How ict helps people with special needs essay sample

Kate Anderson is a student at Cyril Jackson Primary school. Her legs and both arms are physically disabled. She is also partially deaf. She is extremely dependant on her wheelchair to help her with everyday life. Paralysis is failure of muscle function. It is usually caused by damage to the nervous system or spinal cord. This prevents messages being sent to the brain. In this case Kate Anderson's arms and legs are paralyzed. Deafness means lack of sensitivity to sound. The next paragraph will explain how deafness is caused:

" Sound waves vary in amplitude and in frequency. Amplitude is the sound waves highest point of oscillation. Frequency is the speed of sound divided by the wavelength of the sound wave, which is referred to as the pitch of the sound. Therefore losing the ability to detect some frequencies, or very soft sounds, that an organism naturally detects, creates some form of hearing impairment."

http://en. wikipedia. org/wiki/Hearing_impairment

I will put the technologies which Kate Anderson uses in three categories:

* Personal Use

* School Use

* Social Use.

Personal use

Electronic wheelchair

Kate Anderson finds her wheelchair extremely handy as it has aided her in much of her work. With her wheelchair she can remain mobile, travel around, change speed and she finds it extremely easy to use.

The great uses of Kate Anderson's wheelchair are that she can plug a games console in her wheelchair and she can get access to the internet because she has a computer attached to her chair. She finds that her electronic wheelchair gives her much more support than her normal wheelchair. It also senses dangerous obstacles and has automatic brakes.

She controls her wheelchair by moving her joystick which is attached to the arm of her wheelchair. She also has a navigation screen which shows the obstacles coming. Kate Anderson uses a wheelchair lift to access different levels of a building.

The disadvantage of the electronic wheelchair is that since her arms are physically disabled she cannot control the chair with the joystick and needs someone to always e with her.

Head pointer

Since Kate Anderson can not move her arms she uses a head pointer to move the cursor on her computer. A head pointer is a form of technology which is a replacement of a mouse. Kate straps the head pointer to her forehead and when Kate moves her head she moves the cursor on the computer as well. Unit usually mounted on the monitor picks up head movement, and moves the pointer on the screen to reflect this.

Kate finds this technology extremely useful because she is doing her GCSE's at the moment and it helps her with her coursework and her homework.

So far she has not found a disadvantage in this technology except the fact that it is a little uncomfortable to wear.

Speech recognition

Kate installed the speech recognition software on her computer as she can not type on the computer. Speech recognition is software, it is used by speaking into a microphone and the microphone will change it in data by typing out what Kate said onto the computer. As Kate Anderson cannot type on a computer, she finds this speech recognition software extremely convenient.

Along with that she wears a computer headset just in case her software does not work which is a great disadvantage to her as she relies on technology to get her work done due to the injuries.

School Use

Concept keyboards

Before Kate Anderson injured her arms she used to use a concept keyboard. A concept keyboard is a touch sensitive board which Kate used to plugs into her computer. A paper overlay is placed on the board and the user presses the overlay to activate the board. The great thing about the concept keyboard is that it is waterproof. The concept keyboard very much helped

her at her early learning stages. Concept keyboards are also used in fast food restaurants.

The disadvantage about concept keyboards is that there are no numeric buttons which could help Kate.

But since Kate has injured her arms this is no longer useful to her.

Digital Hearing Aid

A digital hearing aid is a technology containing a computer chip which processes sound. Its 40% more efficient than the analogue hearing aids. Kate Anderson is partially deaf therefore she uses a digital hearing aid during classes in school so she can hear what her teacher is saying.

The digital hearing aid separates background noise so there is no whistling noise and the sound is clear. The digital hearing aid is more comfortable and has improved natural sound quality. The hearing aid contains a switch which can improve sound quality, block background noise and humming interferences.

Kate Anderson finds that the digital hearing aid is much more better then the analogue hearing aid, she finds that there a many benefits. But as well as that there are also some disadvantages.

The disadvantage of the hearing aid is that it sometimes starts a screeching noise and needs to be repaired. It also does not have a good grip and sometimes falls of her ear, this causes the hearing aid to break due to lack of strength of the material.

Digital alarm clock

As Kate Anderson is a student she needs to make sure that she gets to school on time and to help her do that she uses a digital alarm clock.

" Digital clocks typically use the 50 or 60 hertz oscillation of AC power or a crystal oscillator as in a quartz movement to keep time. A digital clock typically displays a numerical hour range of 0-23, or 1-12 (with an indication of AM or PM), although digital versions of analog-style faces exist."

http://en. wikipedia. org/wiki/Digital_clock#Construction

The advantages of the alarm clock are that it vibrates when it rings, this is a great advantage to Kate as she is partially deaf. She finds this a lot better than her previous analogue alarm clock which did not vibrate and cause her to be late for school. She finds her alarm clock to be perfect and finds no disadvantages in it.

Social Use

MSN Hotmail

Email is short for electronic mail. Email means to send, compose, receive and store messages with internet access. To communicate with friends Kate Anderson uses MSN hotmail and sends emails. She has many advantages from this software as it contains an address book which she uses to store information of her family and friends such as name, age, email and such. Another advantage is that since Kate Anderson cannot type she uses her speech headset which was describe in page 2 under personal use.

The disadvantage of MSN Messenger is that it only works when there is access to the internet so Kate cannot always use it. Another think is junk mail which Kate hates very much hates and it disturbs her.

Farhana Rahman (3a-How ICT helps people with special needs)