

GCSE ICT – Social effects of information systems

Is ICT a good thing?

- Many of the old boring jobs can now be done by a computer, which leaves workers to do more interesting tasks.
- Computerisation has improved levels of productivity, which means that workers need to work shorter hours and still maintain the same standard of living.
- Businesses in the UK must use ICT in order to keep up with their competitors in other countries.
- Without ICT many things would not be possible (e.g. Credit cards, digital television, DVDs, space travel, mobile telephones).
- ICT has created many new jobs.

Is ICT a bad thing?

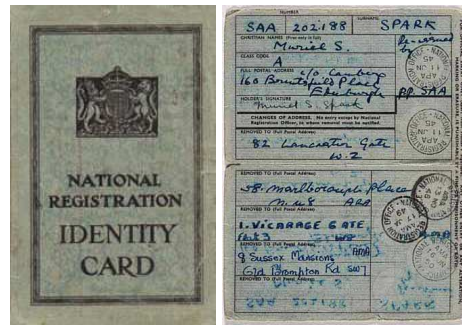
- Life without ICT tends to be slower and less stressful.
- Computerisation of many jobs in industry (e.g. manufacturing) has led to unemployment.
- Many of the new ICT jobs require high levels of skills and/or qualifications, and are not easily filled by older, less ICT-literate workers.
- ICT has increased the amount of work many workers have to do, and they often have to work longer hours.
- Many ICT jobs (e.g. data entry) are just as boring as the jobs they replaced.
- The storage of personal data on computer systems has eroded people's privacy.
- ICT systems often fail at inconvenient times – leaving businesses unable to function because they are so dependant on ICT.

Changing patterns of employment

- The introduction of ICT has changed the ways in which people work.
- Many manual tasks in factories are now done by robots.
- Many manufacturing tasks are 24/7 – they take place for twenty four hours per day, seven days per week – and are constantly monitored and controlled by computers that require human supervision.
- There are fewer paper-based data systems in offices and this has led to the replacement of filing clerks by data entry clerks.
- More people can work from home rather than have to travel to an office every day.
- It is rare for people to stay in the same job for more than a few years because changes and developments in technology require regular retraining as old jobs disappear and new work opportunities emerge.

Who watches the watchers?

- During the Second World War everyone had to carry an identity card, and you could be arrested for not having one with you at all times.



↔ Second World War Identity Card

- It is likely that identity cards will be reintroduced in the UK in a few years time.
- They will have the individual's photograph and a chip with biometric data stored on it.
- The identity cards will be used by many different government departments to keep track of data about the whole population, and could be used to replace existing passports, driving licences, National Insurance numbers, even examination candidate numbers.
- The data stored on the identity card may also include encoded versions of an individual's fingerprints, iris prints, and facial identification points.
- The latter is a method of mapping a person's face and converting this data into digital information.
- Although this facial identification data will not be unique to an individual, it will help identify them.
- It will also interact with CCTV systems (N.B. In 2004 there were 4 million CCTV cameras in the UK, and someone walking through London will pass over 300 CCTV cameras during the course of a day!).



↔ CCTV camera used for surveillance

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Environmental, ethical, moral, and social issues

- ICT will have an impact on the environment, the decisions that people make about what is right or wrong, and the structure of society.
- Environmental issues
 - ICT should reduce overall energy consumption because computer control will make energy use more efficient.
 - ICT should reduce wastage in industrial processes because computer aided manufacture (CAM) will make more efficient use of materials.
 - ICT should save trees because the paperless office and digital news gathering will require far less paper than is presently produced.
 - ICT should reduce traffic pollution because more people will be able to work from home.
- Ethical and moral issues
 - ICT might encourage software theft.
 - ICT might encourage the growth of computer 'hacking'.
 - ICT might diminish people's privacy.
 - ICT might lead to job losses as new systems and methods of working are introduced.
- Social issues
 - ICT may lead to the development of a cashless society.
 - The advantages of a cashless society
 - It is more convenient.
 - People will no longer have to carry money with them.
 - There will be no need to queue at banks or cash machines to get money.
 - The increased use of credit cards will give consumers control over when they pay for things they have bought (i.e. do they pay off their credit card bill at the end of the month or spread the repayment over time).
 - The disadvantages of a cashless society
 - It can lead to people spending more than they can afford to repay.
 - It can lead to people losing track of what they have spent.
 - It can lead to more information being held about people, thus reducing their privacy.

Crime fighting

- ICT will have a major impact of crime prevention and detection.
- This includes:
 - The increased use of CCTV to deter crime.

- The increased use of speed cameras to reduce the number of speeding offences committed.
- The tagging of valuable items with chipped security tags.
- The increased use of computer-controlled security systems for homes and businesses.
- The development of an improved Police National Computer (PNC) that will hold details of all criminals and offences.
- The development of a National Criminal Intelligence System (NCIS) that will interact with the computers systems of banks, the PNC, Interpol, Europol, MI5, MI6, Special Branch, Customs and Excise, and the Inland Revenue.
- The development of a national DNA profiling and fingerprint database.

Tasks:

1. What effects on employment has the increased use of ICT had?
2. Should people be worried about the increased use of CCTV surveillance or should they feel safer because its use is increasing?
3. What environmental, ethical, moral, and social issues does the increased use of ICT raise?
4. In what ways will crime fighting be improved by the increased use of ICT?

Extension Task:

Do you consider the increased use of ICT to be a good thing or a bad thing?