

EMPOWERING PEOPLE WITH DISABILITIES (PWDs) VIA INFORMATION COMMUNICATION TECHNOLOGY (ICT): THE CASE OF MALAYSIA

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ABSTRACT

Information and communication technology (ICT) skills have become basic requirements to compete in the labour market. However, persons with disabilities (PWDs) face financial, social and environmental difficulties which form barriers to acquiring these skills. Thus, it contributes to the weakening of their competitiveness in the labour market. The main objective of this study is to identify the extent of the contributions of ICT in empowering Malaysian persons with disabilities (PWDs) to compete in the labour market and get jobs. The study used a qualitative approach. Twenty interviews were conducted with Malaysian PWDs who are working in jobs related to ICT and represent institutions in the public and private sectors. The findings reveal that ICT plays a key role in empowering PWDs in employment. However, efforts to empower PWDs in the ICT sector are weak. The study also found that Malaysian PWDs face financial, social and environmental problems in accessing sources of ICT which contributes to the weakening of their competitiveness in the labour market. Serious efforts should be made to develop awareness in Malaysian society about the importance of empowering PWDs via ICT. PWDs are an integral part of the Malaysian society and as such it is the responsibility of the society to enable them to lead a dignified life and contribute effectively to nation-building. Indeed, ICT has an essential role in empowering PWDs. It is a major tool in strengthening the skills of the disabled in order to compete in the labour market.

Keywords: empowerment, ICT, labour market, Malaysia, PWDs

INTRODUCTION

During the past two decades, information and communication technology (ICT) has made a significant shift in the labour market. The acquisition of skills of such technology has become one of the basic requirements to compete in the labour market by new entrants into the workforce and job seekers (Garido et al., 2012). ICT provides People with Disabilities (PWDs) with widely expanded opportunities (UNESCO, 2011). According to Article 21 of the United Nations Convention on the Rights of PWDs (UNCRPD), they have equal right to seek, receive and impart information just like the non-disabled. Thus, the United Nations urge governments of member states to ensure that services and facilities in ICT are made accessible to all (UNESCO Global Report, 2013).

PWDs, as a segment of community, need to live independently, which they cannot achieve alone. Therefore, the empowerment of PWDs in employment by providing them with skills of using computers and the Internet helps them to lead independent and dignified life. The training of PWDs in ICT enhances their ability to work and perform daily activities (Ta, Wah & Leng, 2011). According to the Malaysian Ministry of Commerce and Industry, the empowerment of PWDs in accessing sources of ICT demonstrates their ability as individuals to derive benefits from public services and to operate effectively in society. It also confirms the importance of ICT in the labour market where ICT changes the characters of a considerable number of jobs in ways that allow the development of a more inclusive labour market. It introduces opportunities for more flexible working patterns, allows better engagement in the workforce of PWDs and creates a range of new jobs (Meager, Hill & Wilson, 2007).

Based on the United Nations statistics, 10% of the world's population consists of PWDs in various forms. An estimated 82% of PWDs in developing countries live below poverty line and often are deficient in accessing key areas of development, including health, education, training and employment. Moreover, PWDs face constraints in employment in developing countries due to lack of education and skills (ILO, 2012). According to United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2011), over 80% of PWDs live in isolated rural areas in developing countries. It also indicates that unemployment rate among PWDs in developing countries amounts to 90% and in developed countries up to 70%. With rapid increase of urbanization in Malaysia, reaching 61.8% in 2000 and is expected to reach 75% in 2020, the most prominent challenges facing PWDs in this country are poverty, education and training (Wahiza & Wahat, 2011). The Malaysian government has thus allocated a card for PWDs, obtained through voluntary registration.

Since past views about PWDs have changed, attention is now diverted to issues of PWDs and their rehabilitation. In this context, empowerment of PWDs through employment of ICT is consistent with the Universal Declaration of Human Rights issued in 1948, which states that all human beings are born free and equal in rights and dignity (UNESCO, 2011). This study thus investigates the role of ICT in empowering PWDs with employment.

LITERATURE REVIEW

According to the World Health Organization (2011), many PWDs do not have equal access to health care, education, and employment opportunities, do not receive the disability-related services that they require, and experience exclusion from everyday life activities. The World Bank (2017) points out that one-fifth of the estimated global total, or between 110 million and 190 million people, experience significant disabilities and they are more vulnerable to negative social and economic factors than non-disabled persons. Specifically, the factors include less education, poorer health outcomes, low staffing levels and high poverty rates.

Approximately 60% of the total 650 million PWDs in the world are living in the region of Southeast Asia (UNESCAP, 2008). Furthermore, several studies affirm that the advent of new technological approach has generated increased possibilities for labour force participation also for persons with severe disabilities. In practice, from the beginning of 1987 extra funding has been set aside for such workplace adaptations that are considered technologically advanced or can offer work opportunities and new types of jobs for people with various impairments and disabilities (AAATE, 2010).

The difficulties faced by PWDs in the workplace are reflected in the high rates of unemployment, prejudice about their productivity and lack of access to the work environment. Statistics show that high unemployment rates among people who suffer from mental illness make up the highest percentage. For example, in the United Kingdom, 75% of people of working age who suffer from mental illness are unemployed, while in Switzerland, people with mental disabilities are the most important claimants for disability benefits, which represent more than 40% of the total. Moreover, they are paid less than non-disabled persons. As they are entrusted with low-paid jobs, they often have less access to social and legal guarantee (ILO, 2007).

These conditions affect, directly or indirectly, the self-confidence of PWDs and may push them towards frustration and depression. Experience shows that PWDs who get jobs suited to their skills and abilities contribute considerably in developing their work environment (ILO, 2007). The unemployed are more likely to be deprived of the benefits of participation in the labour market, which is an essential element for social integration (Turcotte, 2014).

The International Labour Organisation (ILO) aims, essentially, to guarantee the rights of everyone, including those with disabilities, to obtain decent work. Thus, the practical translation of this concept means enhancing employment opportunities for persons with disabilities based on the principles of equal opportunities, equal treatment and community participation through the promotion of labour standards and advocacy. It also aims to build knowledge, partnership and technical cooperation services. ILO has made great strides with regard to ensuring the rights of PWDs in getting employed. In this regard, it has adopted the Vocational Rehabilitation and Employment (Disabled Persons) Convention in conjunction with the beginning of the United Nations Decade for PWDs in 1983, which obliges member states to formulate, implement and review national policy on vocational rehabilitation and employment for PWDs. Along with the Code of Practice "Managing Disability in the Workplace" 2001, this is a non-binding document which if adopted, the employers should be ready to implement its rules and procedures. In 2014, the Human Resources Development Recommendation invites Member States to develop policies and programs on vocational guidance and training through public employment services and systems. These policies were essentially designed to expand the national systems of services, information and guidance for all, including persons with disabilities (ILO, 2007).

In Canada, hundreds of thousands of individuals suffer from obstacles in their daily activities because of physical or mental disability. The country has examples of positive participation for PWDs in the labour market and they often hold jobs that commensurate with their qualifications. In spite of the many positive experiences and stories, employment opportunities for persons with disabilities are still less than the others, not only in Canada, but other parts of the world as well. To deal with this issue, the Canadian government has embarked on actions and programs that enable access to work and university education opportunities for the promotion and participation of PWDs in the labour force. These have overcome some of the social and physical barriers encountered (Turcotte, 2014).

Many studies have found that PWDs and their families are more likely to experience economic and social deprivation unlike those without disabilities. Therefore, they need support in order to achieve their fundamental rights. Moreover, PWDs are more likely to be unemployed than non-disabled persons, and they get low wages even when they find jobs (WHO, 2011). Most of the PWDs in Asia and Pacific region suffer from poverty and marginalization, live in rural areas, or in the urban periphery. They generally have limited access to education, employment, housing, transportation, health services and recreation, leading to their total economic and social exclusion. Moreover, the unemployment rate among PWDs, according to the International Labour Organization (ILO), is double the rate of the non-disabled. These disproportion can be attributed to frequent and diverse barriers such as negative attitudes of employers, lack of accessible facilities, and lack of vocational and technical trainings. In this respect, it is important to note that the European Union policies towards the handicapped are mainly aimed towards employment and social integration (Santvoort, 2009).

In the United States of America, the Department of Labour's Office of Disability Employment Policy (ODEP) has made efforts to increase employment opportunities for PWDs by expanding access to training, education, employment supports, assistive technology, integrated employment, entrepreneurial development, and small-business opportunities (Martinez, 2011). The department has extensive partnerships with employers, local governments and agencies to increase awareness of the benefits of employing persons with disabilities, and thus facilitate the use of effective strategies in this regard.

Recently, educational requirements in all occupational groups have increased due to the increase in demand for highly and middle skilled workers. The opportunities are narrowed down to low-educated and low-skilled workers. However, this polarization of jobs raises concerns about social equality and exclusion (Simonazzi, 2009). According to the report by the World

Health Organization (WHO) on Disability (2011), the main factor in the exclusion of PWDs from the labour market is their lack of access to education and training, particularly in the increasingly important field of information technology. However, the most important challenges facing social work organizations in the field of PWDs in Malaysia are limited employment opportunities and weak educational infrastructure at the training institutions (Sinnasamy, 2006).

THEORETICAL FRAMEWORK

Empowerment as a process of change refers mainly to enhancing the possibilities for people to manage their own lives (Rappaport, 1987 as cited in Lord & Hutchison, 1993). In other words, it aims at the development of individuals to live independently and with dignity. Thus, the outcomes of empowerment of PWDs are reflected in enabling them to access sources of knowledge and information in order to develop their skills and abilities, and participate effectively in achieving positive shift in their lives and the community as well. In addition, the process of empowerment contributes to strengthening the capabilities of vulnerable groups in society in order to stabilize their livelihood and life style. It provides facilities and opportunities for decent living. Meanwhile, the process of empowerment contributes to the society in producing active members (Sen, 1999).

Alsop and Heinsohn (2005) describe that the meaning of empowerment encompasses two stages. The first is enhancing the capacity of an individual or group to make choices and the second is to transform those choices into action and desired results. They propose a measure of empowerment based on the individual's ability to choose. Thus, a person can be empowered if he/she possesses the ability to choose and then the embodiment of this choice is reflected in the desired outcomes. According to them, there are two factors affecting the ability of the individual to make the choice, agency and opportunity structure. Agency means the actor's ability to make significant choices from among the options available. Opportunity structure is the surrounding formal and informal contexts by which actors operate; both factors play an important role in the output, and the level of the empowerment process (Alsop & Heinsohn, 2005). This is shown in Figure 1.

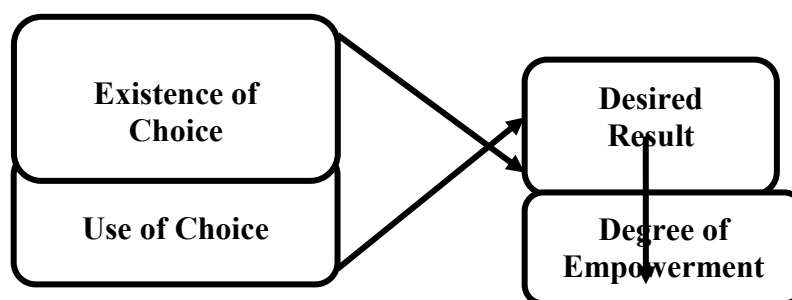


Figure 1. Empowerment Process

Through this model, the current study tries to reveal the role of ICT in empowering PWDs in Malaysia. ICT can enable PWDs to compete in the labour market. However, they face difficulties in accessing the sources of ICT mainly through education and whether these sources are affordable or not. In this context, the study focuses on whether ICT enables PWDs to make the right choice (it depends upon accessibility to the Internet and computer using skills), whether the use of ICT is affordable for PWDs and whether accessibility to ICT services achieves the desired results that are embodied in independent and dignified living. In this regard, education plays an important role in the access to sources of ICT and helps PWDs to take advantage of its benefits. It also provides PWDs awareness to systems related to the access and use of ICT facilities. The skills to utilise the Internet and computers contribute to the empowerment of PWDs to achieve independent and decent living, which means overall empowerment in the end.

METHODOLOGY

This study employed qualitative method to examine and assess the role of ICT in empowering Malaysian PWDs to compete in the labour market and lead a dignified and independent life. Qualitative study is characterized by depth and comprehensiveness as it deals with the social life from various angles. Therefore, it focuses on the study of the phenomenon in its social context to track the interpretations and connotations in a specific socio-cultural framework. The researcher employed the purposive sampling technique to recruit 20 respondents. Face-to-face interviews were conducted to elicit information about the socio-demographic characteristics, awareness, involvement and utilization of ICT. In addition, it also sought information about the opportunities of betterment that ICT brings into the life of PWDs. All interviews were recorded after getting permission from interviewees and then the conversations were transcribed in the form of texts and analyzed. The recording of the interviews was more accurate than taking notes solely because the interviewer focused on follow-up questions from the interviewees (Lee, 2006).

According to Lee (1993), there are three issues that are considered sensitive in social research namely: (a) issues considered private, stressful, or sacred, such as issues on sexuality or death, (b) issues, if revealed, might cause stigmatisation or fear, such as youth studies that reveal illegal behaviour, (c) issues that could be a source of political threat to the participants, in particular in social conflicts and conflict zones (as cited in McCosker et al., 2001). Brannen (1988) has identified four categories for the conduct of interviews with sensitive topics which are: (a) approaching the topic; (b) dealing with the contradictions, complexities and emotions inherent in the interviews; (c) the operation of power and control in the interview situation; and (d) the conditions under which the interviewing takes place. The fact that the researcher is a non-Malaysian and investigating the experiences of

Malaysians with disabilities with respect to ICT posed a great challenge. Some of the cultural and language difficulties had formed barriers to get the information directly. In this respect, Brannen (1988) claims, "interviewees may not have the vocabulary which allows them to discuss the problem, or they may deny it" (as cited in Lee, 1993: 103).

The researcher faced different difficulties in approaching the respondents and collecting the data. Some of the difficulties are: a) scarcity of disabled people who are working in jobs related to ICT; b) poor responses from government institutions and NGOs in seeking their permission to conduct interviews; and c) the large geographical area of the sample.

RESEARCH FINDINGS

a) Control over daily life and independent living

The study shows that ICT has contributed to the integration of the respondents in the society by enhancing their employability, community participation and contribution to nation-building just like the non-disabled persons. It has also helped them to achieve a level of independence in the control of their daily lives on the one hand and independent living with dignity on the other. In particular, the data indicate that they are able to spend on themselves and their families as well as help those in need in the society. The independence of the participants is reflected in self-confidence, self-esteem and the respect they receive from the society.

Participants pointed out that ICT has empowered them in many areas of life. First, through the use of audio-visual, PWDs who have learning difficulties are able to rely heavily on ICT to communicate with others, especially through the use of social media such as WhatsApp and Facebook which have become an integral part of daily life. Secondly, the social dimension of ICT has emerged in the testimony of some of the respondents in terms of enriching their social relations through the means of social media. The participants stressed that there are specific categories of PWDs who have benefited more from ICT. One of the respondents said:

ICT is very beneficial especially for persons with sensory impairment disability, the vision and hearing impaired. They rely on ICT because communication becomes a problem for them. (Zee)

Persons with motor disabilities can use computers and communication devices more than people with other disabilities who need additional programs to enable them to be easily used. Nevertheless, there are some people with motor disabilities who face difficulties in the use of these devices because of their level of disability. Another participant stressed the importance of ICT in the lives of PWDs by saying:

ICT helps us a lot. Although I did not study ICT, I believe ICT creates a huge change in the life of PWDs. (Ris)

ICT is not limited to a specific area of knowledge in the sense that it is not necessary that a person must specialize in computer science in order to acquire the skills of such technology. In this regard, the study shows that most of the participants do not come from ICT related background but they have acquired skills related to the area because they are basic requirements to competing in the labour market. Ben said:

ICT helps me in my job, everyday life, education, communication with others through Facebook and WhatsApp. It makes my life very easy. With ICT, the world becomes smaller than before. By using ICT devices, we can interact like normal people without any problem. I acquired ICT skills because I need it, I have no choice if I want to compete in the labour market. I have to learn about ICT.

Participants stressed that acquisition of ICT skills has helped them to get jobs as employers focus on the CV and soft skills during job interviews. The following are examples participants mentioned in this regard:

By acquiring that kind of knowledge you gain higher advantage to compete in the labour market. For example, most of my senior colleagues don't have ICT skills that I have. So, when it comes to that kind of job that needs ICT they ask me to assist them. (Sali)

Therefore, acquisition of ICT skills is the basic condition for competition in the labour market although these skills do not require a high level of education. It requires basic knowledge in using the computer in the area of data processing in terms of input, organization, storage and output as well as dealing with the Internet as a source of information. This level of skills is required in general administrative positions, whether in the public or private sector. Therefore, providing opportunities for Malaysians with disabilities during the education process is the determining factor which will enable them to compete in the labour market. In other words, a significant association exists between "inclusive education" and "equality at work" opportunities which is vital for PWDs (Teik, 2010). Employment is a means of social integration of PWDs into society. From the perspective of PWDs, the need to work is no different from people without disabilities, especially since the job is a source of income. Therefore, working will enable PWDs to achieve independent living.

b) Self-esteem and community respect

Based on the results, the study concludes that ICT is a tool for the empowerment of PWDs. It serves a valuable means for disabled people to get employed and lead independent and respectful life. One of the respondents said:

ICT is essential in my job. I use it in my teaching, like projector, reading textbooks, Internet documentation. There are some difficulties when I teach like describing diagrams and pictures, because the voice cannot do it, I need someone to help me. But ICT helps us to become paperless person. ICT is very important to compete in the labour market for all kind of jobs. If you don't have ICT knowledge it is very hard to get a job. For example, a blind person can work as a receptionist, but he or she should know how to use the Internet like writing and replying emails, using social media like WhatsApp, all these things involve ICT. In order to get a job, you have to gain ICT skills. Otherwise, you cannot survive. (Ting)

The results show that disability does not constitute an obstacle to respondents, in fact, is a motivation for achievement. One of the participants reported that disability for him is a strong motivation to continue his graduate studies until he received his PhD. Studies have indicated that motivation is directly linked to the objective that motivates someone to work (Ryan & Deci, 2000).

The respondents understood the importance of ICT towards competing in the labour market. This awareness has emerged through the keenness of some of them to acquire these skills since secondary level and then developing them at the university and after graduation as well. Most of them took advantage of the training courses organized by universities for free or for a reasonable fee. They also stressed that these courses contributed significantly to their employment prospect. Thus, this result confirms that acquisition of ICT skills has empowered the participants to compete in the labour market and get jobs. This is a positive indication that if the disabled people have been trained to acquire ICT skills, their opportunities of competing in the labour market will be great in terms of the multiplicity of options. Thus, we can conclude that, proficiency in ICT positively relates with better opportunities of employment.

Employability has multi-dimensional benefits for PWDs. Firstly, it enables them to achieve financial independence as they bear the expenditure on personal and family needs. Secondly, a job enables a person with disability to participate in community development. As Zam mentioned:

He or she does not need other people to provide financial help to them, even from the government... Since you are earning income you are actually contributing in terms of tax, *sadaqah* (charity) and *zakat* (alms-giving) as well, and then you are also able to support your family without any help from anyone.

Furthermore, most respondents showed a high level of confidence when talking about self-esteem, self-worth and community respect for PWDs. This is because PWDs also have plans, ambitions, hopes and goals which they seek to achieve. In this regard, Ris pointed out, "Every disabled person has a plan like others, but they have some limitations to achieve this plan". Another respondent, Ting said:

I have dignity like others and I don't feel that I am less than anyone else. I am better than others who are not working. I am working.

Self-esteem lies in the self-desire of a person with a disability to better change through skill development and acquisition of knowledge. The desire for self-esteem despite a disability is that it motivates others to help him in self-development. Similarly, the community respect for PWDs depends on the level of their participation in community activities. As revealed in the result, education, work and community participation play important roles in this regard. The respondents confirmed that their job has enhanced their participation in community development, as well as strengthened their self-esteem. They also indicated that their jobs have given them a sense of respect in the society. Furthermore, the respondents unanimously agreed that their jobs enabled them to control their everyday life. In addition, the jobs have also helped them to increase their sense of self-worth.

The study reveals experiences of societal success among the respondents who were able to reach a high level, financially and socially. There are successful PWDs who serve as a catalyst for others with disabilities. Thus, a person with disability is capable of shifting from being a dependent person to serving himself, the society and the nation. However, to achieve such a transformation it is important for the person with a disability to have the desire to change. He must also perceive the family, community, and state of PWDs. He must understand that he possesses the ability to participate and contribute to all fields of life. This awareness should be reflected through programmes and activities that help PWDs in communal and national participation.

DISCUSSION

ICT has opened up new prospects in the labour market for disadvantaged groups such as PWDs. However, PWDs face several constraints to get these opportunities such as financial limitations and lack of skills to use computers and access the Internet. The statistics on PWDs further complicates the problem where it shows that PWDs represent approximately one sixth of the working population globally. This indicates that the opportunities are limited for PWDs to obtain decent work, which provides the necessary income for independent living (Bruyère et al., 2000). Today's job market requires diverse standards. The acquisition of skills to use ICT has become one of the necessary requirements for employment. This implies that those who do not have these skills will be on the margins of the workforce. This situation highlights the importance of empowering PWDs with acquisition skills of using ICT in order to compete in the labour market. Thus, the challenge for the PWDs is the ability to access employment opportunities through training for the skills required in the labour market (Bruyère et al., 2000).

The problem lies in the fact that the skills required in the labour market are not available for the vast majority of PWDs. Moreover, the training programmes do not meet the requirements of the labour market (Powers, 2008). Thornton and Lunt (1997) point out that most PWDs, particularly in developing countries, do not receive any form of vocational training. Thus, most of them are socially excluded and suffer from poverty. This condition reflects negatively on individuals and communities alike. However, the main factor behind the exclusion of PWDs from competitive labour market is lack of formal education and training in order to gain the necessary skills to compete in the labour market, specifically in the field of ICT as PWDs face many difficulties in getting access into this area (Morris, 2011). Thus, the current study seeks to discover the role of ICT in empowering PWDs to acquire the skills required in order to compete in the labour market.

Although the Malaysian government has made efforts towards the empowerment of PWDs through employment and allocating 1% quota of jobs in public service for them, most of them are unemployed because of their inability to compete in the labour market. In the Malaysian situation, as a result of the various difficulties confronting PWDs, job opportunities for them are limited compared for the non-disabled. Such difficulties are in the form of limited job opportunities, and obtaining the right to be trained, employment and jobs (Hashim, Wok & Rahim, 2011). Thus, this study investigates the role of ICT in empowering PWDs with employment. The study addresses the theme of empowerment in terms of several perspectives. It deals with two aspects of the problem; first, ICT plays an active role in empowering PWDs. Second, PWDs face many difficulties in accessing the services of ICT. In this sense, ICT is considered as an effective mediator in empowering marginalized groups in society. Regarding empowering PWDs with employment, this study assumes that ICT plays a pivotal role in this respect. Given that the acquisition of ICT skills has become one of the most important criteria to compete in the labour market, the training of PWDs in this area is an urgent necessity. There are different terms related to these skills and most of them are related to the concept of rehabilitation. For example, ICT Skills for Life, ICT Key Skills and ICT Functional Skills (Morris, 2009:9). However, according to Digital Britain Interim Report (2009), ICT skills of life are the ability to make safe use of computers to access and communicate information.

However, the process of empowerment of PWDs through ICT depends on other factors such as the level of education as a key factor in strengthening the capacity of PWDs in acquiring these skills. In other words, advanced education may increase the opportunity for empowerment. Second, accessibility to ICT sources plays an essential role in the empowerment of PWDs where the cost of training to acquire these skills must be affordable. The integration of these factors may help PWDs to acquire ICT skills, allowing them to compete in the labour market. Accordingly, the process of empowerment embodies independent living and dignified life for PWDs. As the process of empowerment is the process of transformation from powerlessness to situation of ability, ICT has a crucial role in the empowerment of PWDs to obtain the right to independent living like the non-disabled. It is possible that training in using ICT may allow one to get employment. Harnessing the ICT for training of PWDs in order to achieve empowerment in the employment sector requires two basic conditions: providing training opportunities for PWDs in the area of ICT and allowing PWDs to benefit from these opportunities.

Education is of paramount importance for persons with disabilities; the most important condition of competition in the labour market is the level of education. As mentioned in the theoretical framework of the current study, the higher the level of education for PWDs, the more opportunities in facing competition in the labour market. In this respect, the literature of the study confirms that PWDs face difficulties in accessing sources of education. Although the Malaysian government has established special schools for the disabled, it is not enough compared to the numbers of disabled students. In addition, such schools require specialized teachers in the teaching of PWDs. The majority of schools specializing in the teaching of the disabled are administered by the private sector. Specifically, special needs education requires certain environment, equipment and teachers that are different from those in regular schools. Thus, the cost of establishing and running this type of school is high compared with public schools. Given the difficulties faced by PWDs, they are forced to enroll in public schools, which lack the required environment that meets their needs in terms of equipment, specialist teachers and design of buildings.

The study shows that the acquisition of ICT skills is one of the requirements in competition in the labour market. Hence, more disabled persons in Malaysia should be empowered in the acquisition of these skills. Effective and appropriate training programmes to acquire ICT skills should be designed for PWDs to enable them to compete in the labour market. Therefore, the number of training centres related to ICT should be increased and be equipped with the necessary means and facilities. In this regard, NGOs working in the training of disabled people in ICT skills should be provided financial and logistical support. Specialist trainers should be provided at the training centres with commitment to pay their salaries; and adequate laboratories should be provided to the respective training centres to accommodate all types of disabilities.

However, the Ministry of Education should allocate appropriate funds for conducting empirical researches relating to the problems of PWDs and their training in ICT centres. Funding has been identified as a major barrier in ICT Skill acquisition. Fees for the training of PWDs in private centres should be reduced and the training in government centres should be affordable or free of charge. The government should allocate some funds like *zakat* (alms-giving) and *waqaf* (endowment) to support and initiate effective programmes in enabling PWDs to compete in the labour market. In this respect, the government's allocation of 1% employment to disabled people in civil service must be increased in order to cater for the potential of skill PWDs.

There is a need for cooperation and coordination with local, regional and international NGOs in order to provide greater opportunities for PWDs to enable them to compete in the labour market. The relevant government institutions to PWDs should strengthen cooperation with NGOs regarding the application of the comprehensive integration standards. In particular, the non-friendly environment is the most prominent barriers to access for Malaysians with disabilities to ICTs sources. These should be enhanced through public awareness programme on the plight and potentials in PWDs.

The ICT curriculum in public and private schools for the disabled should be reviewed, assessed and revised from time to time to meet the needs and demands of the labour market. In this regard, the Ministry of Education should increase the number of specialized schools in the education of people with disabilities, including providing teachers specialized in this type of education. Especially since most of the available schools are subject to the private sector, and with high costs, it is not affordable for most of the PWDs in Malaysia. Conferences, seminars and workshops should be organized at regular intervals to evaluate the implementation of programmes related to PWDs' training in ICT as well as to address the negatives and the positives points of the training. These events are needed to raise awareness among the people about the problems of PWDs in order to enable them to settle down lead a dignified life.

Employers in the private sector should be pursued and motivated to employ more disabled people. For this purpose, a partnership should be established under the umbrella of governmental agencies with potential employers, NGOs and other organizations to take effective measures. Serious efforts should be made to develop awareness in Malaysian society about the importance of the empowerment of PWDs. PWDs are an integral part of the Malaysian society and as such it is the responsibility of the society to enable them to lead a dignified life and contribute effectively to nation-building. The need to establish a comprehensive database for people with disabilities in Malaysia in collaboration with academic institutions, government institutions, local, regional and international organisations. This recommendation will help to provide information and statistics and consultancy services. This will guide decision makers and policy-makers with respect issues on disability and people with disabilities in Malaysia. The dearth of adequate research and studies in this regard will also be filled in cooperation with graduate students in universities from both inside and outside Malaysia.

CONCLUSION

Employment is a multi-dimensional process, affecting one economically, socially and psychologically. Thus, the study emphasizes that having a job has empowered PWDs in Malaysia in terms of control over everyday life, increase in self-worth and self-determination. This is strengthened even more with the acquisition of ICT skills which has contributed significantly to integrating Malaysian disabled people into the community. It is clear that ICT plays an important role in empowering PWDs in Malaysia and ICT skills have made a significant shift in their life, enabling them to become independent people instead of relying on others. Furthermore, the outcomes from this study are also consistent with the United Nations Convention for the Rights of Persons with Disabilities. In this context, the study has confirmed that it is a fundamental right for persons with disabilities to be able and allowed to compete in the labour market and state institutions and civil society organizations should fulfil it. The study concludes that ICT not only empowers PWDs for individual independence, but for the social integration through participation in social activities. Secondly, if given the right opportunity, a person with a disability is capable of giving, being creative and innovative. As pointed out in the literature, access to education, health and work are rights that the state and society should strive to fulfil. This position is stipulated in international conventions and national legislations. Indeed, ICT has contributed to integration of the PWDs in the community by enabling them to work and participate actively in many social engagements. In addition, they are able to contribute like the non-disabled in the Malaysian community development as well as achieve satisfactory level of independence through the control of their daily lives. This independence has been reflected in the strengthening of their self-confidence, self-esteem and respect received in the society.

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