The Effects of Using ICT

МХТ-ий хэрэглээ, үр нөлөө

Negative Aspects of ICT

- copyright problems
- viruses and hacking.

Software Copyright Theft

Software Piracy Prevention

\# Software can be protected against piracy in a number of ways including:

1. **Serial Numbers**
2. **Holograms**
3. **Licence agreements**

1 Serial Numbers

When software is being installed, users are often asked to enter a **unique number which proves the software is original**.

Serial numbers are supplied with the original copy of the software.

S/N: 2UA449P120

P/N: DD522AV

2 Holograms

Holograms are often used on the packaging of software and they indicate that the **copy is genuine**.

Software without a hologram on the packaging is usually an illegal copy.

Microsoft

3 Licence Agreements

Licence agreements are part of the software installation process and they inform the user exactly how they are **legally allowed to use the product**.

Users are required to **'agree to terms of use'** before they can complete the installation.

Apple Software Update

Safety Info: Read all safety information before use: www.apple.com/support/manuals/ipod

Software License Agreement

ENGLISH

APPLE INC.
SOFTWARE LICENSE AGREEMENT FOR VOICEOVER KIT
Single Use License

PLEASE READ THIS SOFTWARE LICENSE AGREEMENT ("LICENSE") CAREFULLY BEFORE USING THE APPLE SOFTWARE. BY USING THE APPLE SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS LICENSE. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE, DO NOT USE THE SOFTWARE. IF YOU DO NOT AGREE TO THE TERMS OF THE LICENSE, YOU MAY RETURN THE APPLE SOFTWARE TO THE PLACE WHERE YOU OBTAINED IT FOR A REFUND. IF THE APPLE SOFTWARE WAS ACCESSED ELECTRONICALLY, CLICK "DISAGREE/DECLINE". FOR APPLE SOFTWARE INCLUDED WITH YOUR PURCHASE OF HARDWARE, YOU MUST RETURN THE ENTIRE HARDWARE/SOFTWARE PACKAGE IN ORDER TO OBTAIN A REFUND.

Decline   Save...   Previous   Agree

Computer Viruses

Definition: *"A self-copying program that has been created with the purpose of damaging a computer system "*

Overview of computer viruses:

\# Computer viruses can cause huge problems if they are allowed to infect a computer.

\# Viruses are programs that automatically make **replicates (copies) of themselves** and then **attach to other files** within the computer.

\# Any files which have viruses attached to them are said to have been **'infected'**.

What problems can viruses cause?

\# Viruses can be designed to carry out different malicious (harmful) functions. Some include:

- **Annoying pop-up messages on the screen**
- **Causing the computer to slow down or even crash (stop responding)**
- **Deleting important files or programs**
- **Trying to access your personal files like passwords, bank details or credit card numbers etc**

The first computer virus se
over the Internet was crea
in 1988 by Robert Morris.

Click for more info

How do viruses infect computers?

\# There are many ways that viruses can infect a computer. The most common include:

- **Downloading infected files from the internet**
- **Email attachments that contain infected files**
- **Plugging a flash memory stick that containing infected files into your computer**

Preventing Software Virus Infections

New computer viruses are being created all the time and this means that you should take steps to reduce the chance that you computer and data become infected. The best methods are outlined in the table below:

1	Use **up-to-date anti-virus software**.
2	Use **genuine copies** of software.
3	Only open **email attachments from people you trust**.
4	**Scan flash memory with anti-virus software** before you attach it to your computer.
5	Only download software from **legitimate websites**.

Click for Picture Example

NOTE!
Keeping your **anti-virus software up-to-date** is vital. This is because new versions of viruses are being made all the time.

Hacking

Definition: *"The process of accessing a computer system without permission"*

Overview of hacking:

\# Hacking is where people **'break' into computer systems without permission**. These people are known as **'hackers'**.

\# Hackers often use the **Internet** to break into the system.

Why do people try to hack into computer systems?

\# Hackers try to break into computers for the following reasons:

- **To cause damage to files and data by deleting or changing them**
- **To commit fraud by stealing data (bank numbers etc)**
- **To access sensitive information**
- **Simply to see if they are clever enough to beat the system's security.**

NOTE!
Some companies actually **employ hackers** as a way of **testing how secure their security is**.

Please Login

Username: Alex
Password: ·234567·

Login   Cancel

1 Firewall's

Firewall's provide a **'shield'** between your **computer** and the **Internet**.

Firewall's can **block unwanted data** (including hackers) from reaching your computer. They can also stop your computer from connecting to unwanted websites.

2 User-ID's and Robust Passwords

User-ID's
A user-ID is usually a **word or a number** that identifies particular users as they log onto the computer system.

User-ID's give people access to certain areas or files within the computer.

Robust Passwords (hard to guess)
A good password should be hard to guess. It should be made up of a **combination of letter and numbers** and changed regularly.

NOTE!
In order to gain access to the system, the **hacker** must **guess/break both the User-ID AND the Password**.

The **more robust the password** is, the **harder it will be for the hacker**.

3 Data Encryption

Encryption makes the **files on you system unreadable** if the user does not know the password to un-encrypt them.

If someone try's to read an encrypted file they will just see **random junk instead of the real data**.

NOTE!
Encryption **does not prevent hackers** from **accessing your files** it just makes them **unreadable and useless**.

The Effects of ICT on Society

Нийгэм дэхь МХХТ-ийн нөлөө

Impacts on Patterns of Employment

Why do businesses use ICT?

\# Computer usage in businesses and companies has increased massively within the last 30 years. The benefits that computers bring to business is just too hard for the owners to ignore. For example:

1. Speed	➡	Data can be **stored**, **processed** and **searched** extremely fast
2. Volume	➡	Vast quantities of data can be stored in small amounts of space
3. Less Paper Work	➡	Computers **remove the need** for huge quantities of **paper-work**
4. Less Workers	➡	Computers can do the **work of many people** which **saves expenses in wages**
5. Connectivity	➡	**The Internet** means that companies can **share data** or even **hold meetings** in different countries **without actually leaving the office**

Before computers there had to be lots of workers to run a business

\# However, the heavy use of ICT does have certain effects upon employment. These effects can be positive or negative depending upon your viewpoint.

One person and a computer can do the job of many manual workers

1.Хурд -мэдээллийн боловсруулсан, хадгалсан, маш хурдан хайлт хийж болно

2.Эзлэхүүн-мэдээллийн асар их хэмжээний зай бага хэмжээгээр хадгалж болно

3. Бага баримт бичиг ажил-Компьютер цаасан ажлын асар их хэмжээний хэрэгцээг устгах

4. Ажилчид-Компьютер цалингийн зардлыг хэмнэдэг олон хүний ажлыг хийж чадна

5.Холболт-Интернэтийн компаниуд мэдээллийг хуваалцаж болно, тэр ч байтугай үнэн хэрэгтээ албан гаралгүй янз бүрийн улс оронд хуралдаж байна гэсэн үг

Areas where jobs have been created

ICT has brought new jobs to the world These include:

1. **Network Managers / Technicians** — These jobs have been created due to the need for big **computer networks within companies**. Network managers make sure that computers on the network **run smoothly** and are **secure**.

2. **Web Design** — The Internet has seen a huge demand for both **commercial (business) and personal web sites.** Web designers create these sites and keep them up to date.

3. **Systems Analyst** — These workers are responsible for designing **new ICT systems**.

4. **Programmers** — Programmers create all the **software that can be used on a computer**. This is a huge industry and produces things like **operating systems**, **applications** (word, excel etc) and **computer games**.

5. **Computer Engineers** — Engineers are needed to **build the high-tech computers** that we use today.

Web Design jobs have been created due to ICT

Gaming industries have exploded in recent year

- Шинэ ажлын байруд бий болсоор байна.

Areas where jobs have been lost

Unfortunately ICT has also caused the loss of jobs in certain areas. These areas include:

1. **Manual Repetitive Jobs** — **Factory manufacturing**, **spraying**, **welding**, **packing** and **assembling** have seen **robots replacing humans**. Robots are replacing people because they can do the same job much **faster**, they can **work 24/7** and they **do not require wages**.

2. **Shop Work** — Online shopping **(like Amazon)** has caused a **reduction in the number of shops** found on our high streets. More and more people are shopping online because is it generally **cheaper** and they can get **goods delivered**.

3. **Bank Cashiers** — Use of **ATM's** have reduced the need for bank cashiers.

4. **Office Work** — Traditional office work such as **typists** and **filers** have been replaced by computers. One person who knows how to use **Word Processors** and **Databases** can replace many typists and filers.

5. **Telephone Exchange** — Telephone operators have been replaced by computer systems that make **telephone connections automatically**.

6. **Library Work** — With the launch of e-books (electronic books) the future of traditional libraries could be at risk. People could easily download an electronic book instead of having to visit a library.

Robots do the work of many people

ATM's reduce the need for bank cashiers

Робот-Үйлдвэрийн үйлдвэрлэл, цацах, гагнуур, сав баглаа боодол болон угсарч роботууд хүн сольж харсан. Роботууд нь мөн ажил илүү хурдан хийж чадна, учир нь тэд 24/7 ажилладаг бөгөөд тэд цалин шаардаж болохгүй бол болно хүнийг сольж байна.

Shop ажил

1. Онлайн худалдааны (Амазон гэх мэт) нь манай өндөр гудамжинд олж дэлгүүр тоо буурсан учруулсан байна. Энэ нь ерөнхийдөө хямд бөгөөд тэд бараа нийлүүлэх авах болно, учир нь илүү олон хүн онлайнаар худалдан авалт байна.

2. Bank Кассчин

3. АТМ-ын хэрэглээ банкны кассын нярав хэрэгцээг бууруулсан байна.

4. Оффисын ажил

5. Ийм typists болон filers уламжлалт оффисын ажил компьютер сольсон байна. Олон typists болон filers сольж болно текст боловсруулагч болон мэдээллийн сан хэрхэн ашиглах талаар мэддэг нэг хүн.

6. Утас операторууд нь автоматаар утасны холболтыг хийх Компьютерийн систем солигдож байна.

7. И-ном (электрон ном) нь уламжлалт номын сан ирээдүйн эхэлснээс нь 6. Номын сан Ажил эрсдэлтэй байж болох юм. Хүмүүс амархан оронд номын санд очиж байх нь цахим номыг татаж болох юм.

The Capabilities and Limitations of ICT

МХХТ-ийн хязгаарлалт болон боломжууд

Capabilities of ICT devices

What things do ICT devices do well?

ICT devices and systems are capable of performing lots of tasks very well. Some of these are listed below:
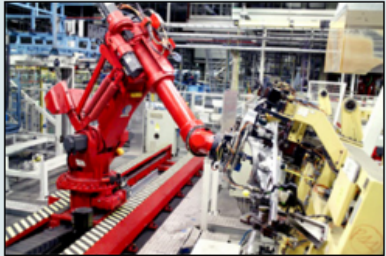
1.	**Speed**	Computers perform tasks very fast. Some **cpu's** can execute literally **'billions' of instructions per second**.
2.	**Accuracy**	If programmed properly, computers are capable of performing the same **tasks 100% accurately every time**. For example, a robot that is programmed to bolt a wheel to a car will get it exactly right each time.
3.	**Multi-Tasking**	Computers are able to perform **many tasks at the same time**.
4.	**Repetitive Tasks**	Computers will carry out **boring and repetitive tasks accurately**. Humans tend to get bored and make mistakes. For example, machines that count bank notes will do that job all day long without making a mistake.
5.	**Networking**	Computers can be **joined together** (either as a LAN or a WAN) and allows them to easily **share resources** such as **printers** and **data**.
6.	**Huge amounts of Data Storage**	Computer databases can store **enormous amounts of data**. All types of data be stored including text, numbers, images and video.
7.	**Fast Searches**	Computers can **search for stored data extremely fast**. For example, the police can match fingerprints in a database in minutes rather than spending weeks searching through printed copies.
8.	**Security**	Data can be **secured** with **passwords** or **encryption**.

Bank note counters perform repetitive tasks

Fingerprints can be matched quickly in a database

Programmed robots carry out jobs fast and accurately

2.үнэн зөв байдал

3.Олон үйлдэл зэрэг хийх чадвартай

4. давтагдсан асуудлууд
Компьютер үнэн зөв үйтгартай ажлыг хийх болно. Хүмүүс үйдэж авч, алдаа хийх хандлагатай байдаг.

5. Networking
Компьютер хамтдаа нэгдэн орсон (аль аль нь LAN буюу WAN гэх мэт), тэднийг амархан хэвлэгчүүд болон өгөгдлийг нөөцийг хуваалцах боломжийг олгодог болно.

6. асар их хэмжээ
Өгөгдөл хадгалах нь
Компьютерийн мэдээллийн сан өгөгдлийг асар их хэмжээний хадгалж чадна.

өгөгдлийн бүх төрлийн текст, тоо, зураг, видео зэрэг хадгалагдах болно.

7. хурдан хайлт
Компьютер нь маш хурдан хадгалагдсан өгөгдлийн хайх боломжтой.

Жишээ нь, цагдаагийн хэвлэсэн хувь дамжуулан хайж зарцуулж долоо хоног гэхээсээ илүү минутын дотор санд хурууны хээ тохирох болно.

8. Аюулгүй байдал

What things do ICT devices not do well?

Computers, and other devices, are not without their problems. Limitations of ICT devices are listed below:

1. **Battery Life**	Portable device such as laptops, **PDAs** and **mobile phones** are **limited by their battery life**. These devices only remain charged for so long before they need to be plugged into the mains.
2. **Weight**	Some portable devices are **heavy** (especially laptops). This does not make them ideal for carrying around.
3. **Screen and Keyboard Size**	Smaller devices such as **mobile phones** and **PDAs** have very **small screens** and **keyboards** which can cause problems for some people.
4. **Bandwidth**	Bandwidth is the **speed that data can be transported over the Internet**. Low bandwidth means that large files will take a long time to transfer.

Laptop batterys have a limited charge

Some devices have small screens and keyboards

1.Зөөврийн компьютер batterys хязгаарлагдмал цэнэг байна

2. Жин- Зарим зөөврийн төхөөрөмж хүнд (ялангуяа зөөврийн компьютер) юм. Энэ нь тэднийг орчим явуулах хамгийн тохиромжтой болгох биш.

3. Зарим төхөөрөмжүүд нь жижиг дэлгэцтэй байнамөн гар
4. Хурд

Internet Developments and Issues

Интернэтийн хөгжилийн асуудлууд

In **1993 the web browser Mosaic was launched**. Mosaic is credited with making the **Internet easily available to the general public**.

Ever since then, the Internet has **undergone constant change and development.** This section looks at some of these developments including **Web 2.0**, **blog**, **wikis**, **digital media uploading websites** and **social networking websites**.

Uses of Blog's, wikis, digital media websites and social networks

1 Blog's (web logs)

A blog is a kind of **online journal** or **a log** where **'bloggers'** write about **topics that are important to them**.

Blog's can be about anything that the blogger wants to share with other Internet users and interesting Blog's can attract **millions of visitors**.

Some current popular Blog's include:

- **FAILBlog**
- **Mashable**
- **Engadget**
- **Huffington Post**
- **TMZ**

2 Wikis

Wikis are **interactive web pages** that can be **viewed and edited by users**.

Anyone with a web browser can visit a wiki and make **changes to the content**. This has both advantages and disadvantages as shown below:

Advantage	Disadvantage
Information is quickly added as many people collaborate their knowledge.	One of the problems with letting everyone add to the wiki is that sometimes incorrect information is posted.

The best known wiki on the web is probably Wikipedia.

3 Digital media sharing websites

These websites allow users to **upload video and images** which can then be **viewed by other people**.

Video sharing websites, in particular, are helping to **change the way in which we can learn on the Internet**. For example, YouTube has a huge amount of **'how to'** and **'tutorial'** videos for all sorts of topics.

One of the advantages of digital media websites is that the owners of the videos and images do not need to waste their own hard drive space storing them. The files are held **'remotely'** on the websites servers.

The best known video sharing website is YouTube and for images Flickr.

Angus T. Jones Slams Two and a Half Men Commentary

83,577

4 Social networking websites

These websites create **'communities' of people** who can share information about their **lives**, **interests** and **hobbies** with each other.

They also make it easy for people to **make new friends** and to **keep in touch with each other** no matter where they are in the world.

Common features of social networking websites include:

- **Status updates** - letting friends know what you have been up to
- **Message boards** - where groups of friends can post each other messages
- **Private email** - this allows people to send private messages
- **Video conferencing** - where you can have face-to-face chats using web cams.

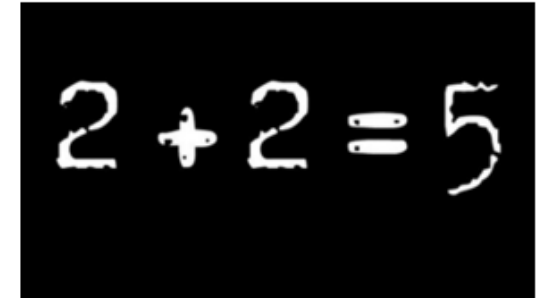The best know social networking websites are Facebook, Twitter and MySpace.

Description of issues with the Internet regarding information

1 Unreliable information

Just because something is written on the Internet does not necessarily make it **true or correct**. **Anyone can make a website** and a lot of the information held on these websites is **never checked or verified**.

Wikis (like Wikipedia) allow anyone to change the information held on the site. This means that sometimes what is written is completely incorrect.

In fact, some websites **deliberately set out to fill their pages with incorrect information** just to cause a nuisance to people. Examples here and here.

Ways to check that online information is correct

1. Use **well known websites** that you have heard of (bba, yahoo news etc).

2. Use **official websites** (band websites, football clubs etc).

3. **Verify the information by checking it on several different websites**. If each one says the same thing you can be sure its correct.

4. Try and **stay away from sites where just anyone can post the information** (like ask.com or answers.com).

5. Use websites that are **updated regularly**. Fake websites are not usually kept up to date as much.

NOTE!
The Internet is still an amazing tool for research. You just have to know how to use it!!!!

2 Undesirable information

Undesirable websites are those that include **content that is offensive to individuals or even races**. Undesirable content can include:

- **Pornography**
- **Violent videos or images**
- **Content promoting hatred**
- **Racial content**

We **cannot fully censor (block)** this type of content from the Internet as many of the sites are based in **Countries that do not have laws against it**. However you can take steps to reduce the chance of you accidentally stumbling across undesirable information:

Ways to avoid undesirable information

1. Stick to **well known websites** that you have heard of.

2. Use **built-in search engine filters.** Google has a feature which will exclude search results that contain undesirable content.

3. Use **parental controls** which are built into most modern browsers. These block access to many undesirable websites.

PARENTAL
ADVISORY
EXPLICIT CONTENT

Health and Safety

Эрүүл мэнд, аюулгүй байдал

There are some problems that affect from computer.

Health problems

- Repetitive Strain Injury
- Back and Neck Strain
- Eye strain and Headaches

Prevent from these problems

Repetitive Strain Injury

- Take breaks to rest your hands.
- Use an ergonomic keyboard/mouse.
- Arrange your workspace so you are not cramped.
- Use a wrist rest.

Back and Neck Problems

- Take regular breaks to stretch your body.
- Use adjustable chairs so you can sit in a position suitable for your height.
- Sit upright against the back rest.
- Tilt the computer screen so it is set just below your eye level.
- Keep your feet flat on the floor.

Eye Strain and Headaches

- Take regular breaks (every hour or so).
- Use LCD screens rather than CRT as they have less flicker.
- Use an anti-glare screen.
- Ensure that room lighting is good with no direct light causing glare on the screen.
- Keep the screen clean of dirt.
- Have eyes tested regularly.