

Faculty of Cognitive Sciences and Human Development

**ASELTY: ONLINE DISABILITY ASSISTANCE IN COMMUNITY-BASED
REHABILITATION CENTRE**

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**ASELTY: ONLINE DISABILITY ASSISTANCE IN COMMUNITY-BASED
REHABILITATION CENTRE**

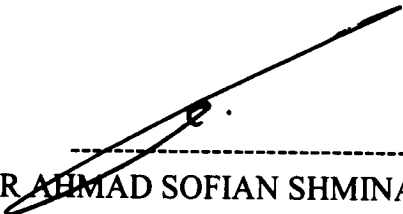
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The project entitled ‘ASELTY: ONLINE DISABILITY ASSISTANCE IN COMMUNITY-BASED REHABILITATION CENTRE’ was prepared by Ting Hui Yi and submitted to the Faculty of Cognitive Sciences and Human Development in partial fulfillment of the requirements for a Bachelor of Science with Honours (Cognitive Science).

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ABSTRACT

Getting hired or employed means that an individual is being accepted to participate in the working society and having the opportunities to co-operate with others. The government of Malaysia has strived very hard to ensure the welfare of people with disabilities. The establishment of the Community-Based Rehabilitation (CBR) centre is one of the efforts made towards the people with disabilities. Those efforts are to ensure that the people with disabilities can become self-manageable and involve themselves in the working environment. Due to their disabilities, people with disabilities may not have the opportunity to achieve a higher and better education level. This may increase the difficulty for them to get a job because most of the recruitment systems or platforms are targeted on candidates that possess certain education qualification. Moreover, the system or application that used to assist the committee members of the public agency such as Community-Based Rehabilitation (CBR) centre to help the people with disabilities to find job still has not been developed in Malaysia. Hence, an online application will be developed to address the problem. The main purpose of this research is to develop an online application that assists the committee members of the Community-Based Rehabilitation (CBR) centre to help the people with disabilities to find job. The online application was tested and evaluated in term of its usability. The result shows the usability of the online application is high and acceptable by the users.

CHAPTER ONE

INTRODUCTION

1.0 Background of study

Getting hired or employed means that an individual is being accepted to participate in the working society and having the opportunities to co-operate with others. When a person is employed, he or she would have better self-esteem. The same goes for people with disabilities (Boman, Kjellberg, Danermark, & Boman, 2015). In Malaysia, the promotion and advocacy of the employment of people with disabilities is a crucial policy objective since years ago (Yusof, Ali, & Salleh, 2015). The government of Malaysia has strived very hard to ensure the welfare of people with disabilities. To provide the workforce diversity and chances equally to the people with disabilities, the Person with Disabilities Act 2008 is enacted and executed in Malaysia. The main purpose of this act is to give equal chances to people with disabilities and take care of their well-being (Noor, Isa, & Manaf, 2017).

Furthermore, the scale of employment for people with disabilities has been increased by the Malaysia government. Since 1988, the allocation quota for people with disabilities in the public sector is one percent (Yusof et al., 2015). In other words, the job opportunities that opened for the people with disabilities to apply in the public sector is approximate to 14000 (Lavasani, Wahat, & Ortega, 2015). The Department of Social Welfare which is under the management of Ministry of Women, Family and Community Development of Malaysia committed to provide registrations and allocations of people with disabilities into the job market (Yusof et al., 2015). The government of Malaysia has

made the six years of formal education obligatory for the people with disabilities (Lee, Abdullah, & Mey, 2011). Besides, the establishment of the Community-Based Rehabilitation (CBR or PDK) centres by the Department of Social Welfare is to provide special education, vocational training, rehabilitation, and social integration for people with disabilities (Dort, Coyle, Wilson, & Ibrahim, 2013). On the other hand, the vocational training centre that established by the government and non-governmental organizations e(NGOs) in Malaysia is focused on providing the self-employable techniques and training to the people with disabilities (Lee et al., 2011). The efforts from all the agencies in Malaysia is to ensure that the people with disabilities to become self-manageable and involve themselves in the working environment.

1.1 Problem statement

Although people with disabilities are well-prepared to involve themselves in the working environment, they still faced plenty of obstacles when they try to find the jobs. Due to their disabilities, people with disabilities may not have the opportunity to achieve a higher and better education level. According to Lee et al. (2011), the changing in workplace nature and the growing in demand for workers who possess the higher education qualification and job-related techniques may cause the people with disabilities find it more difficult to find the job.

Moreover, the existing recruitment system such as Web-based University Recruitment System (WBURS) (Amusan, & Oyediran, 2016) and Web-based Medical Recruitment System (WBMRS) (Oluwagbemi, & Akinsanya, 2010) that has been reviewed was developed by foreign researchers to recruit university staffs and to help the teaching

hospital to recruit potential candidates respectively. Both recruitment systems tend to recruit the people who possess certain education qualification. In addition, the systems or applications that used to assist the committee members of the public agency such as Community-Based Rehabilitation (CBR) centre to help people with disabilities to find job still has not been developed in Malaysia.

1.2 Objectives

1.2.1 Main Objective

- To develop an online application that assisting the committee members of the CBR/PDK centre to help the people with disabilities to find job.

1.2.2 Specific Objective

- To design and develop an online application that is accessible and easy to be used by the end users.
- To evaluate the usability of the online application.

1.3 Contribution of the proposed application

The proposed online application able to assist the committee members of the Community-Based Rehabilitation (CBR) centre to help the people with disabilities to find job. Besides, the online application can also be said as a recruitment platform for people with disabilities. The people with disabilities can apply the jobs they want through the online application and they will be the worker to complete the job offered by the employers. The committee members of the CBR centre are the administrators of the online application. When there are users or employers offer a job through the application, the administrators

will assign the worker to complete the job based on their health conditions and capability by the administrators. Furthermore, the online application able to help the people with disabilities to generate income. They can earn money on their own and reduce the burden of their family members.

1.4 Conclusion

The unemployment issue of the people with disabilities in Malaysia remains as a hot topic to discuss since decades ago. There are seven categories of disabilities which are learning disabilities, physical disabilities, visual impairment, hearing impairment, mental disorder, multiple disabilities and speech impairment. The percentage of allocation of the people with disabilities in the public sector is very low. People become more relying on computer and mobile phone because it brings a lot of conveniences. On the Internet, there are a lot of available systems or applications. People can download or apply it directly. Each of the system or application is developed for a specific purpose and to solve certain kind of problem. However, the system or application that is developed to assist the committee members of the CBR centre to help the people with disabilities to seek for the job still has not been found in Malaysia. To overcome or handle the issue, the online application will be developed. The main objective is to develop the online application that assisting the committee members of the CBR/PDK centre to help the people with disabilities to find a job.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter, the different recruitment methods such as typical recruitment method and modern online recruiting or e-recruiting will be discussed. Newspapers and magazines recruitment advertisements are examples of traditional recruitment methods. However, online recruiting or e-recruiting include the recruitment website and mobile-based recruitment application. Besides, the efforts taken by the government and Non-Government Organization (NGO) toward the people with disabilities and the effects on them. The difficulties faced by the people with disabilities will also be discussed in this chapter.

2.1 Cognitive Science

Cognitive science is the study of intelligence and mind, it is a multidisciplinary field which is closely related to the study of psychology, artificial intelligence, philosophy, anthropology, linguistics and neuroscience. Cognitive science examines the mind as the “software” of the computer that capable to acquire, alter, store and apply the information. The purpose is to explain the mechanisms regarding human thought, learning capability, linguistic capacity, consciousness, evaluation, communication with others and self-concept (Ishii, 2005).

2.2 Human-Computer Interaction

Human-computer interaction (HCI) incorporate multiple disciplines, for instance, cognitive science, human-factors engineering and computer science. HCI is an

interdisciplinary study that focuses on the designing of computer technology (not limit to desktop computer) and the interaction of the users with the computers. Although in the beginning, HCI concerning about computers, but then it has enlarged to cover nearly whole forms of the design of the information technology (Interaction Design Foundation, 2018).

Usability is the major component to guarantee the quality of user experience (UX). It is the fundamental part of the broad and multidisciplinary field of human-computer interaction. Besides, it is about designing computer technology as an extension of human capabilities to complete the task and make it as transparent as possible in the process. Users satisfaction, productivity, learnability, ease to use, efficiency, effectiveness and retainability are the characteristics of the usability (Hartson, & Pyla, 2012). By applying the UX design guideline, the developer able to develop or implement an application that evokes a better user experience and satisfaction.

2.3 Category of Disabilities

According to the Statistics Report of Department of Social Welfare in 2015, The disabilities are categorized into seven categories as shown in *Figure 1*. The seven categories of disabilities include learning disabilities, physical disabilities, visual impairment, hearing impairment, mental disorder, multiple disabilities and speech impairment. Each of the categories is explained in detail in Table 1.

Categories of Disabilities	Number	Percentage (%)
Learning disabilities	129, 550	35.43
Physical disabilities	125, 491	34.32
Visual impairment	32, 807	8.97
Hearing impairment	29, 636	8.10
Mental disorder	29, 403	8.04
Multiple disabilities	16, 963	4.64
Speech impairment	1, 827	0.50
Total	365, 677	100.00
Source: Department of Social Welfare Statistics Report (2015)		

Figure 1. The number and percentage of people from each category of disabilities.

Table 1.

Categories of disabilities

Categories of disabilities	Description
Learning disabilities	An individual with intellectual disabilities, dyslexia, dysgraphia, Attention Deficit Hyperactive Disorder (ADHD), Down syndrome, global development delay and autism are categorized in the learning disabilities (Lavasani et al., 2015; Abdullah, Hanafi, & Hamdi, 2017).
Physical disabilities	The permanent inability of the part of the body that affect the basic movement and other ability to carry out physical activities of a person, which caused by injury or bodily defect (Lavasani et al., 2015; Abdullah et al., 2017).
Visual impairment	The person who is blind in both or one of his or her eyes and has low vision even the visual supportive equipment is employed. Other permanent visual related impairment (Lavasani et al., 2015; Abdullah et al., 2017).
Hearing impairment	An individual that unable to hear at all even the hearing aid is applied and has low hearing level if the hearing aid is not applied (Lavasani et al., 2015; Abdullah et al., 2017).

Mental disorder	The person who suffers a chronic mental illness such as Schizophrenia, Persistent Delusional Disorder and Paranoia. In addition, the person has undergone or received a minimum of 2 years of psychiatric treatment (Lavasani et al., 2015; Abdullah et al., 2017).
Speech impairment	The person with the speech problem (Lavasani et al., 2015; Abdullah et al., 2017).
Multiple disabilities	The individual who suffers more than one disability and unable to classified into the existing category of disabilities (Lavasani et al., 2015; Abdullah et al., 2017).

2.4 The sources that people with disabilities find job

According to International Labour Organization (2008), they had listed out some of the job searching sources for the people with disabilities to find a job. Basically, the ways that people with disabilities seek jobs are similar to normal people. The list below shows the methods that the people with disabilities seek for jobs.

- Newspapers advertisements
- Through the recommendation from Non-Government Organizations
- Agencies of employment in the public or private sector
- Through relatives and friends
- Internet recruitment web site or platform

2.5 Traditional recruitment method

Newspaper advertisements, campus recruiting, mouth to mouth and the job fairs are the traditional methods or strategies that used by the organizations to seek for the potential applicants (Cober, Brown, Blumental, Doverspike, & Levy, 2000). The advancement of the technologies are the factors that cause the utilization of electronic devices and the internet over the world to become ubiquitous (Cober, Brown, Keeping, & Levy, 2004).

Posting the recruitment advertisement in the magazine and newspaper is one of the typical methods used by the organization. So, the applicants or candidates are able to find a suitable job vacancy in the recruitment section. The position offered or available, a short description of the responsibility, the address of the organization, e-mail address and telephone number are the fundamental elements that will be included in the recruitment advertisement. Sometimes, the workers' benefits such as insurance, bonus and monthly salary will also be stated in the recruitment advertisement. To apply for the position that the organization advertised, the candidates can apply directly and send the resumes to the organization through the ordinary mail, e-mail or facsimiles transmission. Then, the human resources department of the organization will screen through the resumes to determine and identify the most suited candidates to the available position (McGovern, Winchester Jr, Evans, Farmer, Koffman, & Walker, 1999).

2.6 Online recruiting (e-recruitment)

The full name of e-recruitment is electronic recruitment, also known as internet or online recruitment. The e-recruitment with the meaning of the utilization of the electronic resources within the recruitment process by the organizations. The purpose is to obtain and

enhance the normal recruitment results (Gupta, 2016). Electronic recruiting (e-recruiting) is one of the useful method or strategy used by the organizations to attract and seek for job seekers. This is due to the e-recruiting can save a lot of time, able to reach a wide array of potential candidates or applicants and lower the costs of recruiting. The emerges of the new technologies that focus on the digital network and internet cause the organizations to modify their way to hunt and communicate with the candidates or applicants (Harrison, & Stone, 2018). Nowadays, the e-recruitment becomes the major platform for the organizations and the professionals of human resource to hunt for the potential applicants. This is due to the dominance, popularity and convenience of real-time interaction and communication over the Internet (Anand, & Chitra, 2016).

According to the study of Anand and Chitra (2016), they stated that the e-recruitment used by the organizations is a good and effective strategy to hunt for competent and potential candidates. Moreover, e-recruitment can reduce cost and less time-consuming. Therefore, there are plenty of organizations developed the e-recruitment and use it recruit and receive resumes from the job seekers. To match the current trend of using this medium, there are plenty of organizations have adopted the changes and migrate from the traditional recruitment method to the paperless method.

Due to the widespread and rapid growth of information technologies and the usage of the internet. Hence, it was a common strategy that the organizations use the websites to recruit and employ potential and competent applicants. The utilization of the video, animation and the interactive features in the organizational recruitment website provide the applicants an abundant of vivid experiences that the traditional method difficult to achieve (Cober et al., 2004).

Base on the study of Cober et al., (2004), they stated some reasons why the organizations give a strong emphasis to the recruitment website. Firstly, cost-effectiveness. Recruit the potential applicants through the organizational website is a low budget alternative to the old-style recruitment methods. Second, there are only a general presentation and limited information advertised in typical job advertisements. The uniqueness of the organizations cannot be presented to the masses. The third reason is the organizational recruitment website allow the applicants to apply directly. Fill in all the required information and upload the resumes. Besides, it is a great chance for the people with disabilities to access the available jobs through the recruitment website (Lima, 2016).

The mobile devices such as tablets and smartphones owning a huge market share and it is still growing expeditiously. The usage of these mobile devices by the masses or users show an increasing trend (Böhm, 2013). On the internet, there are plenty of services provided. The users can use their smartphones and tablets to access the services. There is shifting on the time spent online by the users from the laptop and desktop computers to the mobile devices which is relatively light and easy to carry. However, in certain fields, the utilization and total access that the desktop computer generate has surpassed by the mobile devices. Due to the rapid advancement of mobile devices, the applicants or job seekers' utilization behavior and anticipations have been affected when they access the recruitment advertisements and other relevant information online. There are some innovative organizations began to establish the mobile-optimized recruitment website or even developed the mobile application to seek or hunt for the potential applicants (Böhm, 2013).

2.7 Efforts toward the people with disabilities

2.7.1 Community-Based Rehabilitation (CBR or PDK)

Education is the fundamental need or early preparation for an individual to acquire a job. The government of Malaysia has strived very hard to provide formal education to the people with disabilities. However, for people with severe disability, they are not suggested to enter the government-run preschools. Department of Social Welfare is one of the departments under the Ministry of Women, Family, and Community. Fortunately, this department will provide special education for them with disability. The establishment of the Community-Based Rehabilitation (CBR or PDK) centres by the Department of Social Welfare is to provide special education, vocational training, rehabilitation, and social integration for people with disabilities (Dort et al., 2013). There are 388 Community-Based Rehabilitation centres (CBR/ PDK) in all the states in Malaysia. These centres educate children who have severe disability and unable to get formal education (Lee et al., 2011).

The Community-Based Rehabilitation centre (CBR) or Pusat Pemulihan Dalam Komuniti (PDK) in the Malay language was first organized by the World Health Organization (WHO). The Community Rehabilitation Program is supervised by the Department of Social Welfare. This department is responsible for planning and managing the program. Besides, the Department of Social Welfare has also be given the right to assess and alter the implementation or execution of the Community Rehabilitation Program. As compared with the day before, the PDK program has obtained vast response and concern from the community gradually (Department of Social Welfare, 2018).

There are five objectives of the PDK program. The first objective is to promote the sense of responsibility, self-awareness and self-reliance to the local communities in the rehabilitation of the people with disabilities (OKU). Second, Gather and collect the local resources with the purpose to renovate the local resources for the people with disabilities rehabilitation. Third, based on the local condition and situation, promote the utilization of the appropriate, affordable, simple and effective techniques. Fourth, supply or provide the services by applying the current existing local organizations' infrastructure. Fifth, by considering the economic resources of the country and allow the broader of the comprehensive services based on the needs of the people with disabilities. There are three models in the PDK program, Home Bases, Centre Based and Centre-Home Based. Furthermore, there are also some activities prepared for the people with disabilities who involved in the PDK program. For instance, gross and fine motor skills training, social development, self-management, music therapy and many other activities (Department of Social Welfare, 2018).

2.7.2 Vocational training centres

On the other hand, the government and Non-Government Organization of Malaysia had shown their concerns to establish the vocational training centres. Their purpose is to train and coach the people with disabilities to acquire the self-employable techniques and work abilities, so they are able to become the workforce and contribute to the country (Lee et al., 2011). The vocational education and training allow people with disabilities to acquire and develop their cognitive, psychomotor, life skills and working abilities. These capabilities can be said as an early preparation or essential for them to involve in the workplace and compete with others in the job market. If the people with disabilities have