

Unit 33: The Impact of Communications Technology on Business

Unit code:	L/502/5485
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

The aim of this unit is to provide an overview of the use of the internet by business organisations and to develop learners' skills so that they become proficient business users of the internet.

● Unit introduction

At the time of writing, the UK is Europe's second largest e-commerce economy, with two-thirds of consumers having shopped online. The power of the internet continues to grow with 29 million UK adults having used it in the three month period up to February 2006. It is predicted, that by 2012 £1 in every £5 of all new commerce in the UK will be online. All usage measures of internet and related technology continue to rise with seemingly relentless growth in access to the internet and uses such as music downloads, social networking sites and instant messaging.

Firstly learners will learn how the internet is organised and how servers and internet service providers link together and conform to protocols. Next, learners will consider the trends in the use of the internet and the worldwide web (www), and current key developments.

Learners will then develop a range of practical skills in using the internet for different types of business uses including setting up of an internet connected computer, and the internet and worldwide web for business research, procurement, promotion and communication, using a range of methods.

Having developed a fuller understanding of the range of uses of the internet and worldwide web, learners will then explore the reasons behind the trends by examining the benefits of internet use from the points of view of organisations and customers. They will also examine the implications of competitive pressures on organisations as e-business has grown.

Finally, learners will consider the actions that are being taken at national, organisational and individual level to meet the ongoing challenges created by the rapid development of e-business. At national level learners will explore government actions such as the establishment of an appropriate legislative framework, support for business development of e-business and the provision of learning opportunities to enable individuals to gain the necessary skills. When considering how organisations plan for change, the rest of the unit content is drawn together to examine key considerations which all organisations are facing. Learners will then consider how individuals can prepare for a world where e-business is growing rapidly and changing constantly.

● Learning outcomes

On completion of this unit a learner should:

- 1 Know how the internet operates and the facilities available
- 2 Be able to use the internet and related technology for a range of business activities
- 3 Understand how organisations adapt to trends in the use of e-business
- 4 Understand the key features of planning for the increased use of e-business at different levels.

Unit content

1 Know how the internet operates and the facilities available

How the internet works: internet as a network; servers; types of connections to the internet; internet service providers (ISPs); worldwide web (www); protocols; domain names; World Wide Web Consortium (W3C); internet Society (ISOC)

Networking of computers: networks; wireless networks; current related technology such as (at the time of writing) WiFi, Bluetooth®, 3G phones, Personal Digital Assistants (PDAs), smartphones

Use of the internet and worldwide web by business organisations: procurement; research; development of online presence for sales, promotion, customer service, public relations, providing information, influencing others, communications, email, intranets, extranets

Use of related mobile technology by business organisations: WiFi; Bluetooth®; 3G phones; PDAs; smartphones; Voice Over internet Protocol (VoIP)

Trends in internet development: increasing speed; falling costs; increased use of netbooks, rise of social networking, growing concerns over data security and increasing worldwide internet usage

2 Be able to use the internet and related technology for a range of business activities

Setting up an internet-linked computer: equipment requirements; costs; risks eg viruses, Trojans, worms, hackers, spam, spyware, adware, scams, loss of data; measures to reduce risks eg anti-virus software, spam filters, firewalls, anti-spy software, methods of backing-up data; information technology and data management policies

Use of internet for business research: types of data eg demographics, competitor analysis, environmental analysis, legislation, specialist sites for technical information, weather forecasts, transport information; efficient use of search engines; different types of search eg on Google, with “, with -, with OR; bookmarking; filtering sites; validity of sources of data

Use of internet for procurement: selection of suitable supplier; intermediary sites; security symbol; secure payment methods; services provided online eg online banking, music downloads, software downloads; methods of reducing risks; security symbol; legal protection and limitations as per Consumer Protection (Distance Selling) Regulations 2000 and Electronic Commerce (EC Directive) Regulations 2002

Use of internet for promotion: eg websites, banner advertising, link registrations, direct emails

Use of internet for business communication: email to individuals, to groups, hidden CCs, attachments, business tone, style for emails, company policies on use and abuse; use of digital cameras; use of video images; voice over internet; videoconferencing

3 Understand how organisations adapt to trends in the use of e-business

Marketing benefits: 24-hour global presence; flexibility of location; personalisation of promotion; feedback from customers; data collection and use in re-formulating the marketing mix; opportunities for competitor analysis; opportunities to communicate with customers

Cost benefits: reduced requirement for premises; flexibility of location; reduced staffing costs; cash flow advantages; advantages of disintermediation of supply chain

Benefits to customers: 24-hour availability; flexibility of location; easier cost comparisons; lower prices; time savings; personalised offers eg 'favourites' on tesco.com, personalised recommendations from amazon.com

Operational implications of trends on organisations: customer and user expectations of web access; increased competition; new providers for old services eg music downloads, Voice Over internet Protocol (VoIP), online shopping

Strategic implications of trends on organisations: competitive pressures; closures; mergers; take-overs; relocations; refocusing of businesses

Organisational adaptations to trends: strategic level decisions; location of manufacture; location of service provision; re-engineering of business processes; redefining of supply chain; investment in information technology; acquisition or development of appropriate skills

Implications of trends on customers: loss of non-internet outlets and services; need for technical literacy to access full range of services

4 Understand the key features of planning for the increased use of e-business at different levels

Government support: legislative framework as per E-Commerce Regulations 2002, Consumer Protection (Distance Selling) Regulations, Data Protection Act; support for business; education and training; support for developing infrastructure for internet.

Individual level: growth of home computing; employability and ICT skill requirements; increase in flexible working models eg secondments, contracting, de-skilling, re-skilling

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 how the internet operates		
P2 describe examples of how the internet is used by selected, contrasting businesses [IE]		
P3 use the internet for different types of business activities	M1 demonstrate how to solve problems in internet use for four different types of business activity	
P4 describe the actions taken to reduce risks to security whilst using the internet for different types of business activities		
P5 explain the competitive pressures on selected, contrasting business organisations to develop their use of e-business	M2 explain how two selected, contrasting business organisations have responded to competitive pressures to develop their use of e-business.	D1 evaluate how successful a selected business organisation has been in preparing for the growing use of e-business. [IE]
P6 explain how the government supports the development of e-business		
P7 produce a personal development plan to help an individual prepare for increased use of e-business. [RL]		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills which are embedded in the assessment of this unit. By achieving the criteria, learners will have demonstrated 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

Learning outcome 1 equips learners with sufficient technical understanding of the internet to enable them to become knowledgeable business users. A wide range of delivery methods could be used including diagrams, explanations, demonstration and/or use of equipment, web research into statistics and business organisations use of the internet. The technology and trends are current at the time of writing and should be updated as required. A visit to an organisation which uses a range of technology could provide a valuable opportunity to see its use in a business context. Good use could be made of work placements as learners could compare the use of web technology in a range of organisations.

The purpose of learning outcome 2 is to develop the skills and knowledge of the learners so that they become proficient in a range of business uses of the internet. It is likely that many learners already have extensive leisure use skills and these skills should be refocused towards business purposes. It is envisaged that delivery of this learning outcome would include practical workshop-style sessions with learners using a range of equipment.

In learning outcome 3, learners explore how the technological developments and trends in the use of e-business are affecting business organisations. It builds on knowledge of marketing and finance from the core units. A series of carefully selected case studies would illustrate the learning points. Additionally use could be made of television programmes featuring new developments.

In learning outcome 4, learners consider the adjustments that have been made at national and individual level to the internet. This includes an exploration of legislation that has been brought in to cater for e-business needs. Guidance intended for small businesses may be useful for this part of the unit. Group discussion of the impact of the legislation, using carefully chosen case studies, would enable learners to apply the law to specific situations. The final part of this learning outcome and of the unit is consideration of how individuals can ensure that they plan for the growth and rapid development of e-business. It could be interesting for learners to meet with or view career profiles of people who have had to adjust to changes in their careers, due to the development of internet technology. Learners could prepare a personal SWOT analysis as a basis for an action plan showing how they can ensure that they maintain the required level of continuous development to succeed in a world where e-business is growing rapidly. Alternatively, they may wish to draw up an action plan for another individual who has had little online experience.

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 unit and programme of learning
Small group working: each group researches different aspect of the internet and presents to rest of class; tutor explains overview and fills in gaps
Learners examine network of own centre
Whole group session – WiFi, Bluetooth, 3G/smartphones, PDAs, synchronising, with practical aspects if possible
Visit from information technology manager of own centre – discussion of use of web by the organisation

Topic and suggested assignments/activities and/assessment
Whole group session featuring case studies covering innovative uses of web and related technology by a range of businesses
Small group working: research into trends in internet developments. Whole group plenary to share information.
Whole group teaching – risks to security and methods of reducing risks
Practical workshops on setting up internet linked computer and using the internet for different purposes. Collection of evidence for assignment
Assignment 1 – Business Advisory Service
Whole group teaching on marketing and cost benefits of e-business
Individual research on finding examples to support previous session
Pair work on identifying benefits to customers and sharing findings
Whole group discussion: implications of developments for companies and customers
Small group analysis of case studies describing adaptations in the light of the increase in e-business leading to identification of how organisations make the changes
Whole class teaching on relevant legislation leading to analysis of case studies
Visiting speaker from Business Link on government support for e-business
Individual work – devising plan for an individual preparing for an increase in e-business
Assignment 2 – My e-skills
Supervised assignment time
Non-supervised study time and completion of assignments

Assessment

For P1, learners should describe the internet and the worldwide web are and how they operate.

For P2, it is expected that most of the items of listed as 'uses of the internet' in the unit content, would be included as examples but it would not be necessary to give in-depth descriptions of items such as websites or procurement systems. Two or three organisations should provide sufficient examples to meet the requirements.

For P3, learners should carry out at least one process from each section of the unit content. A learner could therefore demonstrate methods of backing-up data, carrying out business research, carrying out a shopping transaction, developing website material and sending emails using business language and protocols, and including the full range of functions. Evidence of shopping transactions could be brought in from homes if applicable. Many learners will already have the technical expertise to carry out most of the functions listed. In that case, the emphasis may need to be on showing that these skills have been adapted to fit into a business situation. The evidence collected for practical work should include observation records from the tutor supported by other evidence such as learner's notes or printouts.

For P4, learners need to describe how they took precautions to reduce the risks to security inherent in working on-line, for each process. This could include using or setting up passwords, checking before downloading emails, backing up data and taking precautions over security of data.

At merit level learners should demonstrate the ability to deal unaided, with at least four different common problems faced by users in business, such as error messages, non-delivery of emails, blocking of wanted emails by the firewall, and too many hits on a search engine. Evidence of this could be printed off with a description of the actions taken. Witness testimonies or observation records could also be used.

For P5, learners need to consider the impact of the use of the internet and the worldwide web in business and the resulting competitive forces on two different organisations. The organisations can be contrasting in terms of levels of technology used, size, sector or business purpose.

Care should be taken in the selection of these organisations so that learners can obtain information to attempt M2, for which they need to have built on the descriptions of competitive forces and linked these to the actions taken by organisations in response to competitive pressures.

For D1, learners need to evaluate critically the plans made by a specific organisation. The evaluation should draw on factual data, trend analysis and/or benchmarking against other organisations and lead to a conclusion as to the level of success of the organisation.

For P6, learners should explain examples of government actions to support e-business developments including the establishment of an appropriate legal framework and support for both the infrastructure and skill development.

To achieve P7 learners should consider how an individual should plan for the increase in e-business. This could be by producing a plan for themselves or it could be based on a case study, or person known to the learner.

Programme of suggested assignments

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

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P5, P6, P7, M3, D1	Business Advisory Service	Learners are working for a local business advisory organisation that aims to help small businesses.	Learners prepare presentation materials and web-blogs on e-business developments.
P3, P4, P8	My e-skills	Learners are working as themselves.	Learners produce a portfolio of evidence of their own business-related skills, a SWOT analysis of their own skills and an action plan for their own updating and development.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

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

Level 3
The Business Environment
Business Resources
Introduction to Marketing
Business Communication
internet Marketing in Business
Website Design Strategies
Supply Chain and Stock Management.

Essential resources

For this unit learners should have access to a suitable business teaching environment with access to the internet to carry out research. Tutors may consider building a bank of resource materials to ensure there is a sufficient supply of relevant information across a range of business types and sectors.

Learners can generate evidence from a work placement or from work experience. Other learners may have access to information related to family owned and run businesses.

Employer engagement and vocational contexts

Centres should develop links with local businesses. Many businesses and chambers of commerce want to promote local business so are often willing to provide work placements, visits, information about businesses and the local business context and visiting speakers.

The website www.businessbritainuk.co.uk/ provides information about business in Britain and has extensive links to other business and business news sites.

www.fsb.org.uk The Federation of Small Businesses provides information support and guidance about small businesses in the UK.

Many businesses provide information about themselves. An example, for Unilever, can be found at: www.unilever.co.uk

Indicative reading for learners

Textbooks

Buckley P and Clark D – *The Rough Guide to the Internet* (Rough Guides, 2006) ISBN 1843535505

Surridge M, Chapman T, Merrills S, Cornelius D and Frater G – *Applied Business: AS for Edexcel: Student's Book* (Collins Educational, 2005) ISBN 0007197381

Websites

www.businesslink.gov.uk

Business Link site providing advice on e-commerce

www.culture.gov.uk/images/publications/digital_britain_interimreportjan09.pdf

Link to download a Government produced report on Digital Britain

www.davechaffey.com

Website of the e-business author which has useful links and resources

www.deloitte.co.uk

Link to download a report from Deloitte's on Technology Predictions

www.electronic-payments.co.uk

Site which provides advice for businesses on secure online payment systems

www.isoc.org

The Internet Society

www.offt.gov.uk

Office of Fair Trading for a download on legal aspects of e-commerce

www.statistics.gov.uk

Government statistics site from which the e-commerce and business change trends can be downloaded

www.w3.org

The World Wide Web Consortium (W3C)

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	evaluating how successful a selected business organisation has been in preparing for the growing use of e-business describing how the internet is used by different businesses
Reflective learners	producing a personal development plan to help an individual to be prepared for increased use of e-business.

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	exploring issues, events or problems from different perspectives arising from website research
Creative thinkers	trying out alternative methodologies and approaches to work and following the ideas through
Reflective learners	assessing themselves and others in group work discussions on planning to identify opportunities and achievements
Team workers	collaborating with others when working on ICT case studies in groups provide constructive support and feedback to others
Self-managers	organising time and resources, prioritising actions when developing their skills using the internet for business
Effective participators	taking part in group activities, working with others.

● Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Manage information storage to enable efficient retrieval	inputting and manipulating data
Follow and understand the need for safety and security practices	researching the legal issues associated with accessing and storing business information
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	researching how information is used for a range of purposes
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	researching the type and source of information that an organisation needs
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> • text and tables • images • numbers • records 	manipulating data entered into data management software
Bring together information to suit content and purpose	producing information in a suitable format to support business decisions
Present information in ways that are fit for purpose and audience	producing information in a suitable format to support business decisions
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	researching data management systems in an organisation
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	
Identify the situation or problem and the mathematical methods needed to tackle it	manipulating data to produce information for a specific business purpose
Select and apply a range of skills to find solutions	manipulating the data entered into data management software
Use appropriate checking procedures and evaluate their effectiveness at each stage	manipulating the data entered into data management software
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	producing information in a suitable format to support business decisions

Skill	When learners are ...
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	describing the types and sources of information an organisation needs
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching types and sources of information producing reports
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	producing information in a suitable format to support business decisions.