

Survey of Vocational Evaluators' Assistive Technology Knowledge and Usage

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Abstract

Technology is a major part of the world today. For Americans without disabilities, technology makes tasks easier. For Americans with disabilities, technology makes things possible. Without consideration of technology during the evaluation process, vocational evaluators are allowing the individual's current functional limitations to dictate vocational options and could be considered invalid and discriminatory (Langton, 1991). Despite this, assistive technology is being underutilized in the vocational evaluation (VE) process (Langton, Smith, Lown, & Chatham, 1998). Assistive technology is considered any technology that is used during the rehabilitation process (30th Institute on Rehabilitation Issues, 2003). The McCarthy Vocational Evaluation and Assistive Technology Survey (MVEAT) was created and administered to VE professionals to generate current information on this topic. Vocational Evaluator knowledge and usage of assistive technology in this study was similar to data gathered a decade earlier (Reed & Fried, 1995). This study found that the majority of VE practitioners used online resources to find information related to AT. Implications of these findings to the field of VE and recommendations are discussed.

The field of vocational evaluation (VE) emerged in response to a demand for improved vocational assessment techniques that did not discriminate against individuals with disabilities. When compared to traditional normative groups on mental tests or performance based measures, persons with disabilities often scored below average. This score was often a reflection of their disability and not their true abilities. Developed from a combination of many professions, vocational evaluation (VE) utilized a set of procedures that helped to eliminate the discriminatory nature associated with traditional assessment (Vocational Evaluation & Work Adjustment Association (VEWAA), 1975).

Vocational evaluation is a comprehensive, systematic process in which the client and evaluator work together to assess the client's vocational interests, abilities, strengths, weaknesses, aptitudes, and functional limitations (Pruitt, 1986). Each of these variables is looked at in relation to the client's preferred rehabilitation goal or employment outcome. Incorporating assistive technology (AT) into the VE process provides modern, creative solutions necessary to determine ability often masked by the functional limitations of a disability. For persons with severe disabilities, AT can provide solutions to make the impossible a reality.

The term "assistive technology" is commonly used to refer to technology that is used during the rehabilitation process (30th Institute on Rehabilitation Issues (30th IRI), 2003). Considered any piece of equipment, device or strategy used to increase functional capabilities of individuals with disabilities, AT can be acquired commercially off the shelf, modified, or customized. AT products can range from low-tech, inexpensive items to high-tech, costly options.

Several studies have addressed the topic of AT in VE. When subjects were asked to appraise their knowledge of AT devices and services, Reed and Fried (1995) found the most common response to be *limited*. Langton (2003) established similar results nearly a decade later with subjects rating themselves as a 6.14 on a 10 point scale of AT knowledge. In the 1995 study, 39% of respondents indicated they had no AT training, with the majority reporting 2-8 hours. Subjects in the 2003 study reported lack of training opportunities as the major cause for limited knowledge, with nearly 95% of respondents in both studies indicating a need for AT training. Use of AT during the evaluation process was investigated by both studies. Reed and Fried (1995) indicated that 67.2% of respondents used AT during the hands-on phase of the evaluation *never, seldom, or occasionally*. The Langton (2003) study found similar results. Based on these results, it is evident that persons with severe disabilities do not always receive necessary accommodations that have the potential to increase their vocational options.

The purpose of the current study was to generate an updated baseline of information regarding vocational evaluators' knowledge and usage of AT. Notable findings of this study will enhance vocational assessment of persons with disabilities by identifying areas in need of improvement. Furthermore, this study has helped identify future research directions related to the integration of AT into the VE process.

Methods

Participants

A convenience sample of rehabilitation professionals attending the 13th National Forum on Issues in Vocational Assessment and Vocational Evaluation were surveyed. The sample for this study consisted of any rehabilitation professional involved, in some capacity, with the vocational assessment of persons with disabilities.

Age of the respondents ranged from 24 to 67 years with mean age of 48 years. Respondents reported vocational evaluation experience ranging from 0 to 37 years with a mean of 15 years experience. Forty-one respondents were female (61.2%) and 26 were male (38.8%). Fifty-five (82.1%) respondents indicated they had attained education at a Master's degree or higher (see table 1). Twenty-seven (40.3%) reported holding a Certified Vocational Evaluator (CVE) designation.

Table 1

Highest Educational Degree Obtained

Degree	Frequency	Valid Percent
Bachelors	12	17.9%
Masters	44	65.7%
Ed.S.	3	4.5%
Doctoral	8	11.9%

Instrumentation

The McCarthy Vocational Evaluation and Assistive Technology Survey (MVEAT) was designed specifically for this study to assess AT use among vocational evaluators. The instrument was created based on a review of current literature, modification of a 1995 AT Survey, and assistance from a faculty member with a considerable amount of research in the area of VE. The MVEAT consisted of 25 items and was divided into four sections: demographics, AT education and background, AT resources, and current applications of AT in evaluation process.

Content and face validity for the MVEAT was determined using a pilot study consisting of subject matter experts. Three certified vocational evaluators from Stout Vocational Rehabilitation Institute (SVRI) in Menomonie, WI were given a copy of the instrument and a review form. By signing the review form, the evaluators indicated they perceived the instrument to accurately appraise a vocational evaluator's knowledge and utilization of AT. All evaluators involved in the pilot study signed the forms suggesting the survey instrument measured the intended content.

Data Collection Procedures

The MVEAT was distributed at the Thirteenth National Forum on Issues in Vocational Assessment at Auburn, Alabama from April 25 through 29, 2007. Attendees of the forum were involved, in some capacity (e.g. practitioner, educator, administrator), with evaluation of persons with disabilities. Hardcopies of the MVEAT were provided to VE professionals not attending the conference in Kansas, Virginia, and Maryland via colleagues attending the conference.

The researcher distributed the survey at a designated table near the registration desk. Forum attendees were asked to complete the five-page survey directly on the document provided and return the completed survey to the survey box on the table. Electronic and other alternate formats were available to participants. If participants chose to take the survey and complete it off-site, they were provided a self-addressed stamped envelope with instructions to return it to the research by Tuesday May 15, 2007.

Results

Subjects identified types of AT training and total hours of training received. Thirty-three (50%) of respondents reported over 20 hours, nine (13.6%) reported 15 to 20 hours, eight (12.1%) reported nine to 14 hours, nine (13.6%) reported three to eight hours, and seven (10.6%) reported less than two hours of training in the area of AT. When asked how often AT was used during the "hands on" (work samples, community-based assessment etc.) phase of the evaluation, 28 respondents (41.8 percent) indicated *occasionally* (see table 2).

Table 2

Use of Assistive Technology During the Hands-on Phase of Evaluation

	Frequency	Valid Percent
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Never	3	4.5%
Seldom	18	27.3%
Occasionally	28	42.4%
Frequently	15	22.7%
Always	2	3%

Respondents indicated their level of agreement with the statements “my professional skills in AT meet my current needs” and “my current employer encourages AT education.” Based on a 5-point scale where 1 equals *strongly disagree* and 5 equals *strongly agree*, responses to both questions were $M=3.22$ ($SD=0.92$) and $M=3.78$ ($SD=0.82$) respectively.

Subjects were asked to indicate the source they used to answer AT related questions. Online resources stand out as the most common resource used. The least common sources reported were physical therapists.

When asked if additional AT information would help them in their work, 59 respondents (90%) perceived a need. Of the 59 who perceived a need for additional information 56 (86.2%) indicated additional education on specific AT devices would help them in their work, while 47 (72.3%) reported they would like more information on how to incorporate AT in VE.

Participants were asked:

Over the course of your career in VE and Assessment, estimate the percentage of the clients you served where integration of AT during the assessment process may have increased employment options.

On average, respondents estimated that approximately 30% of past clients may have had increased employment options as a result of AT integration into the assessment process. Responses ranged from zero to 100 percent.

Discussion

The amount of AT knowledge and usage reported in this study is consistent with earlier studies by Reed and Fried (1995) and Langton (2003). Although there is no “standard” for an appropriate amount of AT knowledge, an overwhelming majority of practitioners asked for AT education in this and previous studies and have not received it. Reasons for this have been most commonly cited as lack of training opportunities (Noll et al., 2006).

This study found an overwhelming majority of practitioners using online resources to answer their AT related questions. This indicates that practitioners may be doing the next best thing to receiving AT education to increase their knowledge of AT. Practitioners realize the important role AT plays in the assessment of persons with disabilities as many indicated employment options would have been increased with AT integration.

Assumptions and Limitations of the Study

There are three primary assumptions of this study: 1) this was a representative sample, 2) the instrument was valid and 3) the participants responded accurately. Caution should be exercised generalizing these results to other settings. Although collecting data onsite at a professional conference yielded an abundance of responses, the sample is not randomized and may not be representative of all vocational evaluators. The instrument was also intended to collect general information on AT in VE and did not focus on any specific area within the topic.

Recommendations

This research indicates that vocational evaluators have limited knowledge of AT. Practitioners reported additional education in the area of AT is necessary. In order for this to occur, AT information needs to be integrated into college level vocational evaluation courses, continuing education courses, on-the-job training, and mentorship training. This will provide more awareness and knowledge of AT for future and current vocational evaluation professionals in order to increase vocational options for clients.

College level courses in AT need to be available to VE students. Specific courses such as principles of VE, laboratory courses, and practicum experiences need to include AT information. Rehabilitation agencies that provide VE services need to provide continuing education opportunities related to AT. Assistive technology organizations such as Rehabilitation Engineering and Assistive Technology of North America (RESNA) may be able to provide training ideas and opportunities for VE practitioners in addition to the latest information.

A high rate of use of online AT resources was indicated by this research. Given the limited research available on this subject, more information is necessary. This can only be accomplished by conducting research on the subject. It is recommended that future research focus investigation on the use of online resources.

Conclusions

Compared to earlier studies, this research project revealed limited progress in the use of AT in the VE process. Practitioners are using online resources, but AT continues to be underutilized directly in the VE process. Stagnation indicates VE as a profession struggles with integration of AT into the evaluation process. Evaluating previous attempts to remedy the issue and using that information in future research is the first step towards much needed change. It is with these recommendations of providing more diverse education to VE students and practitioners and further investigating use of online resources, AT integration into the VE process can be achieved.

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