

THE ROLE OF INFORMATION TECHNOLOGY FOR PEOPLE WITH INTELLECTUAL DISABILITIES

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Abstract

A mentally disabled person has limited access to information and communication. Making a computer available to such a person we give them an opportunity to be independent in life and develop their self-reliability. They can take part in various forms of social life, develop artistically, enrich their personality and widen the scope of interests. The possibility to use a computer can also be a way of spending free time.

Key words: IT qualifications, life-long learning, digital and social divide, intellectual disabled person.

1 Introduction

A computer with access to the Internet is now an integral part of each day for Polish people. It is a tool of work, study and entertainment. One can find a job, learn, make and keep contacts, get information about interesting social and cultural events, develop hobbies and interests, arrange administration matters on the Internet. Disability can be inborn, genetic, or a result of an illness or injury. Everybody can become disabled regardless of their gender, age, place of living, education or lifestyle.

Nevertheless, it is still one of the most discriminated social groups. The disabled struggle with many problems in their everyday life. These are physical problems (architectonic barriers, difficult transportation, communication), mental problems (low self-esteem, bad mood, difficulty in making contacts) or economic problems (unemployment, low salary,

treatment costs). In the larger socio-cultural context the disabled face problems connected with a lack of proper legal regulations, social isolation, limited or difficult access to various goods (information, education, specialistic medical help) [7].

One can often meet a stereotypical point of view that the disabled do not need to use modern technologies as they are not able to operate them and because this equipment is expensive as it must be adjusted to the needs of a disabled person [6]. A computer and the Internet have been used as tools enhancing education and rehabilitation of disabled youth, e.g. to stimulate cognitive functions and to eliminate developmental disorders.

A lot of research has shown that mentally disabled children can quite quickly master the basics of the computer and simple programs and they do it willingly. If a computer is used for rehabilitation purposes with disabled children, it is highly probable that they will be able to operate it better as adult people [8].

Mental disability is a big difficulty for an ill person. The kind of the illness can make the educational process difficult or even impossible. The symptoms of the illness (e.g. poor concentration, psychotic symptoms, cognitive process malfunction) can be the reason of terminating education due to difficulties in comprehending information. Another reason for not continuing education can be the fact that the disabled person is embarrassed with their illness or is discriminated by their peers.

2 Using a computer while working with children disabled mentally

Traditional prophylactic and re-educational methods with children disabled mentally are at times ineffective and poorly adjusted to new and changing life conditions. Modern therapeutic treatment should be a holistic approach to a child. It should stimulate their cognitive interests, develop creativity and teach making contacts with people.

Thanks to their many advantages as for animation and stimulation of processes and physical, chemical, biological phenomena invisible to eyes or very difficult to see in real conditions, computers are an attractive didactic means. They stimulate the following functions: cognitive, emotionally-motivational, practical, consolidating and controlling.

The computer influences a lot of senses allowing a teacher not only to cross the border of verbal communication but also to engage students emotionally by combining cognitive values with the aesthetic ones – text in connection with music, graphics or film. The computer combines features of many traditional devices used for recording, presenting, processing and sending information. Computer software allows one to consider individual

differences of students. Well thought-over computer use in educational processes gives the teacher a real chance of introducing invaluable changes in achieving educational goals.

To improve all, or almost all, distorted areas one can use computer techniques which can function in three ways:

1. cognitive and educational – computer programs allow people of poor intellectual ability to see and learn about the world, which in turn improves distorted functions.
2. emotional and motivational – the attractiveness of computer programmes impacts emotions making the effects of learning continuous. Computer techniques that are chosen and realised accordingly influence the emotional side of the student and enhance their motivation. Computer techniques activate the student's cognitive motivation and this in turn improves the educational process. Computer education keeps the educational tension providing new and various stimuli.
3. inter-communication – creates a possibility to communicate in the case of children with difficulties in making contacts with people. It allows them to increase the number of social contacts through interests common for healthy children, e.g. games, software. It refers to both children disabled mentally and children with another disability, e.g. in motion or hearing.

A student starting to work with a computer learns its secrets and computer programs directly and indirectly improving the abilities of reading and writing. They learn new terms connected with the way the computer functions in and the whole process is natural by using a mouse and a keyboard.

Working with the computer requires visual-auditory coordination, which also guarantees manual skills. Graphic and drawing programs are extremely invaluable as they improve visual-motor function, or a child's psychomotorics. However, they make the child concentrate very hard. Drawing with a computer requires mental involvement which results from the fact that computer graphics stimulates creative thinking. Computer painting improves exploration processes, requires perception, reception and information and processing it. The computer, thanks to graphics, animation and the possibility to present a still and a moving picture, stimulates imagination. Working with the computer, especially with a mouse, requires logical thinking. Painting or drawing is a visible effect of its work. The main advantage of using a computer is much longer time of concentration. Hyperactive children who cannot concentrate for a long time while working with a computer are able to focus much longer. It results from the fact that the computer is a very attractive work tool. It is not associated with any stressful situation in children's minds and it does not pose any danger. The patience of the device

encourages repetitions and new attempts to solve a task and an incorrect solution does not result in punishment [9].

3 IT qualifications vs employment possibilities for people disabled mentally.

Work is very important in the life of an adult man and its lack has negative effects to self-esteem and mental state, which in the case of the disabled, who find it hard to get or keep a job, is even more destructive to their functioning. Mental disability often makes a person withdraw from socializing. The illness limits autonomy and independence. In the case of mental disability the help of third parties or institutions is necessary therefore it is vital to minimise the negative effect of disability and use all available forms of therapy and rehabilitation [5].

Using information and communication technologies has an invaluable meaning while looking for a job. Knowledge is currently one of the biggest assets, especially in the professional area. A lot of information in its basic form can be obtained thanks to the Internet access.

Due to the fact that the Internet and related technologies are widely used, they are becoming part of almost all areas of socio-economic life. Corporations are trying to use available technologies in the most effective way, which means widening knowledge and skills in this area by employees and those who are looking for jobs. Public administration is also trying to adjust to the changing requirements of the citizens through the so called e-offices. Unlimited possibilities to purchase goods and services also influence the change of the consumer behaviour patterns. Due to the speed of change in the information society a man has to continuously develop professionally and in their personal qualifications.

4 Upgrading professional qualifications

In our dynamically changing time, continuous education, getting new skills, and upgrading qualifications are necessary conditions of functioning both professionally and socio-culturally. One of the conditions to achieve this is access to knowledge, information and various forms of education.

E-learning, i.e. distant learning with the Internet, has many advantages and can be a good solution for disabled people. People with motoric disability, who face various architectonic barriers, wanting to take part in educational classes can benefit from this method of learning. E-education which in fact is life-long learning can offer a lot to the disabled provided that educational materials and websites are prepared especially for them [10].

It is worth mentioning that thanks to the European Union funds the number of free trainings on computers, software, e-marketing, etc. dedicated to the disabled has risen greatly. Many non-government organizations and institutions working for the disabled can see the need to develop skills connected with computer use to prevent social and professional exclusion of this group. Lack of according educational actions, access to equipment and software, is one of the reasons for the growing digital divide of the disabled.

In the continuously changing reality the condition to function independently is widening your knowledge continuously, upgrading qualifications, and acquiring new skills. Using the Internet helps to find and keep a job, decreases the risk of unemployment, increases the chances to find a job when one do not have it. Nowadays, without knowing how to use a computer and the Internet it is very difficult to find a job as the majority of job offers are available only online. In the job offers requirements there is at least basic knowledge of how to use a computer and in the case of the disabled, who physical work is usually impossible for, computer skills can be an advantage or necessity while working from home [3].

5 IT tools preventing social divide

According to recent surveys people undergoing psychiatric or psychological treatment are still one of the social groups in Poland that feel discriminated [4]. It is particularly noticeable among people up to forty years old.

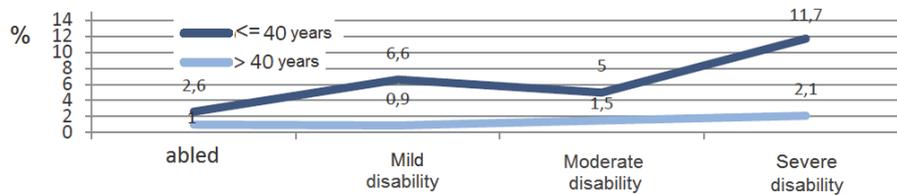


Figure 1. Percentage of people who feel discriminated according to their disability status and age [3].

People who suffer from mental disorders experience fear of being socially stigmatized. They often withdraw from socializing, have difficulties with functioning professionally due to the illness symptoms as well as being hospitalized repeatedly.

In Polish society there is still a negative stereotype of the disabled, which impacts the feeling of being stigmatized, rejected and lonely. In this case a computer can be used in many ways. Thanks to access to the Internet it is

possible to gain knowledge on the illness, read stories of other ill people, get support, find specialistic therapeutic or medical help in dealing with the illness. A mentally ill person, or disabled in any other way, can make contacts without being labelled as ill by using the Internet. A computer can be also helpful in developing passions or hobbies as well as in education. Developing one's interests and acquiring new skills is therapeutic, increases self-esteem and makes the feeling about oneself better, which is immensely helpful in dealing with the illness.

There are many social portals for the disabled – these are niche portals dedicated to a given group of people with certain disability, e.g. <http://www.bardziejkochani.pl/> - for families and caretakers of people with Down syndrome or <http://www.ofon.net/> - Polish forum for the disabled.

Summary

Mental disorders, eyesight or hearing impairment require according conditions and specialistic software for training on how to use a computer. Therefore it is vital that a disabled person knows at least the basics. It may be a starting point for using various programmes for learning (reading, drawing, speaking a foreign language) by ill people. However, one should remember that as for using new IT technologies patients who have been mentally ill require special conditions and educational techniques concerning the nature of their disability [2].

While discussing the beneficial influence of communication and information technologies on the disabled one should mention the following aspects: information and cognitive, educational, cultural, rehabilitating, revalidating and integrational. With an according choice of tools (e.g. educational games) it is a good place of entertainment and relax.

One should not forget the factors which can be a greater danger to the disabled (especially intellectually) than to healthy people. One should remember the fact that the disabled are more prone to media manipulation (consumer media mainly), unable to analyze ambivalent, unclear or polyvalent content. Another danger can be the fact that people with mental disorders have difficulties in telling fiction from reality and recognizing situations, places and time.

Unequal access to IT technologies can result in far-reaching consequences. Nowadays, they are so common in many areas of life that people who do not use them are at risk of social divide. It is the so called digital divide.

One should stress the fact that in the case of the disabled the problem of digital divide – no possibility to use IT technologies - can be even bigger due to the kind of the disability. Many disabled people (e.g. blind, deaf, with

explorative and physical disorders) need additional equipment or special software, which is expensive and difficult to obtain, to use a computer.

In rehabilitation of the disabled the holistic approach appears to be necessary. Medical aspects will be equally important to improving the mental state of the disabled. They need to be self-reliant, adapt to the environment, get better education, be prevented from professional divide. The society should be educated on disability, which in return can help cross psychological, social, structural or legal barriers. One of the ways to achieve it is giving the disabled full access to IT technologies and showing them various possibilities to use them.

Nevertheless, one should remember that IT technologies are not a fantastic cure for all the problems of the disabled.

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