

# BTEC Level 3



## Unit 1: Information Technology Systems

### Learning Aim F: Issues

#### Knowledge and Assessment Organiser



Student name: .....



**What are the impacts and implications of issues resulting from the use of IT systems?**

# Contents

Key Command verbs	
Big Question and Small Question breakdown	
Essential knowledge	
Articles for wider reading and flipped learning	

# Key command words

Command or term	Definition
Analyse	Learners examine in detail a scenario or problem to discover its meaning or essential features. Learners will break down the problem into its parts and show how they inter-relate. There is no requirement for any conclusion.
Assess	Learners give careful consideration to all the factors or events that apply and identify which are the most important or relevant. Make a judgement on the importance of something.
Calculate	Learners apply some form of mathematical or computational process.
Complete	Learners complete a diagram or process. Can apply to problems/solutions of varying complexity.
Demonstrate	Learners illustrate and explain how an identified computer system or process functions. May take the form of an extended writing response, a diagram or a combination of the two.
Describe	Learners provide an account of something, or highlight a number of key features of a given topic. May also be used in relation to the stages of a process.
Discuss	Learners investigate a problem or scenario showing reasoning or argument.
Draw	Learners represent understanding through the use of a diagram or flowchart.
Explain	Learners denote a series of linked points needed and/or justify or expand on an identified point required.
Evaluate	Learners review and synthesise information to provide a supported judgement about the topic or problem. Typically, a conclusion will be required.
Identify	Learners assess factual information, typically when making use of given stimuli. Requires a single-word or short-sentence answer.
Produce	Learners provide a solution that applies established constructs to a given computing problem.
State, name, give	Learners assess factual information. Requires a single-word or short-sentence answer.
Write	Learners produce a solution, or mechanism used as part of, a solution to a given computing problem.



# What is my big question?

## What are the impacts and implications of issues resulting from the use of IT systems?



What does moral and ethical mean?



How can moral and ethical factors affect the use of technology?



How does legislation apply to the use of computer systems?



What are the consequences of failing to meet legislation?

# F1: Moral and ethical issues

The use of IT systems has changed how we live our lives and do business, with both positive and negative effects. As a result there are different moral and ethical issues which both producers and users of IT systems need to consider. This include:

- ⇒ Privacy
- ⇒ Environmental
- ⇒ Unequal access to information technology
- ⇒ Online behaviour and netiquette
- ⇒ Globalisation
- ⇒ Freedom of speech and censorship
- ⇒ Acceptable use

**Moral-** Refers to individual's own principles

**Ethical-** Is defined by rules decided by external source for example an Acceptable Policy or codes of conduct.

## Privacy

Privacy can be comprised by IT systems. Many of us use social media, blogs, online messaging etc and a wide variety of other services to share large parts of our lives online. The growth of services such as, location aware, targeted advertising and software, blurs the lines between our online and offline world.

The misuse of this information can have severe negative impacts. Cyberbullying, identity theft and bank theft are examples.

## Environmental

The growing demand in electronic devices means increased manufacturing output and increased energy needed to run the devices.

These have negative by products such as greenhouse gases which affect climate change.

## Unequal access to information technology

Not everyone has access to IT systems and the internet. There is distinct divide between access in developed and developing countries. It is often schools and colleges many have resources online which many students do not have access to as they may be from a disadvantaged background.

## Online behaviour and netiquette

Netiquette describes acceptable behaviour on the internet. It attempts to solve problems such as trolling, cyberbullying. The perception of the internet as an impersonal and anonymous place communicate, leading to unacceptable behaviour online.

## Globalisation

Globalisation describes the process of countries becoming increasingly interconnected, particularly the increase in trade, transport and communications. IT systems have played a key role in facilitating this process. But despite benefits, globalisation has also caused problems such as job outsourcing, disease spreading, environmental damage and terrorism.

## Freedom of speech and censorship

Some users of sites, such as social networking, blogs, vlogs etc. express views that many people find offensive.

Many sites do set rules for the content that is allowed, but some user's feel this is a form of censorship and violation of their freedom of speech.

## Acceptable use

Many companies have acceptable use policies that define how employees can use IT systems, such as websites and email while at work.

# F2: Legal issues

Many of the issues that arise from the use of IT systems are covered by legislation but there are also moral and ethical concerns associated with these issues.

## Health and Safety

Health and issues associated with IT systems include repetitive strain injury (RSI), eye and back problems.

Employers have a moral responsibility to carry out risk assessments and provide suitable equipment and working conditions for employees.



## Copyright

IT systems have made it extremely easy to share and download copyright material without the permission of the copyright holder. This is most commonly known with the illegal download of movies, tv shows, music & software for free.

These practices threaten the livelihood of the people who produce the works, and those who sell and distribute them.

## Computer Misuse

Attacks on computer system such as viruses, hacking etc. cause harm to individuals and businesses. The effects can include loss of income for businesses, loss of jobs, theft of personal wealth, and the upset resulting from the inability to use our IT systems.

## Protecting of data

Organisations and individuals have ethical responsibility to protect the data of other people that they are using, storing and transmitting.

## Accessibility

New IT systems should be accessible to people regardless of disability. Inaccessible systems because upset and stress, and can deny access for people with disabilities to work, services and leisure facilities.

# Legislation protecting users and data

You need to know about the role and implications of the main UK legislation for protecting data and users.



## Why legislate?

- Legislation ensures compliance.
- It encourages and builds trust in systems.
- Ubiquitous computing means our virtual lives are as important to us as our real lives.

## Who benefits?

- Individuals – they can trust systems and be sure their personal data is protected.
- Society – the use of powers is transparent and clear.
- Organisations – their reputation is ensured.

## Legislation ensuring accessibility

Legislation in IT is not just about protecting users and data. It is also there to ensure that businesses make their systems accessible to all users and that users with disabilities do not suffer from discrimination.

### Accessibility legislation and codes of practice

Legislation	Role	Relevance to IT systems
Disability Discrimination Acts 1995 and 2005	Until 2010 the Disability and Discrimination Act was the main legislation banning discrimination on the basis of disability.	Under the Equality Act of 2010, website owners and hosts have obligations to make their sites accessible to all.
Equality Act 2010	When it was passed in 2010, the Equality Act brought together and replaced a number of laws, including the Disability Discrimination Act, creating a single legal framework to ensure equality for all. The act applies to both personal life and the workplace.	Service providers must provide special computer software or additional staff support to make their systems accessible, at no extra charge.
Guidelines	Role	Relevance to IT systems
British Standards Institute (BSI) codes of practice	The BSI codes of practice cover a wide range of subjects, including accessibility. They are in place to ensure compliance with legislation.	BSI Standard BS 8878 aims to ensure that web products (e.g. websites, web services and email) are accessible to users with a physical impairment or learning difficulty.
Open Accessibility Framework (OAF)	This European research project sets out a process for ensuring that IT systems are accessible.  The framework is broken into steps in two categories: creation of systems, and use of systems.	'Create' steps: 1 Define what 'accessible' means for the particular platform. 2 Provide user interface elements. 3 Provide authoring tools.  'Use' steps: 1 Provide platform supports. 2 Provide accessible software. 3 Provide assistive technologies.
Web Content Accessibility Guidelines (WCAG) 1.0 and 2.0	These guidelines are defined by the World Wide Web Consortium (W3C*) to ensure web content is accessible to all regardless of disability.	The guidelines define three different priority levels for accessibility. Priority level 1 is considered the minimum to allow users with a disability to access a website.

### Accessibility and equality

Accessibility isn't about promoting access or giving advantage; it ensures equal access to all, regardless of any impairment or condition. IT and computing offer a great deal by way of assistive technology as far as equality is concerned; so it is essential that this is mirrored within industry.

# Articles for Wider Reading and Flipped Learning

Know it all Ninja

Read through the topics on:

- ⇒ Moral and ethical issues
- ⇒ Legal issues

Remember to complete the on-line quiz to gain house points and test your knowledge.

<https://www.knowitallninja.com/>