Journal of Adult Education

Volume 44, Number 2
2015

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Adults with Cognitive Disabilities in the Technical Sector

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Introduction

Erickson and Lee (2013) indicate that 11.4 percent of adults in the workplace suffer from a cognitive disability. They further state that these adults worked fulltime for at least a year in their respective occupation (2013). While many adults with cognitive disabilities thrive at work, others struggle in formal and informal training settings. Adults in the workforce do not always identify themselves as cognitively disabled to others, which can cause frustration and negative perceptions of the individual. These particular adults may be insecure about bringing disabilities to the attention of management and trainers, hesitant to ask for assistance due to the stigma involved with being "different" (Shier, Graham & Jones 2009).

Background

To be recognized as a disability, a medical condition must be identified and given a diagnosis, defining disability as a condition of impairment (Hahn, 1988). Cognitive disabilities affect "the ability to think, understand, learn about, and be aware of the environment through the senses" (Wright, 1980, p.96). The field of disability studies provides a location for the deconstruction of disability and an examination of the cultural, political, and social ramifications of disability in society (Rocco & Fornes, 2010). Rocco and Delgado claim, "Discrimination and oppression against people with disabilities is so ordinary that it is invisible" (2011, p.6).

McLean indicates that unfortunately, even today some people with disabilities are faced with discrimination in the workplace. She continues that this discrimination is based on the grounds that being able-bodied is the normal and superior human condition. Discrimination might occur in the workplace within professional relationships. Ablism, while insidious, may not be intentional. While professionals may be quick to recognize disability or difference in others, it is more difficult for them to turn the gaze inward and recognize features of ablism within themselves or in a collective professional identity (McLean, 2011). I am particularly interested in how this dynamic affects those working in the technological sector.

Many adults today are working in the technological sector. As this is a fast paced and ever changing environment, this opens up questions about how adults with disabilities function in the workplace. The technological sector funds emphasize investments in securities of the technology arena. Some of the sub-sectors include multimedia, networking, PC producers, retailers, semiconductor, software and telecommunications (Perskie & Rasiel 2003). The technological sector has become the prime facilitator for sharing products, information, and news. " As technology seemingly advances its way into every nook and cranny of our society, the job market for individuals with vast knowledge of it is ever expanding" (U.S.News & World Report 2013).

Rocco (2005) proposed a Critical Disability Theory that was derived from her reading of disability studies and critical race theory literature. This theory guides my investigation of adults with disabilities in the technological sector. The theory is composed of the six principals below:

1) Disabled people have a unique voice and complex experience.
2) Disability should be viewed as part of a continuum of human variation (Asch, 2001).
3) Disability is socially constructed (Oliver, 1990;1996).
4) Ablism is invisible.
5) Disabled people have the right to self-determination (Gorman, 2000).
6) The commodification of labor and disability business combine to maintain a system of poverty isolation among people with disabilities (Albrecht, 1992).

With these concepts in mind, I can better identify these patterns for adults with cognitive disabilities in the technological sector.

Purpose

Given the number of jobs created in the technical sector (Casserly, 2012), it is essential that we identify how adults with cognitive disabilities can be best supported in professional environments and evolving sectors. Some career paths and jobs can be more understanding of learning disabilities than others (Nicholas, 2011). This is dependent not only on the type of organization, but also the individuals and policies at that organization site. I was unable to locate specific research or data on adults with cognitive disabilities in the technology sector. Through this study I began to address this fast paced and changing environment and how it affects those with disabilities. I was specifically interested in adults that experience Dyslexia, Attention Deficit Disorder or Attention deficit-hyperactivity disorder.

Research Questions

I considered the following questions:

Central Question: Does working within the technological sector present unique challenges or benefits for individuals with cognitive disabilities?

Sub Question: Is there a stigma behind communicating a cognitive disability in a technical sector?

Methods

I was interested in learning how adults with cognitive disabilities function in the technological sector. I investigated advantages and disadvantages they have encountered in their daily operations. I also inquired whether participants feel there is a stigma behind communicating a cognitive disability in the technological sector.

Sampling

I began this process with homogeneous sampling, during which I interviewed two employees who I knew to have a cognitive disability from the sample pool of the software company that is my place of work. For privacy purposes I will not be mentioning the name of this company throughout this paper. From there, I attempted to utilize the snowball sampling method to find others operating with these conditions in my workplace and interview them accordingly (Creswell 2012). This sampling method proved to be difficult as the individuals did not know of others with cognitive disabilities in our work environment. Additionally, when inquiring to management about knowing anyone with cognitive disabilities, the individuals were unable to disclose that information. I then used homogeneous sampling (Creswell 2012) with more success by inquiring within social networking sites to my peers in the company's network. With this method I interviewed three more individuals for a total of five interviews in all. These individuals participated voluntarily and were individuals I knew prior to the study, thus; my study did not represent the entire population of my workplace and cannot be generalized.

Participants

This study involved collecting qualitative data from the employees at a software company based in Santa Barbara, California, with satellite offices and data centers around the world. Additionally many employees choose to work remotely from locations of their choice. This company creates, sells, and supports a myriad of collaboration and remote support products. This company is a prime example of a thriving technical workplace in the emerging software as a service industry.

Participants in this study included males and females, who ranged in age from early-twenties to early-fifties. These individuals have Attention Deficit Disorder, Attention Deficit-Hyperactivity Disorder or Dyslexia. They are fulltime employees who work in, sales, information technology, electronic data processing or customer support.

I have protected the confidentiality of the participants by assigning participant numbers instead of using their names. I assured interviewees that I would not share the information they shared through our interview with anyone other than my classmates and professor in a password protected forum. As a researcher, I was careful not to share my experiences with the interviewees, which could have skewed their responses to the questions (Creswell 2012).

Process

The process for conducting this study involved contacting a gatekeeper, selecting participants to interview, contacting the selected individuals to conduct an interview and analyzing the data gathered. With this data I can report the findings as well as discussing the results.

Gatekeeper

The first step for conducting this study was contacting a gatekeeper in human resources to gain approval. I did this by using the attached gatekeeper letter (Appendix A) and sending it via inter-office mail.

Selecting Participants

With some delay, permission was granted and I invited my two known respondents to participate in a one-on-one interview via GoToMeeting. From these discussions, I was unable to generate a list of others operating with these conditions in my workplace as I had initially hoped. Thus my sampling consisted of two groups, a group of individuals who I know to have a cognitive disability and a second group consisting of individuals who volunteered to be part of the study via social networking sites and met the criteria.

Contacting Participants

The participants were invited electronically to take part in this study; these conversations consisted of emails and text messages as well as some phone conversations. I provided them with a brief survey including a letter of permission (Appendix B). Once the participant provided consent I conducted the one-on-one interview.

Interviews

The one-on-one interviews were conducted via GoToMeeting and recorded in a Windows Media Player Format. Some of the participants joined on the computer and participated using their webcams and other called in to the GoToMeeting line via telephone without joining on the computer. I took brief hand written notes as the participants responded to questions that explored their experiences related to having cognitive disabilities in the technological sector. These questions are documented in the Interview Protocol (Appendix C), additional questions were also asked during the survey to ask for further explanation or explore responses. These are documented in the transcriptions however are not part of the Interview Protocol.

Data Analysis

After completion of the interview, I used a computer to manually transcribe the recording. This allowed me to gain a general sense of the materials. I assigned codes to the data to build common themes that I utilized in my findings (Creswell 2012).

Findings

Through one-on-one interviews, I was able to find common themes regarding the participants very similar yet different experiences having cognitive disabilities in the technological sector.

Description of Participants

I interviewed five participants who work fulltime for the software company. I have included a brief overview of each participant including their age, the amount of time they've been employed at the company as well as their job title. I have also included their diagnosis, when they were diagnosed and whether or not they use medication. Lastly I gave a brief overview of how the interview was conducted and its duration.

Participant One

The first participant was a female in the 25 to 34 age bracket. She has worked for four years in the Santa Barbara corporate office as a Sales Representative and participates often in a training capacity. This participant has Attention Deficit Disorder and was diagnosed at the age of 6. Though she has taken medication previously for her disability she chooses not to take it currently. This participant's interview was 32 minutes long and took place via GoToMeeting utilizing the webcam functionality. Participant was in her home during the interview and became easily distracted throughout the questioning and needed me to repeat or rephrase questions numerous times.

Participant Two

The second participant was a female in the 35 to 44 age bracket. She works fulltime as a Global Customer Support Coordinator and has since August 2011; she currently works in the Santa Barbara corporate office. This participant has Attention Deficit Hyper Disorder and was diagnosed at the age of 23 after many incorrect diagnoses. She currently takes medication for her disability and it makes a large difference in the quality of her workday and life in general. This meeting was 38 minutes long and was recorded via GoToMeeting but took place over the phone only with no webcams.

Participant Three

The third participant was a male in the 45 to 54 age bracket. He has worked fulltime from the Toronto Ontario office in IT Services and has for over a year. This participant has Attention Deficit Disorder, subtype- "Obsessive Passive". This participant received his diagnosis in the mid 90's and was a subject for six

months at the Clarke Institute of Psychiatry for his learning disability and currently takes medication. This interview was 75 minutes long and took place via GoToMeeting using the webcam feature. The participant was in his office after his shift during the questioning process. Because of his experience being studied at Clark Institute of Psychiatry this individual had a vast knowledge of the topics discussed however I do not believe this caused bias in his answers to interview questions.

Participant Four

The forth participant was a male in the 25 to 34 age bracket. He works fulltime as an Electronic Data Processor from the Santa Barbara Office and has worked there for nearly seven years. This participant has Attention Deficit Disorder and was diagnosed in the 4th grade. He also feels he may have Dyslexia but has not been diagnosed for that. Currently he takes medication for his ADD. The interview took place via GoToMeeting utilizing the phone only and was 30 minutes in length.

Participant Five

The fifth participant was a female in the 25 to 34 age bracket. She works fulltime as a Global Customer Support Coordinator from her home office and has worked for the company for over three years. This participant has both Dyslexia and Attention Deficit Disorder and was diagnosed in Pre-School. She previously took medication for her disabilities but currently chooses not to. Due to scheduling conflicts, this interview was done over the phone but not utilizing GoToMeeting, as such this interview was not recorded.

Analysis of Themes

I found three major themes that the individuals discussed during their interviews: The usage of medication for their disability in a workplace setting, the experience of working in the technological sector as well as the support from management from the perspective of a cognitively disabled adult.

Theme 1- Medication

A common theme for all participants in this study is medication and whether taking it helps throughout the day. Though this was not something that was on the initial assessment, it came up as a big part of each participant's interviews. All of the five participants have been on medication for their cognitive disability however three are on medication while working in the technological sector. Participants one and five both choose not to take medication, when asked why this was, participant one's response was:

"I choose now not to medicate myself because sometimes I feel my ADD helps me. I like who I am now and I don't want to act weird or be too excited. I don't know, they say I have ADD, they say they're 100% positive but it's like…I don't see it, I just think I have high energy".

Participant five explained that she does not like the way medication makes her feel in general and chooses not to take medication unless absolutely necessary. As a child on ADD medication she did not feel like herself and did not want that sensation as an adult.

Participants two, three and four who do take medication while working in the technical sector all felt it greatly improve their lives. When asked about taking medication and being in a technical environment, participant two stated:

"I was frustrated, I was angry I felt it shouldn't be hard and anybody could do this, why can't I? I felt insecure and I felt disappointed in myself because I had thought I was an intelligent person but it made me feel stupid that I cannot get this. I never thought of it being a learning disability until after I got back on medication".

Participant three knows that taking medication helps but he will sometimes become defiant against taking it, as he doesn't like the idea of taking medication in general. He has tried various types and none are perfect but he knows how helpful it is for his workday. Participant four cannot even bare going to work if he runs out of his medication or will often have to leave early if he forgets to take it.

Theme 2- Working in Technology

All of the five participants working in the technological sector found that though there are struggles working in any environment, the positives outweigh the negatives and working in technology is helpful from a learning disability standpoint. Participants one, two and five did not come from a technical background and all struggled at first but now embrace the challenges that come with working in the technological sector and prefer it to their previous jobs outside of technology. Participant one mentions:

"This I like because it's challenging for my mind where before it satisfied my social desires, it was all customer service so I talked face to face to people all the time but this one I feel that you get to talk to people but I'm actually feeling productive and it's always changing so like, I'm always learning".

Participants three and four came from technical backgrounds and both have worked technical jobs for at least ten years. Participant four never has had a job outside of the tech world and participant three could not keep a job outside of the technological sector, he

explains his job history outside of the technical sector as follows:

"I was like a boomerang that would have been thrown about, and wherever it went it just ricocheted all over the place. I'd grab a job and I couldn't maintain or keep the job, for a long time. I'm talking about an easy at least 10+ years of my life that was a huge huge battle. I've done everything, I'm not even kidding when I say, I've had in one year, 6-10 jobs. When I started working tech, the longest job I kept was five years and I never looked back. My overall strength in the tech world is that I see things people don't see".

Theme 3- Support from Management

None of the participants told management of their disabilities at the start of their employment, however participant four communicated his disability to his manager shortly after. The additional participants did not tell any direct superiors of their disability. When asked why they did not share some of the responses were:

"NO, I don't want them to look at me like some 5 year old that wont stop screaming and running around in circles" (Participant One)

"I did think to tell them but I had apprehensions about it, just because I didn't want it to effect them having faith in me or I didn't want it to effect ever being able to promote but then also not my direct manager but other managers have said that when people have disabilities it actually works for them in the work place…so I didn't tell anybody, I didn't think…(trails off)" (Participant Two)

"My experience about humanity in general is, once upon a time I did that, once bitten twice shy. I find people are too judgmental. Lets just put it this way, if I was to, it would be like putting a, for me to even discuss it or even to raise or expanding on it, it would be like rehashing old wounds, it'd be like reliving something I actually found to be nightmarish"(Participant Three)

However all the participants did feel they were supported as employees and were able to thrive even with a disability. Participant one appreciates that Citrix headquarters has balls to balance on at your desk and a gym. Participants two and five explain that if they needed to take part in extra training the management happily provides that ability. Participants three and four work best by teaching themselves and find that resources for getting needed information are readily available more often than not.

Discussion

After researching previous studies about adults with learning disabilities in the workplace, finding methods to conduct my study and implementing these methods, I have concluded the following.

Major Findings

The individuals through the interview process answered the central and sub research questions asked at the beginning of this study. The following were the answers deduced from my interviews of adults with cognitive disabilities working in the technological sector.

Does working within the technological sector present unique challenges or benefits for individuals with cognitive disabilities?

According to this study, working in the technological sector presents both unique challenges and benefits for individuals with cognitive disabilities, however the benefits tended to outweigh the challenges for the participants studied. The benefits included always being challenged by the ever changing information and innovations in the technology world, variation on a day to day basis and seeing problems differently than many other abled adults might and thus finding unique solutions. Some of the negatives are a longer ramp up period when starting a task or learning new information as well as difficulties concentrating in general or staying engaged for a lengthy amount of time. However, many of the participants struggled more with their learning disability prior to working in the technological sector or thrive so much in the technological sector that they have made technology their careers.

Is there a stigma behind communicating a cognitive disability in a technical sector?

This study confirms there is a stigma behind communicating a cognitive disability in the technological sector. Adults with learning disabilities were apprehensive about bringing their learning disability to the attention of their managers and trainers. This comes from the participants themselves and not management. Many participants had previous bad experiences, felt self-conscious, and/or were apprehensive about the possibility of lacking career growth or promotability due to their cognitive disabilities. However, there was no confirmation that a cognitive disability was judged poorly in this environment by peers, trainers or management; on the contrary, there is extra assistance such as further training and tools such as immense online resources and even balance balls to sit on, which were available to employees and are especially helpful to those with learning disabilities.

Comparison of Findings with Existing Studies

When revisiting Rocco's Critical Disability Theory, which was derived from her research of disability studies and critical race literature, I can compare the results of my study with many of her findings and the research I have done:

1) Disabled people have a unique voice and complex experience.

In this study, everyone I spoke with had a different perspective and experience having cognitive disabilities. Though each story was different, they all had very common themes particularly with their work in the technological sector and enjoying the challenges of this type of work. Each person is different and does not experience their disability the same, this is not only a cause of their environment but also is commonly dependent on medication.

2) Disability should be viewed as part of a continuum of human variation (Asch, 2001).

This is a common theme I found in a lot of the research that I have read. Many authors expressed that "In order to theorize disability as a public issue, it must become as viable as the race-class-gender triad" (Rocco & Delgado, 2011). Without defining disability as a public issue, there is not a pressure to make changes to the system or acknowledge those who are disabled, most of the individuals spoke of feeling different in general but none described this feeling to be caused by the technological sector or by social injustices. Asch (2011) proposes a human variation approach, suggesting that instead of maintaining the dichotomy- disabled or not disabled – we should determine how to modify the environment, not the individual". As adults with cognitive disabilities, though the individuals feel the stigma from their own insecurities of sharing their disability with others, the technological sector discussed is flexible as needed and allows them to learn and grown and thus the need to share the disability becomes obsolete.

3) Disability is socially constructed (Oliver, 1990;1996).

Often the construct of disability is social as well as biological and the lines are not often black and white, "They are interactive not only in that complex interactions of social factors and our bodies affect health and functioning, but also in that social arrangements can make a biological condition more or less relevant to almost any situation" (Wendell 1996). These social arrangements are very prevalent for the participants working in the technological sector. There are lots of resources and trainings that assist in the functionality of doing a good job. The job itself being challenging and always changing seems to assist with the biological condition and make these individuals successful. Additionally, medication has been a big help for most of the individuals I spoke with.

4) Ableism is invisible.

"Able-bodied people are often unaware of the constraining impact of disability. For that reason, they are likely to assume that the circumstances of their able-bodied world are universal" (McLean, 2011). As the participants in this study did not reach out to management about their disabilities, and resources for any learner are very readily available, this factor cannot be confirmed or denied within the technological sector.

5) Disabled people have the right to self-determination (Gorman, 2000).

This was very prominent in this study, adults with cognitive disabilities in the technical sector had a strong desire to learn and were extremely self determined to do so. They often utilize the resources, take extra training or teach themselves information in a way they can best understand. No one in this environment was telling them they could not experience growth because of their disability, nor did these individuals give up because of the struggles they sometimes face.

6) The commodification of labor and disability business combine to maintain a system of poverty and isolation among people with disabilities (Albrecht, 1992).

This was not the case in this study, in fact the American Disability Act applies a law for employers of 15 or more which applies certainly to Citrix as well as many other companies in the technological sector: "Title II forbids discrimination by an employer if the applicant or employee can perform the essential functions of the job with "reasonable proficiency" (Rocco & Fornes, 2010).

Implications for Practice

From what was learned from participants of this study, I recommend not only the technological sector, but all organizations provide a safe place and an opportunity for adults to disclose a learning disability to management. This can better allow for flexibility of the expectations of the employee as well as the adaptations of training modules to suite the needs of the learner.

When assisting adults with cognitive disabilities in this manner, the company can embrace the unique skills available from their employees as well as creating a comfortable environment for adults to grow to their maximum potential.

Limitations

Due to the lack of time and resources, the sample size was small and only came from one sample pool. Those who participated were all people whom I knew prior to conducting this research and these individuals participated voluntarily thus my study did not represent the entire population of the company and cannot be generalized.

Recommendations for Future Research

Future researches should take random samples from various types of tech environments in different locations. Interviews were conducted over the phone and/or webcam and not in person, which may have caused the responses to be less personal and/or allowed participants to become distracted during interview process.

Further research can be done based on this study to discover how this population best learns and can be used to develop tools from a training and/or management standpoint to assist adults with learning disabilities in the technological sector. Additionally I learned that the majority of participants in this study felt stigmatized for having a learning disability and therefore did not share with others, particularly management. It would be interesting to study management/trainers to see how they feel about adults with cognitive disabilities in the workplace as employees in order to plan better practices for communicating a disability as well as one's reaction to learning of a disability.

Overall Significance of the Study

The significance of the study is to learn more about the experience of having a cognitive disability in the technological sector in order to understand the challenges and benefits for trainers and management to instruct and/or manage this large and varying population. I hope to have portrayed the emotions that come along with sharing a learning disability with management when starting a new job in the technological sector and that one day this population will be comfortable sharing their cognitive disabilities without the fear of judgment or lack of promotability. The participants in this study have thrived in the technological sector and often can offer a different perspective and provide benefits to the technological sector that is often unique from their "abled" peers.

References

Asch, A. "Critical Race Theory, Feminism and Disability: Reflections on Social Justice and Personal Identity." *Ohio State Law Journal*, 2001, 62 (1) 391-423.

Barnes, C. (1998). The social model of disability: A sociological phenomenon ignored by sociologists? In T. Shakespeare (Ed.), *The disability reader: Social science perspectives.* (pp. 66-78). London: Cassell.

Casserly, M. (2012, May 11). *10 Jobs That Didn't Exist 10 Years Ago* - Forbes. *Forbes.* Retrieved March 4, 2013, from http://www.forbes.com/sites/meghancasserly/2012/05/11/10-jobs-that-didnt-exist-10-years-ago/

Charlton, J. I. (1998). *Nothing About Us Without Us: Disability Oppression and Empowerment.* Berkley: University of California Press.

Creswell, John W.. *Educational research: planning, conducting, and evaluating quantitative and qualitative research*. 4th ed. Boston: Pearson, 2012.

Erickson, W. A., Lee, C. G. 2013. "Disability Statistics in the United States." Ithaca, NY: Cornell University Rehabilitation Research and Training Center, www.disabilitystatistics.org. Accessed February 23, 2013.

Hahn, H. (1988) ."The Politics of Physical Differences: Disability and Discrimination." *Journal of Social Issues*, 44 (1), 39-47

McLean, M. A. (2011), Getting to know you: The prospect of challenging ableism through adult learning. New Directions for Adult and Continuing Education, 2011: 13–22. doi: 10.1002/ace.427

Nicholas, R. (2011). *Ready and able addressing labor market needs and building productive careers for people with disabilities through collaborative approaches.* Washington, D.C.: National Technical Assistance and Research Center to Promote Leadership for Increasing Employment and Economic Independence of Adults with Disabilities.

Perskie, E., & Rasiel, E. (2003). Diversifying among Hedge Fund Strategies: An Alternative Frontier. *Duke University (Spring)*.

Rocco, T. S. "From Disability Studies to Critical Race Theory: Working towards Critical Disability Theory". Proceedings of the 46th Annual Adult Education Research Conference. Athens; University of Georgia, 2005.

Rocco, T. S. and Delgado, A. (2011), Shifting lenses: A critical examination of disability in adult education. New Directions for Adult and Continuing Education, 2011: 3–12. doi: 10.1002/ace.426

Rocco, T., and Fornes, S. (2010). "Perspectives on Disability in Adult and Continuing Education." In A. Rose, C. Kasworm, and J. Ross-Gordon (eds.), *The Handbook of Adult and Continuing Education.* Thousand Oaks, Calif.: Sage.

Shier, M., Graham, J. R., & Jones, M. E. (2009). Barriers to employment as experienced by disabled people: a qualitative analysis in Calgary and Regina, Canada. *Disability & Society*, 24(1), 63-75.

U.S.News & World Report. "Best Technology Jobs | Best Jobs | US News Careers." *Business News and Financial News - US News Business*. U.S.News & World Report., n.d. Web. 9 Mar. 2013. <http://money.usnews.com/careers/best-jobs/rankings/best-technology-jobs>.

Wainer, Howard. *Drawing Inferences from Self-Selected Samples.* New York: Springer-Verlag, 1986.

Wendell, Susan. "The Social Construction of Disability." *The rejected body: feminist philosophical reflections on disability*. New York: Routledge, 1996. 57-68.

Wright, G.N. (1980). *Total rehabilitation. Boston*: Little, Brown & Co

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