

# Assistive Technology and Human Capital for Workforce Diversity

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## INTRODUCTION

Workforce development has evolved to describe any one of a relatively wide range of national and international policies and programs related to learning for work. This evolution, in part, is the end result of the term being frequently misunderstood: workforce development consists of job training only. Harrison and Weiss (1998, p. 5) defined workforce development as the “constellation of activities from orientation to the work world, recruiting, placement, and mentoring to follow-up counseling and crisis intervention”. However, inequality in the workplace, specifically promoting equal rights to employment for members of discriminated groups with disabilities (Kriegel, 2002; McClain, 2002) has become a widely talked about phenomenon in the business world, and is visible from an international (Jakovljevic & Buckley, 2011) paradigm. Hence, the purpose of this chapter is not on the varieties of the availability of assistive technologies (AT) and their usages based on individuals’ specified disability, so that individuals who require the usage of ATs can be of equal playing field compared to those individuals who do not require the usage of ATs. For information regarding AT and the state of AT in the past, present, and future in the United States, ADA, and the like, refer to Tran’s (2015a) article titled *Assistive Technology*. The purpose of this chapter is beyond the coverage of Tran’s (2015a) *Assistive Technology* article, such that, the purpose of this article is on the end results that AT could provide and contribute to the diverse workforce, and the role AT play in relations to workforce development—from an international perspective.

## BACKGROUND

Historically speaking, from past to present, for many developing countries, legislation regarding the employment of individuals with disabilities has been criticized due to its ineffectiveness (Schall, 1998; Siegal, 2001). In particular, according to Jakovljevic and Buckley (2011), the legislation has had little or no impact on the employment status of people with disabilities (Agocs, 2002; Brett, 2000; Conlin, 2000; De Jonge, Rodger, & Fitzgibbon, 2001; De Laurentiis, 1991; Hignite, 2000; IRS, 1998; McGregor, 1991; Robitaille, 2002; Saskatchewan, 2000; Schall, 1998, Thomas, 2002). When addressing the needs of employees with disabilities, the Act and the Code both include the term *reasonable accommodation* (Tran, 2015a). Reasonable accommodation (disability accommodation) is any modification or adjustment to a job or to a working environment that will enable a person from a designated group to have access to or participate or advance in employment (Department of Labor, 2002; Tran, 2015a). It includes acquisition and modification of equipment and devices, as well as any necessary training. These devices and equipment are collectively known as assistive technologies (AT).

## HUMAN CAPITAL FOR WORKSPACE DIVERSITY: ASSISTIVE TECHNOLOGIES (AT)

Human capitals [cultural and global (Tran, 2014a)] include labor market skills, leadership skills, general education background, artistic development

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and appreciation, health, experiences, and intelligence [behavioral, emotional, cognitive, cultural (CQ), general (IQ), metacognitive, motivational, and social (Tran, 2014a)]. Human capitals are essential asset in most communities, both domestic, and international. Traditional approaches to human capital development emphasize individual responses. Quite often, individuals bear the cost, and the burden of obtaining education and training. Although many government programs have been developed to provide training, they tend to focus on specific populations and often are not well connected with local labor market conditions, as compared to nongovernmental that may have different types and levels of access and accessibility for various populations: the abled and the disabled.

## **Disability**

There is much debate about the best way to define *disability*. The issue of definition has also been further complicated by the links to individual eligibility criteria for program and financial assistance or to legal implications. Furthermore, disability is difficult to define because it is a multi-dimensional concept with both objective and subjective characteristics. When interpreted as an illness or *impairment*, disability is seen as fixed in an individual's body or mind (Tran, 2014b; Tran, 2015b). When interpreted as a social construct disability is seen in terms of the socioeconomic, cultural and political disadvantages resulting from an individual's exclusion. Furthermore, people with disabilities, advocacy groups, legal and medical practitioners, policy-makers and the general public, all have a different view of disability. Thus, the meaning of disability has evolved and changed over the years through various perspectives, as such moral, medical, social, and human rights perspectives (Department of Education & Training, 2005).

The various perspectives have an effect not only on how we define disability, but also on social planning and program design, employment strategies, and how decisions are made regarding

such things as program eligibility (Nagi, 1965). In seeking to emphasize the distinction between impairment and disability, and promote a *social model*, the Physical Disability Council of Australia (2004) has stated:

*Disability means the disadvantage or restriction caused by a contemporary social organization, which takes no account or little account of people who have impairments and the functional or behavioral consequences of those impairments, leading to social exclusion or resulting in less favorable treatment of and discrimination against people with impairments. Therefore people with disability are people with impairments who are disabled by barriers in society. [The] central theme in this definition are disabled is external to the individual and is a result of environmental and social factors (Submission by Physical Disability Council of Australia to Productivity Commission, 2004).*

There are many variations of the social model, but all portray disability as a social construct created by ability-oriented and ability-dominated environments. According to the social model, even though impairment has an objective reality that is attached to the body or mind, disability has more to do with society's failure to account for the needs of people with disabilities.

## **Assistive Technology**

The World Report on Disability [World Health Organization (WHO, 2011, p. 101)] produced by the World Health Organization and the World Bank, defined assistive technology (citing the U.S. Assistive Technology Act, 2004) as "any item, piece of equipment, or product, whether it is acquired commercially, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of individuals with disabilities" (WHO, 2011). Assistive technology was defined in 1988 U.S. Technology-Related Assistance of Individuals with Disabilities Act as "any item,

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