Unit 8: e-Commerce

Unit code: A/601/7313

QCF Level 3: BTEC National

Credit value: 10

Guided learning hours: 60

● Aim and purpose

The aim of this unit is to ensure that learners know the technologies involved in e-commerce, understand the impact of e-commerce on organisations and on society, and that they are able to plan e-commerce strategies.

● Unit introduction

One of the most important developments in business in recent times has been the increasing use of e-commerce. It has revolutionised many marketplaces and opened up opportunities never before imagined. Businesses that are not exploring the use of e-commerce are in danger of finding themselves being overtaken by those who are utilising this technology. E-commerce uses the internet to build and enhance relationships with customers, partners and other businesses. This can involve processing orders electronically, handling customer service and cooperating with business partners.

E-commerce can be conducted using the internet, intranets, extranets, or a combination of these.

The unit starts by looking at the technologies needed to operate e-commerce, ie the hardware, software and networking required for an e-commerce system to be implemented. Different categories of e-commerce such as e-tailers (those operating only online) and financial services, and the benefits and drawbacks for organisations of using e-commerce are considered. Attention is given to issues such as legislation and promotion. How do you get your company to the top of search lists? Security is a big issue as it affects customer trust. The unit considers the payment systems available and how they compare.

The social implications are considered. For example, the introduction of online shopping has changed our shopping habits and has benefited the housebound and those living a long way from shopping centres.

Finally, after assessing commercial sites, learners will bring all their learning together to develop an e-commerce strategy for a new business.

● Learning outcomes

On completion of this unit a learner should:

1   Know the technologies required for an e-commerce system

2   Understand the impact of e-commerce on organisations

3   Understand the effects of e-commerce on society

4   Be able to plan e-commerce strategies.

Unit content

1 Know the technologies required for an e-commerce system

Technologies: hardware and software eg web servers, browsers, server software, web authoring tools, database system; networking eg TCP/IP addresses, ports and protocols; considerations eg domain names, multiple registration of domains (.com as well as.co.uk), programming requirements, download speeds, browser and platform compatibility

2 Understand the impact of e-commerce on organisations

Benefits: eg global marketplace, 24/7 trading, relatively low start-up and running costs, competitive edge, search facilities, gathering customer information, alternative income sources, pricing opportunities eg differences, fluid pricing

Drawbacks: eg consumer trust, lack of human contact, delivery issues, international legislation, product description problems, security issues

Promotion: effective use of search engines eg use meta tags, 'spiders', paying for prominence in search result listing; newsgroups and forums; banners and pop-ups; spam; site name; direct marketing; ensuring an effective user interface; establishing customer loyalty in a virtual environment

Security: issues eg prevention of hacking, viruses, identity theft, firewall impact on site performance, SSL, HTTPS, RSA certificates, strong passwords, alternative authentication methods

Legislation: associated legislation eg data protection legislation, computer misuse legislation, consumer credit legislation, Trading Standards, freedom of information legislation, copyright legislation, e-commerce regulations

3 Understand the effects of e-commerce on society

e-commerce entities: e-tailers eg Amazon.com, ebuyer.co.uk; manufacturers eg dell.com; existing retailers eg tesco.com, argos.co.uk; consumer led eg eBay; service providers eg easyJET.co.uk, lastminute.com; financial eg esure.com, banks

Social implications: changing customer perspective eg providing added value, providing service, ease and security; economic and social impact due to speed of changes; bricks and clicks (integrating high street and online presence); benefits for customers eg remote shopping, access to goods and services for the housebound, anytime access, internet discounts; drawbacks eg payment security, assessing quality/fit without actual product, reliance on delivery services; impact on employment; social divide

Payment systems: services available eg electronic cheque, PayPal, NoChex, credit or debit cards

4 Be able to plan e-commerce strategies

E-commerce strategy: structure of site; hosting; promotion; issues eg cost, security

Structure: customer interface eg ease of use, display of products, personal details entry, credit card entry, other types of payment, delivery details; image; style

Hosting: choice of ISP; in house or sub-contracted

Promotion: marketing eg advertising the site, placing in search engines; message board; chat rooms

Costs: setup; maintenance; security; leasing; advertising; delivery strategy; staff training

Security: fraud protection; hackers; viruses

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 describe the technologies required for e-commerce		
P2 explain the impact of introducing an e-commerce system to an organisation	**M1** recommend methods to promote an e-commerce system	**D1** evaluate the use of e-commerce in a 'brick and click' organisation [IE6]
P3 explain the potential risks to an organisation of committing to an e-commerce system	**M2** discuss how security issues in e-commerce can be overcome	
P4 review the regulations governing e-commerce		
P5 examine the social implications of e-commerce on society [IE3]		**D2** compare different payment systems used by e-commerce systems.
P6 plan an e-commerce strategy. [CT3]	**M3** design an interface for an e-commerce business. [CT1]	

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

The outline learning plan (OLP) is designed only as a guide and tutors will use knowledge of their learners to adjust the allocation of time accordingly.

The suggested delivery pattern is not the only order which can be used and it is perfectly acceptable for tutors to follow their own preference.

It would be of benefit for some of the elements of delivery to use a visiting speaker from a relevant organisation, or visit an appropriate organisation, but where this is not possible real-world case studies can be used. There are a number of video clips available through internet links of business e-commerce experiences.

To put theory into context it is suggested that as much theory as possible is embedded within practical activities. Learners first need to understand what e-commerce is and why businesses may choose to be 'click' or 'brick' or a combination of the two. Learners will be familiar with many e-commerce 'entities' and an exercise to research, categorise and discuss the differences may be a useful start point. Issues such as start-up costs, security etc may be researched (there is a wealth of material on the web) and visiting speakers would benefit learners with actual experiences. As part of this strand, learners can research the legislation and regulations governing e-commerce.

Promotion of websites is something with which learners are familiar, even though they have probably not thought of it in those terms. Practical exercises can be used to demonstrate the various elements and case studies used to relate them to business.

Much of the technology required for e-commerce may already have been covered in other units and may require revision only. Otherwise much can be delivered with directed study, using the internet or other information sources. If learners produce lists of descriptions of the hardware and software utilised, the tutor can fill in any gaps in knowledge in ensuing discussions.

Security issues can be delivered using a mixture of directed study, whole-class teaching and group discussions. Case studies can be used to illustrate the detail. It may be that some of this has already been covered in other units.

Everyone has some ideas about the social implications of e-commerce and it is a good idea to start with those preconceptions. One idea is to give each small group of learners a heading taken from the prescriptive elements of LO3 and allow the groups to discuss the heading, making notes of what the group thinks overall. Each group presents their ideas to the whole class for comments and criticism, and the tutor can arbitrate and, where necessary, steer ideas. A composite profile of social implications can be drawn up.

Payment systems could prove to be a difficult subject for learners to grasp and is perhaps best delivered through tutor-led discussions using case study examples.

An exercise to compare and contrast different e-commerce interfaces and decide what makes them good or not so good will assist learners in tackling P6. Although this is slightly subjective, learners could discuss their findings and come up with a checklist of what to include or avoid in developing customer interfaces.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction to the unit
E-commerce technologies: - whole-class exercise – tutor presentation on technologies, followed by individual exercise   - a mixture of practical exploration of the technologies, learner exercises, discussion and detailed investigation.
The impact of e-commerce: - whole-class exercise – tutor presentation on benefits of e-commerce, followed by tutor-led research   - whole-class exercise – visiting speaker if available or real-world case study   - whole-class exercise – tutor presentation on drawbacks of e-commerce, followed by group discussion of drawbacks and potential risks posed   - whole-class exercise – visiting speaker if available or real-world case study   - individual or small group exercise – prepare questionnaire to interview public (consumer trust)   - individual exercise – use of the questionnaire, analysis of results   - whole-class exercise – tutor presentation on promotional activities, followed by exercises in using search engines, newsgroups and forums. Tutor supplies checklist of promotional categories, learners search for sites which fall into each category   - individual or small-group exercise – case studies of examples of promotional aspects   - whole-class exercise – tutor presentation on legislation, followed by directed study and case studies   - group exercise – discussion groups consider the effect of the legislation   - whole-class exercise – tutor presentation on hardware and software   - individual exercise – directed study, learners produce a checklist of relevant hardware and software   - whole-class exercise – tutor presentation on networking, followed by directed study and practical exercises where applicable   - whole-class exercise – tutor presentation on security, followed by directed study with case studies and group discussion of security issues.
Assignment 1 – Why e-Commerce?
Effects on society: - group exercise – groups discuss what they feel are the social implications   - whole-class exercise – feedback from groups to whole class for tutor-led discussion   - individual exercise – learners create a composite checklist of social implications, tutors provide a case study against which the checklist can be applied.   Payment systems: - whole-class exercise – tutor-led discussions of payment systems   - individual exercise – learners criticise various case study examples.

Topic and suggested assignments/activities and/assessment
Assignment 2 – Consumer Guide
Customer interface:
• individual exercise – directed research of e-commerce sites
• group exercise – groups discuss research findings and report back to whole class
• whole-class exercise – tutor presentation on designing an interface
• individual exercise – learners practise interface design
• whole-class exercise – tutor presentation on hosting, costs and security.
Assignment 3 – An e-Commerce Strategy

Assessment

The suggested assessment of this unit is through three assignments as summarised in the *Programme of suggested assignments* (PSA) table.

The numbering of the assignments does not mean that they have to be undertaken in that order, rather they are based on the order of delivering the unit.

Suggested Assignment 1 – Why e-Commerce?

A suggested scenario is a presentation to a new business considering whether or not to trade using e-commerce. Although there is a large amount to cover in this assignment a presentation could be the vehicle of assessment. Learners need not actually deliver the presentation unless this is required for other skills. Evidence will come from their presentation slides and accompanying notes. Alternatively, a 'Guide to e-commerce' leaflet could be developed.

The criteria P1-P3 are straightforward and the unit content indicates the required coverage. M1 could be presented as a supplementary leaflet highlighting the pros and cons of the various methods of promoting an e-commerce business. M2 requires a discussion of the security aspects, which should include benefits and drawbacks of potential solutions. For D1, learners may have to research extra material from that in the basic unit content. They will need to look at what the 'click' part of the operation will give the organisation over and above their high street presence, and what disadvantages it might bring.

Suggested Assignment 2 – Consumer Guide

The second assignment looks at e-commerce from the customer's point of view. A suggestion is that P4 and P5 are presented as a consumer guide, eg a leaflet to be available in public places, but other formats may be used. The legislation could be an appendix.

For D2, learners compare different payment systems used in e-commerce. Some useful examples are given in the unit content. 'Different' means different type, thus debit card and credit card are regarded as a single type, ie payment by card. Comparisons must include good and less good points. A detailed table could be used giving blocks of comparative material.

Suggested Assignment 3 – An e-Commerce Strategy

Before developing their own strategies learners should review current commercial interfaces. Learners will then be producing their own e-commerce strategy. Learners may be given a free hand to decide on the nature of their 'business' or the tutor may wish to provide a list of alternatives. This should include ideas for promoting the site, what costs will be involved (actual figures are not required), the security measures to be put in place and how the site will be hosted. P6 can be evidenced by a report in a suitable format. For M3, learners will also include a customer interface design. This may be produced using any appropriate medium.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Pearson assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1-P3, M1, M2, D1	Why e-Commerce?	You work for a firm of e-commerce consultants. You have been asked to give a presentation to a start-up business considering e-commerce.	Presentation Notes Supporting handouts
P4, P5, D2	Consumer Guide	You have been asked to produce a guide covering the regulations related to e-commerce and the implications of e-commerce on society.	Leaflet/brochure
P6, M3	An e-Commerce Strategy	You have been asked to produce an e-commerce strategy for a specific business.	Report

Links to other BTEC units

This unit forms part of the BTEC in IT sector suite. This unit has particular links with the following unit titles in the IT suite:

Level 1	Level 2	Level 3
		Unit 4 : Impact of the Use of IT on Business Systemsy
		Unit 33: Exploring Business Activity

Essential resources

Access to an internet connection is essential for this unit. It will enable learners to view existing e-businesses in order to analyse them. Learners are not required to purchase anything through an e-business site for this unit, but it may be useful to simulate a purchase, perhaps in a demonstration by the tutor.

All learners should have access to a computer with word-processing software and a web browser.

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are …
Independent enquirers	exploring issues, events or problems e-commerce causes for society from different perspectives
Creative thinkers	connecting their own and others' ideas and experiences in inventive ways to produce an e-commerce strategy.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are …
Independent enquirers	supporting conclusions, using reasoned arguments and evidence on the use of e-commerce in a 'brick and click' organisation
Creative thinkers	generating ideas and exploring possibilities while designing an interface for an e-commerce business.

Functional Skills – Level 2

Skill	When learners are …
ICT – Finding and selecting information	
Use appropriate search techniques to locate and select relevant information	researching e-commerce sites
Select information from a variety of sources to meet requirements of a complex task	designing an interface for an e-commerce business
ICT – Developing, presenting and communicating information	
Combine and present information in ways that are fit for purpose and audience	producing a consumer guide to e-commerce.