

Unit 8: Technological innovation and e-commerce (LEVEL 2)

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 one e-commerce website, and
- understand legal and moral issues in the digital age.

It is anticipated that a candidate will require 60 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 one innovation in ICT <p>Describe eg:</p> <ul style="list-style-type: none"> • purpose • extent to which it achieves its purpose • how it works • benefits and limitations
3 Investigate how e-commerce has affected the way people buy goods and services	<p>Define e-commerce</p> <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

Assessment objectives	Knowledge, understanding and skills
4 Investigate one e-commerce website	Investigate one e-commerce website eg: <ul style="list-style-type: none"> • booking system • auction site • commercial website selling products • digital download site Identify audience and purpose The extent to which the site meets its purpose Describe and illustrate the services provided eg buying/selling products
5 Understand legal and moral issues in the digital age	Legislation eg: <ul style="list-style-type: none"> • Data Protection Act • Copyright • Misuse of Computers Act Moral issues eg: <ul style="list-style-type: none"> • civil liberties • access to information • other

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).

Candidates should be encouraged to use the correct technical terminology in all the brief reports/descriptions produced for this unit. It is expected that higher grade candidates will use the correct terminology in their reports and will also produce more considered reports rather than eg one example of a benefit and/or limitation as would be expected for pass candidates.

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 2006 suitable examples might include:

- mobile phone technologies
- TV on demand
- GPS systems
- Bluetooth.

For Assessment Objective 3, candidates must give a definition of e-commerce and for higher grades examples 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.

For Assessment Objective 5, candidates must demonstrate their understanding of computer legislation and moral issues in the digital age. At least one example must be provided to illustrate this, more examples would allow candidates to access the higher grades. The format of evidence produced may be a report, presentation (this may require a witness statement) etc.

Signposting to Key Skills

- ✓ The unit contains opportunities for developing the Key Skill, and possibly for generating portfolio evidence, if teaching and learning is focused on that aim.

Key Skill reference		Key Skill reference		Key Skill reference	
C2.1a	✓	ICT2.1	✓	N2.1	✓
C2.1b	✓	ICT2.2	✓	N2.2	✓
C2.2	✓	ICT2.3	✓	N2.3	✓
C2.3	✓				

Mapping to National Occupational Standards

National Occupational Standards	Reference ID	Title
IT Users (e-skills UK)	EI2	Evaluate the impact of IT Level 2
IT Users (e-skills UK)	NET2	Internet and intranets Level 2
IT Users (e-skills UK)	SECU2	IT security for users Level 2
Contact Centres (e-skills UK)	CCIWC	Interpersonal and written communication
IT Users (e-skills UK)	PS2	Presentation software Level 2
IT Users (e-skills UK)	WP2	Word processing software Level 2

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 correct at the time of production.

Books

Banks, Harber-Stuart & Parry Folens	<i>Applied ICT</i>
Walmsley, Sargent & Hinder	<i>ICT for GCSE</i> Hodder & Stoughton
Doyle & Penrose	<i>Information Systems for you (series)</i> Nelson Thorne
Lawson (editor)	<i>ICT</i> Longman
CGP	<i>KS3 ICT (Study Guide)</i> CGP
CGP	<i>KS3 ICT (Workbook)</i> CGP
CGP	<i>GCSE ICT (Revision Guide)</i> CGP
Heathcote, P et al.	<i>Applied ICT for GCSE (Double Award)</i> Payne-Gallway ISBN: 1903112753
Wischhusen, Snell, Johnson & Scales.	<i>GCSE Applied ICT</i> Heinemann. ISBN: 0435446371
Stephen Doyle.	<i>Applied ICT GCSE</i> Nelson Thorne. ISBN: 0-7487-5747-3
Banks, Harber-Stuart & Parry.	<i>GCSE Applied ICT - Double Award - Folens.</i> ISBN: 1843033704
Jenny Lawson.	<i>OCR National Certificate in IT Level 2</i> Heinemann. ISBN: 043547149X

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/>
A user friendly BBC resource for tutors and candidates alike.

BBC bitesize revision website, useful for revision of concepts introduced during this unit.
<http://bbc.co.uk/schools/gcsebitesize/ict/>

BBC News website <http://news.bbc.co.uk/1/hi/technology/default.stm>
Technology update on the BBC website.

<http://www.rdn.ac.uk/casestudies/eevl/ict/case3.html>
Case studies, work sheets and activities on the area of Impact of ICT on Society.

Channel 4 website relating to the Christmas lectures by Kevin Warwick, concerned with robots and their impact <http://www.channel4.com/science/microsites/R/robots/>

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

<http://kmsitltd.co.uk/ICTLaw/html>
ICT and The Law, details the main legislation concerned with computers and their use.

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

RDN Case Studies: ICT <http://www.rdn.ac.uk/casestudies/eevl/ict/case3.html>
A practical activity for the study of the impact of ICT on society.

School resources <http://www.school-resources.co.uk/>
Education information, resources and ICT for teachers and candidates.

<http://www.school-resources.co.uk>
Aimed at KS3/4 pupils, interactive quizzes, covers most areas concerned with this unit.

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.

What is?com <http://whatis.techtarget.com/>
On-line IT encyclopaedia.

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.ryanair.com>
Provides low cost air travel.

<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://pages.ebay.co.uk/help/ebayexplained/newtoebay/index.html>
An online marketplace.

<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.kazaa.com>
A file sharing service.

<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/general/internet/fs_s01.shtml
Provides help and advice for consumers in Great Britain.

Grading

Assessment Objective	Pass	Merit	Distinction
<p>AO1 Identify the effects of ICT on the individual</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>
<p>AO2 Describe an innovation in ICT</p>	<p>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.</p>	<p>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.</p>	<p>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.</p>
<p>AO3 Investigate how e-commerce has affected the way people buy goods and services</p>	<p>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 one example. Candidates may not use correct terminology.</p>	<p>Candidates give a definition of e-commerce using examples. 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 relevant examples. Candidates use the correct terminology most of the time.</p>	<p>Candidates give a detailed definition of e-commerce using examples. 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 a range of relevant examples. Candidates use the correct terminology.</p>

Assessment Objective	Pass	Merit	Distinction
<p>AO4 Investigate one e-commerce website</p>	<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>
<p>AO5 Understand legal and moral issues in the digital age</p>	<p>Candidates demonstrate a basic understanding of computer legislation and moral issues involved. They use at least one example to illustrate this.</p> <p>Their descriptions may not be fully accurate.</p>	<p>Candidates demonstrate their understanding of computer legislation and moral issues involved. They use at least two examples to illustrate this.</p> <p>Their descriptions will be mostly accurate.</p>	<p>Candidates demonstrate their thorough understanding of computer legislation and moral issues involved. They use a range of examples to illustrate this.</p> <p>Their descriptions will be accurate.</p>