

Unit 21: Supporting Organisations with IT

Unit code: A/601/3391
QCF Level 2: BTEC Specialist
Credit value: 10
Guided learning hours: 60

Aim and purpose

The aim of this unit is to enable learners to gain a knowledge and understanding how IT is used by organisations and the impact of IT has on organisations and individuals.

Unit introduction

The focus of this unit is on understanding the ways, reasons for and impacts of the use of IT within organisations.

IT is used extensively by organisations and continues to spread into more and more diverse areas using increasingly powerful and innovative technology. This unit starts by giving learners the background to the use of IT in business.

The unit encourages learners to consider how IT supports business functions and to understand why IT is used for those purposes. The introduction of IT into organisations has not only been used to automate existing systems and processes but in many cases has allowed and prompted fundamental changes to be made in the way organisations function. It is assumed that learners will have some knowledge of the capabilities of general applications software before undertaking this unit, although they do not have to have acquired the skills to use the packages.

Learners will discover the positive and negative aspects of using IT for both employers and employees. The impact of the use of IT on individuals within organisations has progressively increased. In particular the life span of particular skills has decreased and this generates a need for constant re-skilling and adaptation. IT technologies are being developed all the time and the latest trends in IT development will be considered.

IT has affected not only employers and employees but the whole business environment. In this unit learners will come to understand the issues of ergonomic design and health and safety that relate directly to IT, and ask questions such as are employees sitting comfortably, do they have enough space, do they need specialist equipment to overcome repetitive strain injuries?

Learning outcomes and assessment 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 determine the standard required to achieve the unit.

On completion of this unit a learner should:

Learning outcomes	Assessment criteria
1 Know the ways in which organisations use IT	1.1 identify the ways in which organisations use IT to manage information 1.2 describe how businesses use IT for communication
2 Understand the reasons why organisations use IT	2.1 discuss the factors that drive organisations to use IT
3 Understand the impact of IT on individuals and organisations	3.1 explain the impact of IT on individuals 3.2 explain the impact of IT on organisations
4 Be able to plan a working environment to incorporate IT	4.1 describe how working environments are affected by IT 4.2 produce a suitable room plan to incorporate IT

Unit content

1 Know the ways in which organisations use IT

Business use: promotional eg marketing, advertising, recruitment; technical eg manuals, specifications

Communication: internal eg email, intranet; external eg letter, invoices, websites, direct mail shots

Managing information: storing eg customer details, sales records; competitor details; online services eg banking, shopping; manipulating eg interpreting data eg accounts, trends; decision making eg forecasting, budgets

2 Understand the reasons why organisations use IT

External factors: penetration into new digital markets eg voice recognition, multitouch input, new consumer devices and platforms; changing external requirements eg supplier expectations, changing market needs, changing legislation

Internal factors: meeting business needs eg cost effectiveness, increases in output, increases in data storage, speed, gaining a competitive edge, adapting to changing customer requirements, access to resources; other commercial drivers eg efficiency gains, consolidating data

3 Understand the impact of IT on individuals and organisations

Impact on individuals: re-skilling employees eg support and training needs; deskilling eg automation of previous user tasks, outsourcing of tasks eg network support, storage; home working; reduced job security

Impact on organisations: risks eg security, compatibility, health and safety, impact on staff

Trends: changes eg new applications, wireless technologies, operating systems, innovative software platforms; changing market leaders; future developments

4 Be able to plan a working environment to incorporate IT

Working environment: ergonomics eg workstation layout, furniture design, positioning of equipment; health and safety issues eg repetitive strain injury, eye strain, electrical equipment safety, trailing cables

Room layout: positioning of office furniture eg desks, chairs, filing cabinets, photocopiers; positioning of IT equipment eg workstations, cabling, servers, printers; lighting; air-conditioning

Essential guidance for tutors

Delivery

The outline learning plan (OLP) which follows this section gives an indication of how time can be allocated between the various topics in the unit content. It is designed only as a guide and tutors will use knowledge of their learners to adjust the allocation of time accordingly.

All of the criteria for this unit tend to be theoretical in nature, and at this level it is important to find a variety of more innovative ways of delivering the subject matter. The use of as many methods of delivery as possible may be used to make the subject matter more palatable for the Level 2 learner.

The fact that evidence asks for work relating to a real organisation should encourage visiting speakers or learner visits as part of the delivery. If this is not possible then the tutor could visit and feed back information to learners.

Tutors may use specific examples to show where IT is used to support organisations. There should be special emphasis on the topic headings presentation, manipulation of information, communication and managing information.

The first of these topics is the use of IT for presentation purposes. Case study material or examples of various presentational uses form an important part of this delivery and give an indication of the breadth of uses. Particularly important is the emphasis that it is not just PowerPoint, printed material and web-based or other electronic material should also be mentioned.

Moving on to the manipulation of information, tutors needs to refer learners to what they already know about software such as spreadsheets, databases and word processors, and relate this to their use in organisations. This can be developed into looking at why organisations need to manipulate information and in particular the interpretation of data and decision making.

Delivery of the communication aspects of the subject can begin with simple diagrams showing examples of internal and external communication. This can be extended by supplying examples of departments in an organisation and the type of things they need to communicate, and encourage learners to draw their own simple 'communication diagrams' to represent this information.

For the final section on how organisations use IT to deal with managing information, a little time should be used to define the concept of management in this instance.

Having established knowledge of how organisations use IT, the logical continuation is into why organisations use IT. Once again case study material, or specific examples are extremely valuable in dealing with this subject. If a visiting speaker, or a visit to an organisation, or even a training video, can be arranged the benefits are considerable especially since some of the assessment relates to a named organisation.

The increased complexity of the use of IT has meant that organisations can now carry out things, which even a few years ago were impossible. This has brought its own problems with it. The use of case studies and examples to explain the impact of this is a useful way of imparting basic information. Discussion groups and internet research can be used to support this information.

A good place to start when considering trends is for learners to research specific trends over recent years. Learners should be given specific topics to research, either individually or in groups, and asked to make notes on their findings to feed back to the whole class.

One group must include the rise and fall of various hardware and software market leaders over the years.

The final learning outcome is about ergonomics and health and safety related to the IT working environment. After some tutor-led discussions, learners can research ergonomic designs in office furniture and computer equipment. This should be related to health and safety. For example, there are many mouse designs available.

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
<p>Know the ways in which organisations use IT:</p> <ul style="list-style-type: none"> • use of presentation software • information an organisation may want to manipulate and the reasons why • simple block diagrams to show the type of communication which takes place in an organisation and between • organisations • defining the term 'management of information' • visiting speaker/visit/directed research.
<p>Understand the reasons why organisations use IT:</p> <ul style="list-style-type: none"> • case study material to explore external factors • case study material to explore internal factors • directed research.
Assignment 1 - Using IT
<p>Understand the impact of IT on individuals and organisations:</p> <ul style="list-style-type: none"> • case studies to identify potential skill changes • directed research – trends which have brought us to the current position (learners could investigate various aspects in small groups and feedback to the whole class).
Assignment 2 - Impact of IT
<p>An overview of ergonomics:</p> <ul style="list-style-type: none"> • directed research – the latest ergonomic designs • health and safety in the office • planning layouts – exercises.
Assignment 3 - Ergonomics

Assessment

It is suggested that this unit is assessed using three assignments as summarised in the *Programme of suggested assignments* table which follows this guidance.

The nature of this unit makes deriving a scenario for assessment purposes quite difficult. The programme of suggested assignments table suggests a local newspaper-based scenario where, in common with many local and national newspapers, the news provision covers web pages, pull-out supplements and sometimes giveaway CDs, as well as pure news sheets. This basic scenario is used across all three assignments.

The suggested types of evidence are all related to the scenario but they are not the only methods appropriate to the particular criteria.

The tasks require learners to prepare material to assist with the finished published articles the newspaper are going to produce on the use of IT in organisations.

For 1.1, prepared material will identify ways in which organisations use IT to manage information. Learners needs to give examples from each of the sub categories in the unit content. Learners should select these examples themselves.

For 1.2, learners are describing how organisations use IT for communication. Again, reference should be made to the unit content.

For 2.1, learners must describe reasons why organisations use IT. Learners should include both external and internal factors. Ideally learners should select the factors themselves although some outline guidance by the tutor is acceptable.

For 3.1, learners should describe the impact on the complexity of an individual's work and on their capacity to produce work. The learner is only required to produce draft material, but that should contain proper descriptions of the subject.

For 3.2, learners should consider the impact of IT on organisations involving positive and negative aspects. The positive impact will be related to the reasons for using IT.

For 4.1, the learner is asked for ways in which the use of IT impacts on the working environment. These should be selected from the unit content.

For 4.2, learners are asked to produce a layout design for an office environment incorporating IT. Learners should be given basic room dimensions with any fixed points such as doors and windows shown and told how many people will use the room and possibly any existing equipment that is to be retained. Learners should submit an annotated plan, which may be drawn using IT but need not be. They could give a presentation to introduce their plan.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the assessment 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 Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
1.1, 1.2, 2.1	Using IT	Your local newspaper is producing a series on the use of IT in organisations. You have been asked to help prepare materials for it.	Newspaper article. Supplements.
3.1, 3.2	Impact of IT	The newspaper was delighted with the help you provided. They now want you to prepare followup materials on the impact of IT.	Web pages or leaflets.
4.1, 4.2	Ergonomics	The newspaper realise their office needs rearranging. They have asked you to plan a new look for them taking into account ergonomic design and health and safety issues.	Presentation. Layout design/s. Report/wiki.

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

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

Level 1	Level 2	Level 3
	Doing Business Online	Impact of the use of IT on Business Systems
		e-Commerce

This unit maps to some of the underpinning knowledge from the following areas of competence in the Level 2 National Occupational Standards for IT (ProCom):

6.1 Information Management.

Essential resources

Case studies and examples are an essential to the delivery of this unit and tutors will need to have a sufficient stock of them.

Access to an organisation or personnel from an organisation which uses IT is essential.

Employer engagement and vocational contexts

The use of vocational context is essential in the delivery and assessment of this unit.

Learners will require access to computer equipment to enable them to gain a practical awareness and enable them to apply their knowledge and understanding in a practical situation.

There is a range of organisations that may be able help centres to engage and involve local employers in the delivery of this unit, for example:

- Learning and Skills Network – www.vocationallearning.org.uk
- Local, regional business links – www.businesslink.gov.uk
- National Education and Business Partnership Network – www.nebpn.org
- Network for Science, Technology, Engineering and Maths Network Ambassadors Scheme – www.stemnet.org.uk
- Work-based learning guidance – www.aimhighersw.ac.uk/wbl.htm
- Work experience/workplace learning frameworks – Centre for Education and Industry (CEI University of Warwick) – www.warwick.ac.uk/wie/cei

Indicative reading for learners

Textbooks

Campbell-Kelly M and Aspray W – *Computer: A History of the Information Machine* (Westview Press Inc US, 2004) ISBN 0813342643

Ferry G – *A Computer Called LEO: Lyons Tea Shops and the World's First Office Computer* (Fourth Estate Ltd, 2003) ISBN 1841151866

Rheingold H – *Smart Mobs: The Next Social Revolution* (Perseus Books, 2003) ISBN 0738208612

Warschauer M – *Technology and Social Inclusion: Rethinking the Digital Divide* (The MIT Press, 2004) ISBN 0262731738

Journals

Computer Weekly

Computing

Websites

www.forrester.com

www.gartner.com

www.ovumkc.com

Functional Skills – Level 2

Skill	When learners are ...
ICT - Using ICT	
Select, interact with and use ICT systems safely and securely for a complex task in non-routine and unfamiliar contexts	indicating how health and safety issues have been taken into account in the planned layout.