

L2 Unit 8: Technological innovation and e-commerce (2010)

Learning outcomes

By completing this unit candidates will develop basic knowledge and understanding of technological innovation and e-commerce.

Candidates will be able to:

- identify the effects of ICT on the individual
- describe an innovation in ICT
- investigate how e-commerce has affected the way people buy goods and services
- investigate e-commerce websites, and
- understand legal and moral issues in the digital age.

It is anticipated that a candidate will require **40** guided learning hours to complete this unit.

Assessment objectives	Knowledge, understanding and skills
1 Identify the effects of ICT on the individual	<p>Categories of technology</p> <ul style="list-style-type: none"> • internet eg: email, WWW, messenger, chat rooms • communication eg: mobile phone, video phone, video conferencing, information points • entertainment eg: games console, MP3 player, digital TV • mobile access eg: laptop, PDA, wi-fi, WAP • data capture eg: digital camera, voice recorder, scanner • financial transactions eg: ATM, EPOS, smart card <p>Effects on the individual:</p> <ul style="list-style-type: none"> • how this technology is used • benefits • disadvantages eg: cost, theft, limitations of the chosen technology
2 Describe an innovation in ICT	<ul style="list-style-type: none"> • identify the innovation <p>Describe eg:</p> <ul style="list-style-type: none"> • purpose • extent to which it achieves its purpose • how it works • benefits and limitations

Assessment objectives	Knowledge, understanding and skills
<p>3 Investigate how e-commerce has affected the way people buy goods and services</p>	<p>Types of e-commerce, eg:</p> <ul style="list-style-type: none"> • electronic data interchange (EDI) between companies • supermarkets • banks • specialist retailers • auction sites • organisations, clubs etc where e-commerce is not the primary function of the website • price comparison websites <p>Explain how e-commerce has changed the way people buy goods and services eg:</p> <ul style="list-style-type: none"> • choice • location • convenience • cost • flexibility
<p>4 Investigate an e-commerce website</p>	<p>Investigate to include eg:</p> <ul style="list-style-type: none"> • booking system • auction site • commercial website selling products • digital download site <p>Identify audience and purpose</p> <p>The extent to which the site meets its purpose</p> <p>Describe and illustrate the services provided eg buying/selling products</p>
<p>5 Understand legal and moral issues in the digital age</p>	<p>Legislation eg:</p> <ul style="list-style-type: none"> • Data Protection Act • Copyright • Misuse of Computers Act <p>Moral issues eg:</p> <ul style="list-style-type: none"> • civil liberties, eg: <ul style="list-style-type: none"> ○ surveillance ○ data collection ○ data storage ○ ID cards ○ airport security • access to information • employment

Assessment

This unit is centre assessed and externally moderated.

In order to achieve this unit, candidates must produce a portfolio of evidence showing that they have met all of the assessment objectives.

Portfolios of work must be produced independently. They will need to be made available, together with witness statements and any other supporting documentation, to the OCR Visiting Moderator when required.

Centres must confirm to OCR that the evidence produced by candidates is authentic. An OCR Centre Authentication Form is provided in the Centre Handbook and includes a declaration for assessors to sign. It is a requirement of the QCA Common Criteria for all Qualifications that proof of authentication is received.

Guidance on assessment and evidence requirements

Candidates may provide portfolio evidence for this unit using a range of suitable and appropriate techniques. These may include written and typed documentation, printouts, screenshots etc and computer files. Where presentations or displays have taken place for which evidence cannot be easily included within the portfolio evidence assessor testimony/witness statements must be included, signed by the assessor(s), and supported by appropriate evidence (handouts, slides etc).

As this unit requires a considerable amount of research from candidates it is especially important that centres are vigilant when assessing work from this unit that they do not accept work that has simply been copied and pasted from websites. Any work quoted by candidates must be clearly referenced to the source. Section 3.6 of the Centre handbook should be referred to,

Candidates should be encouraged to use the correct technical terminology in all the work produced for this unit.

For Assessment Objective 1, candidates must describe how technology from at least three of the categories listed in the knowledge, understanding and skills is used by the individual, suggesting benefits and disadvantages. To achieve the merit or distinction grades for this assessment objective, candidates must consider four or five of the categories listed, respectively. The 'individual' may include the candidates' own experiences if appropriate.

For Assessment Objective 2, candidates will identify one innovation in ICT and describe its purpose, consider whether the purpose is met, how it works and the benefits and limitations of the identified innovation. The innovation studied should be relatively new, easily researched and understood by the candidates. For example, the introduction of computers into an office environment is not a suitable topic of study. Specific examples of suitable innovations are difficult to give as the nature of the unit means that there will always be new developments superseding any that are detailed in a printed document. However, in 2010 suitable examples might include:

- convergence of mobile phone and computer technologies
- social networking websites
- TV on demand
- Catch-up TV services (e.g. iplayer etc)
- GPS systems
- Collaborative software technologies

Whilst a particular product may be used as an example, the focus of this AO must be on the innovation.

For Assessment Objective 3, candidates must give a definition of e-commerce and for higher grades examples of different types of e-commerce websites must be provided. Candidates must provide reports on how e-commerce has affected the way the consumer buy goods and services and as a minimum the following key points must be covered in their reports: choice, convenience and cost. Candidates may wish to give their own impressions of such sites, but better grades may be secured where further research is carried out eg consumer surveys. It may also be possible to gain an insight into the benefits of using such websites through contact with e-commerce businesses. In some cases, candidates may already have some experience of using such sites themselves. This may prove to be very useful in providing accurate and detailed descriptions of their functionality.

For Assessment Objective 4, candidates must identify one e-commerce website and provide the purpose and audience of the website. Annotated screenshots describing the different e-commerce features must be provided. The accuracy of these descriptions acts as a grade differentiator, although candidates should be encouraged to research their chosen e-commerce website thoroughly and record their observations accurately. When investigating e-commerce websites it is important that candidates demonstrate a sound understanding of the whole process – not just browsing and choosing items. Understanding of payment methods, including the use of secure sites should also be shown. It is possible on many e-commerce websites to follow through to the payment screen.

All candidates must identify the purpose and audience for the website investigated. 'Everyone' or 'all ages/genders' is not an appropriate identification of the audience.

For Assessment Objective 5, candidates must demonstrate their understanding of computer legislation and moral issues in the digital age. The format of evidence produced may be a report, presentation (this may require a witness statement) etc.

Examples might be found through news/current affairs via relevant websites and/or technology magazines. Candidates should be encouraged to research issues which may affect them – such as issues involving the increased use of surveillance/security cameras; the issuing of Identity cards etc.

Mapping to national occupational standards

The mapping in the table below provides an indication of where evidence might be available for assessment against some of the knowledge and understanding contained in the national occupational standards (NOS). It does not claim to guarantee that evidence will meet the NOS.

Occupational standards	Unit number	Title
IT Users (e-skills UK)	EI2	Evaluate the impact of IT Level 2
IT Users 2009 (e-skills UK)	ICF:FS:B	IT communication fundamentals
IT Users 2009 (e-skills UK)	ITS:B	IT Security for users
IT Users 2009 (e-skills UK)	INT: B	Using the Internet
IT Users (e-skills UK)	PS2	Presentation software Level 2
IT Users (e-skills UK)	WP2	Word processing software Level 2
IT Users 2009 (e-skills UK)	WP:B	Word processing software
IT Users 2009 (e-skills UK)	PS:B	Presentation software
IT Users 2009 (e-skills UK)	ISF:FS:B	IT software fundamentals

Signposting to functional skills

- ✓ The unit contains opportunities for developing Functional Skills.

Functional Skills Standards				
English		Mathematics		ICT
Speaking and Listening	✓	Representing	✓	Use ICT systems
Reading	✓	Analysing		Find and select information ✓
Writing	✓	Interpreting		Develop, present and communicate information ✓

Resources

This section provides suggestions of suitable resources. The list is neither prescriptive nor exhaustive, and candidates should be encouraged to gather information from a variety of sources.

Some suggested resources are intended for Tutor use. The resources in this section were current at the time of production.

Books and electronic resources

Parry, Kelsall, Manson	<i>ICT for OCR National Level 2 Student Book: Unit 8 Technological innovation and e-commerce and Unit 13 IT systems and user needs</i>
Walmsley, Sargent & Hinder	<i>ICT for GCSE</i> Hodder & Stoughton
Doyle & Penrose	<i>Information Systems for you (series)</i> Nelson Thorne
Bowman & Jones	<i>OCR National Level 2 in ICT Student Book with Dynamic Learning CD-ROM</i> Hodder Arnold. ISBN: 9780340942017, ISBN-10: 0340942010
North West Learning Grid	<i>OCR Nationals in IT (ICT)</i> North West Learning Grid
Thomas Telford Online	<i>OCR Nationals in ICT</i> Thomas Telford Online

Websites

Answers <http://www.answers.com/>
An on-line encyclopaedia.

BBC <http://news.bbc.co.uk/1/hi/technology/default.stm> ,
Section on Technology, details up-to-date developments in the general Technology area.

BBC Bitesize revision [URL:http://www.bbc.co.uk/schools/gcsebitesize/ict/](http://www.bbc.co.uk/schools/gcsebitesize/ict/)
A user friendly BBC resource for tutors and candidates alike.

Computer Weekly <http://www.computerweekly.com/>
The on-line version of the IT magazine.

How stuff works <http://www.howstuffworks.com/>
An instructional and an update on technological advances resource.

The Computer Information Centre <http://www.compinfo.co.uk/>
A one-stop reference resource for IT.

<http://www.direct.gov.uk>

UK Government website, gives wide range of information relating to technology and how it can be used.

Examples of online booking websites:

<http://www.easyjet.co.uk/en/book/index.asp>

Low cost flights, hotels and apartments, car rental, airport parking, insurance, airport transport etc.

<http://www.qjump.co.uk>

Provides train times and reserves seats for UK trains.

<http://www.thetrainline.com>

Provides train times and tickets.

Examples of online auction sites:

<http://www.ebay.co.uk>

A site to buy and sell items.

<http://www.ebid.net>

An online auction house.

<http://www.qxl.com>

An online auction house.

Examples of commercial websites selling products:

<http://www.ebuyer.com>

A site selling a wide range of IT equipment and supplies.

<http://www.currys.co.uk>

The electrical store online.

<http://www.tesco.com>

Supermarket chain with online sales of groceries, clothing, home accessories, financial services.

<http://www.parentscentre.gov.uk/usingtheinternet/internetsafety/shopping>

Government site giving information about education.

Examples of digital download sites:

<http://www.apple.com/itunes>

A site providing an audio player and multiple playlist functions.

<http://www.computeractive.co.uk/vnunet/news/2127047/legal-music-download-sites-flourishing>

An online version of the magazine.

<http://www.mycokemusic.com>

Buy and download music.

<http://www.napster.com>

Buy and download music.

<http://virgindigital.com>

Buy and download music.

Internet fraud etc:

http://www.banksafeonline.org.uk/types_of_scams.html

A site providing simple steps to help keep safe online.

<http://news.bbc.co.uk/1/hi/uk/4749806.stm>

<http://www.businesslink.gov.uk/bdotg/action/layer?r.l2=1075408323&r.l1=1073861197&r.s=tl&topicId=1075421828>

A site providing practical advice for business.

<http://www.consumerdirect.gov.uk>

Provides help and advice for consumers in Great Britain.

Equipment:

No specialised equipment is required for this unit, however, it may be useful for candidates to have some access to new technologies, or at least resources and materials which illustrate new technologies, to enable access to all elements of the unit. In addition, centres must enable candidates to access e-Commerce websites suitable for this unit. .

Grading

Assessment Objective	Pass	Merit	Distinction
AO1 Identify the effects of ICT on the individual	Candidates briefly describe how technology from at least three of the categories is used by the individual. They describe how the technology is used and suggest some benefits and disadvantages. Candidates may not use correct terminology.	Candidates describe in detail how technology from at least four of the categories is used by the individual. They describe how the technology is used and give a range of benefits and disadvantages. Candidates use the correct terminology most of the time.	Candidates explain in detail how technology from at least five of the categories is used by the individual. They explain how the technology is used and give a wide range of benefits and disadvantages. Candidates use the correct terminology.
AO2 Describe an innovation in ICT	Candidates identify one innovation in ICT. Candidates describe briefly its purpose, how it works and one benefit and one limitation. Candidates may not use correct terminology.	Candidates identify one innovation in ICT. Candidates describe its purpose, how it works and a range of benefits and limitations. Candidates use the correct terminology most of the time.	Candidates identify one innovation in ICT. Candidates give a detailed description of its purpose, the extent to which it achieves its purpose, how it works and a range of benefits and limitations. Candidates use the correct terminology.
AO3 Investigate how e-commerce has affected the way people buy goods and services	Candidates give a brief definition of e-commerce. Candidates will explain how e-commerce has changed the way people buy goods and services covering the key points of choice, convenience and cost. They give an example to illustrate at least one of these key points. Candidates may not use correct terminology.	Candidates give a definition of e-commerce using examples of at least two different types of e-commerce website. Candidates will explain how e-commerce has changed the way people buy goods and services covering the key points of choice, convenience, cost, location and flexibility. They give an example to illustrate each of three of these key points. Candidates use the correct terminology most of the time.	Candidates give a detailed definition of e-commerce using examples of a range of different types of e-commerce website. Candidates will give a detailed explanation of how e-commerce has changed the way people buy goods and services covering the key points of choice, convenience, cost, location and flexibility. They give an example to illustrate each of the five key points. Candidates use the correct terminology.

Assessment Objective	Pass	Merit	Distinction
AO4 Investigate an e-commerce website	<p>Candidates identify one e-commerce website.</p> <p>Candidates identify the purpose and audience of the website. This description may not be fully accurate.</p> <p>Candidates use annotated screenshots to describe some of the e-commerce features of the website.</p> <p>Candidates may not use correct terminology.</p>	<p>Candidates identify one e-commerce website.</p> <p>Candidates identify the purpose and audience of the website.</p> <p>Candidates use annotated screenshots to give an accurate description of a range of the e-commerce features of the website.</p> <p>Candidates use the correct terminology most of the time.</p>	<p>Candidates identify one e-commerce website.</p> <p>Candidates identify the purpose and audience of the website. They describe the extent to which the site meets its aim, giving examples.</p> <p>Candidates use annotated screenshots to give a detailed description of a range of the e-commerce features of the website.</p> <p>Candidates use the correct terminology.</p>
AO5 Understand legal and moral issues in the digital age	<p>Candidates describe some of the main requirements of legislation relating to data protection, copyright and computer misuse.</p> <p>They will briefly describe at least one moral issue related to the use of digital technology, giving a specific example to illustrate their description.</p> <p>Their descriptions will be largely accurate.</p>	<p>Candidates describe the main requirements of legislation relating to data protection, copyright and computer misuse. For each type of legislation their descriptions will include at least one example of an issue affected by it.</p> <p>They will describe at least two different moral issues related to the use of digital technology, giving a specific example for each to illustrate their descriptions.</p> <p>Their descriptions will be mostly accurate.</p>	<p>Candidates explain the main requirements of legislation relating to data protection, copyright and computer misuse, giving reasons for the requirements. Their explanations will be illustrated by a range of examples.</p> <p>They will describe at least two different moral issues related to the use of digital technology, explaining why they have occurred and discussing opposing opinions.</p> <p>They will use a range of examples to illustrate the issues.</p> <p>Their descriptions will be accurate.</p>