Section E Essay: How ICT Has Helped People With Special Needs

Introduction
In this essay I will be analysing how the usage of ICT helps people with special needs. There are 3 types of special needs.

What is a physical disability?
The term "disability", as it is applied to humans, refers to any condition that impedes the completion of daily tasks using traditional methods. National governments and global humanitarian agencies have narrowed this definition for their own purposes, only pledging aid to those with specific disabilities of a certain severity

What is a sensory disability?
Is when someone is you are Deaf, visually impaired, hearing impaired or have a significant combination of hearing and sight loss.

What is a learning difficulty?
A disorder in basic psychological processes involved in understanding or using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or use mathematical calculations. The term includes conditions such as perceptual disability, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

How ICT is used to help those with Learning Difficulties

Multimedia software   Helps people who find it hard to concentrate. It uses different forms of media, pictures, sound clips and video to keep the user interested.

Specialised educational software There's a huge range of software available to help people struggling with different subjects and useful tips e.g. help with reading and basic maths.

Touch screens These are useful for people who finding using a mouse or any other sort of input device difficult.

Spell checkers Can help people with dyslexia who finds it difficult to spell; you can set it up so check your words as you type.

 How ICT is used to help those with visual difficulties.

People with hearing difficulties can still use most computer functions normally. One thing you can do though is set up the computer to display visual icons rather than using sound. DVDs are much better than videotapes as you can use the subtitle facilities. Many recent communication technologies like e-mail and texting work really well for people with hearing. Being able to set mobile phones to vibrate or flash is also very useful.

Text phones are an older system that replaces a standard telephone with a keyboard and a screen. What you type on both screens- a bit like a chat-room. Both sender and receiver need a text phone machine.

 If a person has problem seeing or is completely blind they would be categorized as having a Visual disabilities. If a person cannot read small type then there are a lot of magnification devices out on the market, which fit almost anything from phones to monitors.

For example a person with low vision would use a keyboard with extra large print. If a person is completely blind then they would use a speech recognition device.

Changing the screen settings can help. You can also change the colour scheme, screen resolution and fonts to make it clearer. For the blind, special hardware is available- Braille keyboards make it easy to type, and describe what's on the screen. Screen readers are pieces of software that use speech synthesis technology to read out and describe what's on the screen.

Text-To-Speech.

A text-to-speech is designed for individuals with reading difficulties. It works by simultaneously highlights and reading aloud of text. There are other devices for people with reading disabilities such as spellcheckers

How ICT is used to help those with hearing difficulties.

Speech Recognition

There are two uses for speech recognition these are Dictation and Computer control. Speech recognition is one of the desired assistive technology systems. People believe speech recognition is a natural and easy method of accessing the computer

A dyslexic person who has problems with writing English would use the speech recognition to make sure their English is correct. A person planning to use speech recognition must be aware he is required to go through a training session. This is a one-time reading when the user must read aloud an excerpt of text that is displayed during the training feature of the speech recognition application. Depending upon the speech recognition software, there is several enrolment training excerpts to select from. A person planning to use speech recognition must be aware he is required to go through an enrolment (training) session. This is a one-time reading when the user must read aloud an excerpt of text that is displayed during the training feature of the speech recognition application. (For an example of enrolment text, please see What Is Speech Recognition) Depending upon the speech recognition software, there is several enrolment training excerpts to select from.

Personal Communicator tool for Learning and Communicating Sign Language. The Personal Communicator creates a common ground for communicating in Sign Language. Using hypermedia technology, the Personal Communicator is a user-friendly program that brings sign language communication capabilities to the desktop and notebook computer. With more than 2500 digital video signs and 4500 English words. The Personal Communicator can be a useful tool in communication, education, and other environments.

If someone is not able to use a mouse because they haven't got full control in there hands then there are mouse alternatives to help people with the disabilities.

How ICT can help those with Physical Difficulties

Many people find mice difficult to use- there are many alternatives such as tracker balls, Joy Sticks and tough pads. People with limited hand movement can get specially designed keyboards to suit there needs. Voice Recognition software can be used by people with little or no hand movement. It lets you speak to the computer to navigate menus and do what you want it to do. If you are severely limited, you can use a computer with switches carefully arranged- Stephen Hawking is a famous example of someone who uses ICT in this way. For people with limited mobility, environmental control systems can be set up to atomically open, close curtains, turn lights on and off, operate heaters and so on.

How ICT can help those with Language difficulties

Dictionary software can help you to quickly translate individual words.
Learning software can help you practise an unfamiliar language with exercises where you can hear phrases spoken. It can also record your voice and play it back to see how well you have done. Most word processing packages can check your spelling in different languages and check that your sentences make sense.

In conclusion it is fair to say that people with disabilities might need variations on the standard equipment to use computers, but once they have these mentioned above I am sure it can change the way they live.