

The effects of using IT

On employment

Working patterns within organizations

Microprocessor- controlled devices in the home

Potential health problem (prolonged use)

Employment

- There has been a reduction of employment in offices, as workers' jobs have been replaced by computers.
- Payroll workers: Benefit has been that jobs often no longer have to be done at precise times so the workers may have the opportunity to plan their working hours around their family commitments.
- Typing: Job of typist has been made redundant by the use of computers and printers.



A man with a beard, wearing a grey button-down shirt, is seated at a desk in profile, looking towards a large window. He is holding a printed document in his right hand. On the desk in front of him are various items: a black mug, a pen holder with pens, and some papers. In the background, a large black multifunction printer is visible, along with two computer monitors. The scene is brightly lit by natural light from the window.

Remote Printing with Splashtop

- Car production workers: The concept of an assembly line was evident before the industrial revolution , where individual workers would take responsibility for an area of expertise in making one part of the whole product by hand using simple tools. Building or assembling the different parts of a car required different skills and knowledge depending on which part of the line you were working on. Each expert worker would have had to train in their specific field, and on the assembly line that's basically all they would do, though to a high standard.





- **Reskilling:** when people change their jobs by learning the new skills necessary for another job.
- **Deskilling:** when people who have been doing a skilled type of job are replaced by technology requiring operators with less skill, thereby saving the company money.
- Over 80% of the jobs that are in the greatest demand globally are IT related. The range of jobs is increasing exponentially because each type of job requires very specialist IT skills and capabilities. Some of these are no longer a **job for life** but have become short-term contract work. In addition, some specialist IT skills can take an individual from one end of the globe to another over short periods of time.

Advantages of robots over humans

- Higher productivity (this can be considerable in mass production factories).
- More consistent results (robots are not necessarily more accurate, but every car is identical, which means a big increase in reliability and easier maintenance for customers).
- They work non-stop without breaks, holidays or time for shift handovers.
- They don't get bored by repetitive tasks.
- They don't go on strike.

Even taking into account expensive maintenance costs, robots still work out cheaper in the long term than paying humans wages.

Disadvantages of robots over humans

- Robots are expensive to purchase and set up in the first place.
- They often need to be reprogrammed for every new task they have to carry out, which can be expensive and time-consuming.
- If an error occurs in the robot's programming, or if it develops a mechanical problem, a number of production errors will occur until the fault has been identified (however, this is becoming less of a problem as self-diagnostics become increasingly sophisticated: robots can detect errors in their own operation and halt production until the fault is rectified).

Increase in employment due to IT

- Website designers: The job of web designer only began when the internet began and so is a relatively new type of job on the job market. Initially, only people with advanced computer technology skills were able to design websites.
- Computer programmers: The job of computer programmer involves using a specialized coded language that helps humans to communicate with machines.
- Delivery drivers: As online shopping and e-commerce is becoming very popular, the need for delivery services is increasing.

Working patterns within organisations.

- Work does not have to be place you turn up to every morning, but it is increasingly something that can be done anywhere, and at any time, as long as it suits both the employee and the employer. For instance, software can be used that enables virtual meetings to take place via high-speed broadband and mobile networks.

The use of computers have changed the way we complete our work. Employees now don't necessarily have to be in the office to complete set tasks.

	Advantages	Disadvantages
Remote Working: Employees are able to access their <u>office desktop computer</u> from a different location (home).	Employee <ul style="list-style-type: none"> Do not have to make child care arrangements – spend more time with family. Employee can work at a convenient time for them. Save time/costs on travelling. Employer <ul style="list-style-type: none"> No need to provide desk/office space. Employees may be happier and productive working at home. 	Employee <ul style="list-style-type: none"> Lack of interaction (including social) with staff and management. Employee could be easily distracted working from home. Could be overlooked for promotion opportunities. Employer <ul style="list-style-type: none"> It could be harder to check what the employee is up to.
Use of Intranet: Employees can <u>log into an intranet</u> to communicate and access shared resources with other staff.		
Use of Internet: Employees can check their <u>emails</u> or <u>have web conferences</u> with peers.		
Use of Smart Phone: Phone calls and emails can be diverted to personal smart phone from office accounts.		

Past paper question 1

Describe the advantages and disadvantages for remote working for the employee and employer?

Exam Question



Employees working remotely at home will be able to work more flexible hours which is more convenient for them. They will be able to spend more time with their family and also save time and travelling expenses. However the employee may feel isolated at home due to a lack of interaction with their coworkers. In addition they may also be overlooked for promotion opportunities. The employee could also be less productive working at home as they could easily be distracted. The advantage for the employer is that they would not have to provide a desk or office space. If the employee is happier working at home then they may be more productive. Nevertheless it would be more difficult to check up on the employee and to keep on track of the work that they should be completing.

Effects of IT on working patterns within organisations

The introduction of ICT in the work places has allowed employees to work a more flexible time rather than the rigid traditional office hours of 9-5. The four main types of Employee working patterns are **Full Time**, **Compressed**, **Part Time** and **Job Share**.

	07.00	08.00	09.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Mon												
Tue												
Wed												
Thur												
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Full Time:

- Employees will normally work over 5 full days.
- Typically 9am till 4 or 5pm.
- Will complete between 35 – 40 hours a week.

	07.00	08.00	09.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Mon												
Tue												
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Compressed Hours:

- Employee are still working full time hours.
- However the same amount of hours are completed over less days.
- Employees will work more hours in one day.

	07.00	08.00	09.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Mon												
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Part Time (flexi-Time):

- Employees who work less hours over a week than a full time employee.
- Part time staff can work outside of the traditional hours of work (evenings or weekends).

	07.00	08.00	09.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Mon												
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Job Sharing:

- Full time job is divided between two part time employees.
- Both employees do the same job – same responsibilities.
- One employee could work in the morning and the other in the afternoon or the first or second part of the week.

[illegible]

Past paper question 2

Describe what is meant by the following types of working.

Exam Question



Compressed hours

The worker completes the normal working hours per week but works for fewer days. For example a policeman may work a 40-hour week compressed into 4 days not 5.

Flexible hours

Workers complete the same number of hours over a working week but can choose when to start and end in agreement with the manager. Allows for workers to complete the school run or miss rush hour.

Summary

IT led to unemployment in many areas

- Manufacturing - robots have taken over many tasks and are much faster
- Computer controlled warehouses – automatic, does not need people
- Labour intensive work - printing industry and filing

Effect on Companies:

- Can employ less people
- Robots do not take holiday, get sick or need breaks
- Greater consistency in products made

New jobs have been created in ICT

- Writing software
- Maintenance of robots
- Internet related jobs

Effects on People:

- People need to be retrained due to new technology
- Cleaner working environment
- De-skilling of workforce
- Computers can now do tasks that required high skill level
- Safer working environment
- Fewer manual tasks such as heavy lifting

Microprocessor-controlled devices in the home



- A dedicated device that incorporates all the parts of a computer processor on a single chip.

Microprocessors are found in many household devices. These devices could either be labour-saving devices, leisure or more for convenience.



Advantages

- Devices do **much of the housework chores** including:
 - Cooking Food
 - Washing clothes or dishes
- Tasks do not need to be done **manually** which means:
 - Do not need to be in the house when food is cooking or clothes are being washed.
 - More time to spend with family and friends.
 - More time for leisure activities or to complete work.
- Can encourage a **healthy lifestyle** because of smart fridges analysing food ingredients.
- Do not have to leave home to get **fit**.
- Burglar alarm provides a sense of **security**.

Disadvantages

- People can become **over reliant** on these devices and can **become lazy**.
- Can lead to **unhealthy eating** due to dependency on ready meals.
- Manual household **skills** are **lost**.

Past paper question 3






Describe the advantages and disadvantages for microprocessor controlled devices in the household?

Exam Question



Microprocessor controlled devices can be used to complete housework chores. Tasks would not have to be done manually like washing clothes and dishes. This would allow people to have more leisure time and would also mean that they do not have to be present whilst the task is being completed. However people may become over reliant and lazy due to their dependence on these devices. In addition they will become deskilled and will lose basic household skills. Furthermore if people are constantly eating microwave meals then this may lead to unhealthy eating habits. On the other hand fitness machines and smart fridges can be used to encourage a healthy life style. Burglar alarms could also provide a sense of security.

Potential health problem (prolonged use)

Health Risk and Reason	Prevention
 Repetitive Strain Injury (Fingers/Wrist) <ul style="list-style-type: none">From repetitive clicking of mouse and continual typing.	<ul style="list-style-type: none">Use of a wrist support when typing and using a mouse.
 Back Problems <ul style="list-style-type: none">From sitting in same position all day or having a bad sitting posture.	<ul style="list-style-type: none">Use of adjustable ergonomic chair.Ensure the monitor is at eye level.
 Headaches/Eyestrain <ul style="list-style-type: none">From staring at screen continuously or having bad lighting in the room.	<ul style="list-style-type: none">The use of anti glare filter to reduce the screen reflection which could tire the eyes.Use of LCD screens over CRT due to reduced amount of flickering.
	Use of IT equipment to minimise the health risks: <ul style="list-style-type: none">Use of ergonomic chairs which are adjustable to suit the needs of the user.Use of ergonomic designed work stations.Use of ergonomic keyboards.Use of voice-recognition software to reduce the amount of mouse clicking and typing.
	Strategies to minimise the health risks: <ul style="list-style-type: none">Take regular breaks – walk around and stretch muscles.Look away from the monitor at regular intervals

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htm](https://ictlounge.com/html/health_and_safety.htm)

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ociety.htm](https://ictlounge.com/html/effects_of_ict_on_society.htm)

Repetitive Strain Injury (RSI)

- This is when joints such as the shoulder, wrist or fingers swell, causing pain
- Damage gets worse if left untreated
- Can lead to hand/arm immobility