivity and sustainability. Selective attention is exemplified in the urban driver who must scan a constantly changing environment, identify and respond to real and potential dangers, and navigate a route to their destination while managing a constant flow of distracting stimuli. Sustaining selective attention over time requires vigilance, and is equally crucial to safe driving in rural areas, (Gunzelmann et al., 2008) although the hazards may be different. The lack of stimuli, as experienced in interstate travel, can pose a danger of lulling the driver into a state of diminished vigilance or even “drowsy driving”. In-car distractions (e.g., talking and texting on a cell phone, eating, or reading) markedly reduce driving skill (Haikonen et al., 1998) as well. Drivers that engage in these activities become hazards that the rest
of the public must identify and defend against. In all circumstances, the lack of sustained, selective attention diminishes capacity to drive in accordance with the rules of the road and increases the likelihood of motor vehicle accidents. To the degree that diminished selective and sustained attention are characteristics of impairment associated with disability, it becomes a consideration in vocational evaluation as it applies to driving.

**Disability and Driving Performance**

Limited research has been conducted observing the impact of disabilities on driving performance. Haikonen et al. (1998) found that individuals with neuropsychological impairments take longer to perform secondary driving tasks, such as checking the speedometer, thereby increasing the amount of time that attention to the primary task of driving is diverted or diminished. Authors concluded that the extended glances and secondary tasks were directly linked to impaired motor and visuo-spatial skills. The driving habits of young adults with ADHD have been explored in descriptive study and found wanting. According to Barkley, Murphy, and Kwasnik, (1996), young adults with ADHD are less likely to be using sound driving habits; more likely to be out of compliance with traffic laws (e.g., driving on a suspended or revoked license, frequent traffic citations); and four times more likely to be involved in a motor vehicle accident than their peers. While diminished selective attention has not been identified as a root cause of driving problems in this limited research, the empirical findings are suggestive and the model would seem to fit.

**Selective Attention and Effective Driving Systems**

Driver training systems are designed to improve skill and performance, and reduce public risk (Kenel et al., 2000). Selective and sustained attention are prerequisite skills for training effectiveness and retention in any model used. The *Search, Identify, Predict, Decide, and Execute* (SIPDE) model is perhaps the most common. Searching is the ability to scan the roadway that will help you plan your path of travel. Identifying refers to objects or conditions that may interfere with your path of travel (Kenel, et al., 2000). Prediction is the foreshadowing of potential for dangerous situations to arise (i.e., Semi swaying back and forth within their lane may be a potential dangerous situation). Deciding is defined as choosing the best course of action to minimize the risk potential and collision. Executing is the actual process of changing the course of action to avoid the identified and predicted conditions that would interfere with your driving (i.e., driver remains at a safe distance from semi-truck driver). Selective and sustained attention compliments the SIPDE process with respect to driving. For instance, a driver would need to visually scan the environment for specific problems that may occur. If a driver is unable to scan the environment for potential collisions, then the driver would have difficulty completing the five-step process. This training system is promoted to increase appropriate driving behavior and reduce high risk driving behavior.

The Smith Driving System utilizes five driving guidelines and complements the SIPDE model. “Aiming High and Look Ahead, Not Down” refers to scanning the environment ahead for 20 to 30 seconds and is similar to the first step (Search) of the SIPDE model. “Keep Your Eyes Moving” refers to the process of constantly scanning the environment and staying alert for changes on or near the roadway, which may result in adjusting the vehicles speed (Kenel et al., 2000). “Getting the Big Picture” refers to searching the whole scene rather than just a part of it. For example, driving through school zone results in having to scan the environment for both vehicles and pedestrians. “Make Sure Others See You” refers to communicating your intentions to other drivers (e.g., using a turn signal to indicate that you will be making a turn). “Leave Yourself a Way Out or a Margin of Safety” refers to the constant evaluation of risk and consequent adjustment to potentially hazardous situations. For instance, traffic speed, road conditions, weather, visibility, and perceived response time are constant considerations in judging and adjusting a safe distance between vehicles. Both models share certain assumptions that define the safe driver (Johnson et al., 2000):

- All senses are used to assess risk, including sight, hearing, smell, touch;
- The art of scanning, glancing continually and quickly with very brief fixations through an orderly visual search pattern, is a crucial and learned behavior;
- Selective seeing, attending and responding to appropriate cues and events, is a fundamental skill required to drive safely.

Attention is a cognitive prerequisite for successful driving and thus should be predictive of success in obtaining a drivers license. It is this assumption that led the authors to evaluate the effectiveness of the Ruff 2 & 7 Selective
Attention Test in differentiating between individuals who would, and would not, be successfully licensed drivers following driver's training: Is sustained and selective attention associated with future success in a driver's rehabilitation program (driver's licensure obtainment)?

**Methods**

**Participants**

A total of 180 participants referred from State-funded vocational rehabilitation agencies to receive Driver's Rehabilitation Services at a Community Rehabilitation Program were asked to volunteer for the study. Following human subjects' approval and informed consent procedure, 124 participants fit norming criteria (16-24 years of age with 12 years of education or less) established by the Ruff 2 & 7 Selective Attention Test Psychometric manual and are the future target group for Community Rehabilitation Programs. The mean sample age was 19.51. Participants were primarily Caucasian (n=110; 88.7%) with 8.9% identified as African-American/Black (n = 11); male (n = 68; 54.8%); right hand dominant (n = 88; 71%); and educated through the 12th grade (n = 105; 84.7%). The most common disability descriptor was learning disability (n = 45; 36.3%). However, a variety of disability descriptors including mental illness (n = 19; 15.3%), mental retardation (n = 25; 20.2%), orthopedic disability (n = 17; 13.7%), autism (n = 8; 6.5%), traumatic brain injury (n = 3; 1.6%), cardiac and circulatory (n = 1; .8%), nervous system disorder (n = 1; .8%), and hearing impairment (n = 4; 3.2%) illustrate a rather heterogeneous sample demographic.

**Instrument**

The Ruff 2 & 7 Selective Attention Test (Ruff & Allen, 1996) measures two aspects of visual attention: sustained attention (ability to maintain consistent performance level over time) and selective attention (ability to select relevant stimuli while ignoring distractors). The test consists of a series of 20 trials of a visual search and cancellation task. The participant detects and marks through all occurrences of the two target digits: “2” and “7.” In the 10 Automatic Detection trials, the target digits are embedded among alphabetical letters that serve as distractors. In the 10 Controlled Search trials, the target digits are embedded among other numbers that serve as distractors. Correct hits and errors are counted for each trial and serve as the basis for scoring the test. Speed scores reflect the total number of correctly identified targets (hits). Accuracy scores evaluate the number of targets identified in relation to the number of possible targets. Convergent and discriminant validity show that sustained attention is captured by the combination of 2 & 7 Test Speed and Accuracy scores; factorial validity studies confirm that the 2 & 7 Test measures both sustained attention and selective attention.

**Procedures**

The Ruff 2 & 7 Selective Attention Test was administered prior to behind-the-wheel and classroom training. After completion of this test, all study participants received both behind-the-wheel training in conjunction with classroom instruction. Behind-the-wheel training consists of driving a vehicle with supervision from a Certified Driving Rehabilitation Specialist (CDRS) and each participant receive approximately 30 hours of this training component. Classroom instruction consists of driving rules and regulations, simulated-driving, and problematic driving situations. Participants that didn't make sufficient progress and did not demonstrate driving skills did not attempt the licensing examination.

**Results**

Before any analysis could be performed, the researchers had to obtain participant's raw scores on speed and accuracy for the Letters and Digits portion of the test. For the letters portion, the goal is to compute the Automatic Detection Accuracy (ADA) score, by utilizing the following formula:

\[
\text{ADA Speed Raw Score ÷ (ADA Speed Raw Score + ADA Errors Raw Score)} × 100
\]

The components of this formula were computed using the Ruff 2 & 7 Selective Attention Test Booklet Scoring Sheet. The AD Speed Raw Score is the total amount of hits accrued on the letters portion of the test and the AD Errors Raw Score is the total amount of errors accrued on the letters portion of the test. For the Digits portion of the test, the Controlled Speed Accuracy (CSA) score is computed by the following formula:

\[
\text{CS Speed Raw score ÷ (CS Speed raw score + CS Errors raw score)} × 100
\]

The CS Speed Raw Score is the total amount of hits accrued on the digits portion of the test and the CS Errors Raw Score is the total amount of errors accrued on the digits portion of the test.

After calculating the ADA and CSA scores, each
category was broken into quartile scores. Quartile scores provided the 25th percentile, 50th percentile, 75th percentile, and 100th percentile. The cutoff scores are as follows: ADA: 25th (89.26), 50th (94.56), 75th (97.94), 100th (100); CSA: 25th (86.05), 50th (92.73), 75th (96.74), 100th (100).

A two-way contingency table analysis was conducted for both ADA and CSA to evaluate whether the top 75% of scores on the Ruff 2 & 7 Selective Attention test were more likely to receive their driver’s licensure after completion of a Driver’s Rehabilitation Program than those scoring in the 25th Quartile. The two variables were driver’s licensure obtainment (yes vs. no) and score on test (top 75% vs. bottom 25%). Scores on test and driver’s license obtainment for ADA were found to be significantly related, Pearson $\chi^2 (2, N = 124) = 4.00$, $p = .045$. Scores on test and driver’s license obtainment for CSA were not found to be significantly related, Pearson $\chi^2 (2, N = 124) = .872$, $p = .35$.

**Discussion**

Selective and sustained attention are vital components to reducing potential high risk driving situations (i.e., collisions). As noted by Johnson et al. (2000), safe driving depends upon a driver’s ability to detect and analyze traffic situations correctly, and in turn, this can reduce high risk situations. The Ruff 2 & 7 is an instrument that was capable of measuring this required skill set of detection/scanning (selective attention) and maintaining this behavior for long periods of time (sustained attention), and thus was consistent with driver’s license obtainment when faced with stimuli different then the same environment. Identifying consumers in a Driver’s rehabilitation program that will have difficulty being successful is crucial. These individuals need to be screened upon service entry to make specific accommodations to increase their sustained and selective attention, and to teach the SIPDE and Smith System programs.

The SIPDE process in combination with the Smith System can enable a driver to experience low-risk and low-stress driving (Kenel et al., 2000). Safe driving depends upon your ability to detect and analyze traffic situations correctly, and in turn, can reduce high risk situations (Johnson et al., 2000). The ability to maintain an ability to continuously detect and analyze situations compiles selective attention. In this study, we sought to measure selective attention of PWD and their abilities to obtain driver’s licensure after completion of a Driver’s rehabilitation program.

In examining the components that make up selective attention (Automatic Detection Accuracy; Controlled Speed Accuracy), several inferences were obtained. In terms of Automatic Detection Accuracy (Accuracy and Speed with distractors that are different than the ordinary stimuli), having scores in the upper 75% increased the likelihood of obtaining a driver’s license after completion. From the perspective of Vigilance Decrement, the individuals in the top 75% were able to maintain enough accuracy as the duration increased to obtain licensure, which is opposite of the proposed concept. In other words, the study found that individuals were able to maintain accuracy or the ability to detect distractors among similar visual stimuli.

Accuracy is important in measuring one’s ability to perform a task; however, speed is a component that has important implications as well. The speed component of selective attention (sustained) is constructed to determine how quickly an individual can filter through and find distractors, or visual stimuli that are consistent with the original environment. The controlled speed accuracy may be equally important with automatic detection accuracy of the Ruff 2 & 7 because individuals could sift through the numbers and not be able to detect the distractors (2’s and 7’s) among stimuli that are similar to the original environment. In other words, an individual may be driving and not see the vehicle in front of them that slammed on their brakes. The researchers felt that the automatic detection accuracy is most important for new drivers because if individuals are unable to identify distractors that are different than the environment, then they may have difficulty identifying distractors that are similar. Although we thought that both speed and accuracy is beneficial to obtaining licensure, only a portion of our original hypotheses were answered, in the sense that individuals in the top 75% of Automatic Detection Accuracy are more likely to obtain their driver’s license.

**Limitations**

One potential limitation of the study is that the analyses performed looked at the variables (automatic detection accuracy and controlled speed accuracy) as a linear relationship. A curvilinear relationship may be present, but wasn’t conducted. A future study observing the
curvilinear relationship may produce different results when looking at the relationship of both speed and accuracy on driver’s license obtainment.

**Implications**

The utilization of the Ruff 2 & 7 Selective Attention Test is useful in determining an individual’s projective success in a Driver’s Rehabilitation Program. Specifically, VR counselors and Driver Rehabilitation instructors can use this instrument to identify those who have high potential of being successful and those who need other services prior to entering such a program. Placing individuals into service that they are not prepared for will not be beneficial because they may be unsuccessful. Pre-Behind-the-Wheel training (i.e., simulation & clinical) may be more valuable to help consumers develop selective and sustained attention. Proper placement will promote conservation of financial resources and proper training leading to higher successful closures (licensure) within a Driver’s Rehabilitation Program, which in turn, will increase quality of life.

**References**


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900 Indian Mound Dr.
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859.497.4203
Debbie.Perry@goodwillky.org

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336.750.2589
bettersch@wssu.edu

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Department of Rehabilitation Counseling and Disability Studies
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4205 N. Lincoln Blvd.
Oklahoma City, OK 73105
405.530.7533
jejohnson@lunet.edu

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University of Wisconsin-Stout
Menomonie, WI 54751
715.232.1113
Debra.homa@vewaa.com

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University of Northern Colorado
Gunter Hall, Room 1250
Campus Box 132
Greeley, CO 80639
juliet.fried@unco.edu

James Soldner, Ph.D., CRC, BCBA-D
Assistant Professor
Dept. of Special Education and Rehabilitation
Utah State University
2865 Old Mall Hill
Utah State University
Logan, UT 84322-2865
435.797.3241
james.soldner@usu.edu

Paige Tidwell, CRC, CVE, LPC
Rehabilitation Unit Manager
GDOL/Vocational Rehabilitation Program
226 Alcovy Street, Suite D-14
Monroe, GA
770.207.4220
Paige.Tidwell@dol.state.ga.us

Shawn Zimmerman, MS, CVE, CRC
Vocational Evaluator
Virginia Department of Rehabilitative Services
9309 Center St., Suite 304
Manassas, VA 20110
571.244.8411
shawn.zimmerman@drs.virginia.gov

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