e-Learning Centre's

Guide to e-Learning in Further and Higher Education

2005 edition

Author's Note

Welcome to the 2005 edition of the e-Learning Centre's Guide to e-Learning in Further and Higher Education

This Guide is intended for those teaching or working in colleges or universities - lecturers, staff developers, and other staff - who want an introduction to e-learning

The purpose of this Guide to provide easy-to-read explanations of e-learning topics, links to great examples and key resources as well as some practical guidance on how to get started with easy-to-use tools and systems.

The Guide also aims to raise awareness about the range of possibilities within e-learning, explaining the pedagogic suitability and applicability of different approaches and tools, and stimulating ideas for courses.

To get the most from this Guide, print out a copy – ideally using both sides of the paper - and then keep the PDF open on your computer and use it to access the online resources at a click of the mouse.

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About the author

Jane Knight worked in Further and Higher Education for 14 years. Back in 1994 she was one of the early pioneers in using the Web for teaching and learning and has been evangelising about it ever since. In 1997 she left teaching to concentrate on providing consultancy services to both education and businesses. She is the Editor of the e-Learning Centre's InfoCentre and has written a number of articles about e-learning as well as presented at many e-learning conferences. You can read more information about Jane at **www.janeknight.com**.

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PART A: INTRODUCING E-LEARNING

1

Understanding e-learning

This Chapter provides an introduction to e-learning: what it is and what it looks like in Further and Higher Education. It also explains how to assess the opportunities for using e-learning in your own teaching in order to create successful e-learning solutions.

Contents

1-1 What is e-learning?

The terms “e-learning” and “online learning” are used in Further and Higher Education to describe the use of the web and other Internet technologies to enhance the teaching and learning experience.

But what actually is “e-learning”? And what actually does an e-learner do? If you were asked to picture a student e-learning, what would he or she be doing and where would he or she be doing it?

Are you imagining an individual student sitting alone at a computer – either at home or work – studying some self-paced content? That’s the traditional view of an e-learner.

But e-learners might be:

- a student working independently on some learning materials in a PC suite.
- a small group of students working together at a computer.
- a group of students working with a teacher using an interactive whiteboard.
- an individual or a group of learners using PDAs
- a teacher presenting to a class using a whiteboard and/or data projector
- a student discussing his project with an online tutor.
- a student working collaboratively with other students in her class

e-Learning, therefore, like learning itself –

- can be an **individual**, **group** or **class** activity
- can be **self-paced** or **instructor-led**
- can take place in the **classroom**, at **home** or at **work**
- is about accessing **information** as well as **instruction**
- is also about **communication**, **collaboration** and **knowledge sharing** between learners and their teachers, and between learners themselves

From the outset, it is very important to understand that “e-learning” is a term with a broad definition, e-learning is no longer just about an individual studying an online course on their own.

One of the things that have been said about online or e-learning is that it is the poor relation of traditional learning. It is also often said that online courses can’t match traditional courses in academic quality and rigour. Take a look at this article about how online learning is being used at one college in the US and how it is “one of the most exciting enhancements to contemporary education”.

Ten ways online education matches or surpasses face-to-face learning	By Mark Kassup, the technology source, May/June 2003.

1-2 What does e-learning in FE and HE look like?

Because of the diversity of teaching and learning in Further and Higher Education, the use of "e-learning" in course and programmes will be very different.

There is no one way of using e-learning in an academic course. One size doesn't fit all! All courses will make use of e-learning in different ways.

One myth about e-learning that it is important to dispel from the outset is that it's not just about turning your traditional, classroom-based course into a completely online version. It's more about identifying opportunities where the technology will add value to your teaching and your students' learning.

It's also not about using the technology for its own sake. It's about gradually integrating the technology into a course – **where appropriate** – to create a blended approach. This could mean:

- blending classroom-based approaches with independent and group-learning approaches
- blending face-to-face learning with online learning
- blending a mix of online learning solutions
- blending the best of the old with the best of the new

Courses that use a mix of solutions – both face-to-face and online – are therefore known as **hybrid** or **blended** courses.

Take a look at this article which looks at one college's approach to creating a hybrid or blended course.

Introduction to hybrid courses	By Carla Garnham and Robert Kaleta, Learning Technology Center, University of Wisconsin-Milwaukee. March 2002

One of the questions many teachers ask is what does a "blended course" look like? Another is how much online learning should there be as opposed to face-to-face or classroom-based learning?

There are many ways to blend the new with the old, and these are described in the next section of this chapter.

1-3 Three ways of blending online learning with face-to-face learning

Here are three main ways of blending the old with the new.

[1] Using the technology to support a traditional class

Here the course is delivered in the normal, traditional, face-to-face way with lectures, seminars, tutorials, etc, and the technology is used to **support** the course by providing learners with course documentation and materials online. These materials might be:

- **administrative materials** like a scheme of work, syllabus, course handbook, etc
- **class/lecture materials** like handouts, presentations and reading lists.

It is often said that putting handouts online doesn't constitute online learning - and that is true - handouts don't teach - but they do help to support learning. So here the technology is being used in this case to create a more accessible course repository. And what is more these materials can be read either on a computer or on a PDA which means they are very flexible. As long as it is quite clear that they are there to support the traditional class rather than replace it, it is a very useful way of using the technology.

[2] Integrating technology into a traditional course

The second way of blending the technology into a traditional course is include online activities. The use of interactive, collaborative, online activities can help to provide a much more flexible and richer learning experience for the learners. These materials can either be **existing** resources available on the Internet or resources **developed** specifically for a course. The type and amount of online elements in a traditional course will depend on the nature of the course and the students, but could include:

- **informational and reference materials** – for students to use as background resource materials
- **online activities and exercises** - for students to practise and try out things
- **online tests** - for students to assess their own understanding of the subject
- **online discussions** - for students to maintain a group conversation over a longer period of time
- **collaborative learning activitie**s - for students to work together on projects without necessarily being in the same physical space.

Integrating existing resources from the Internet is very easy; the most important thing is to use them in the most appropriate way for your course. As for the development of course-specific resources, since these can be short and self-contained, they do not necessarily require any significant development time or skills. The most important point to make here is that the face-to-face and online elements should be blended together so that they are complementary.

[3] Delivering a course completely online

In this third way, the technology is used to deliver the course **completely online**, e.g. to offer the programme to a wider audience than just the campus-based learners. This could possibly be done in parallel with a traditional course or, ideally, to provide opportunities for both remote and local learners to study in the most appropriate way for their circumstances.

In this case all course content and all course communications would be available online, and students would need to be supported online. However, the course should not ideally be 100% online - there should also be some opportunity for face-to-face activities - for example an initial, induction period, or study weekends.

1-4 e-Learning: providing content and supporting people

To most people the term e-learning means creating large amounts of online **content**, if not converting the whole course into an online format. But as we have already stated, e-learning can also be used to help create small pieces of online content, for example

- course administrative materials like syllabuses, schemes of work and study guides
- lecture handouts and presentations
- course readers
- quizzes and tests
- interactive resources
- software demonstrations
- tutorials
- podcasts

These small pieces of online content, as will be seen in Part 2 of this Guide, can be developed quickly and easily. More complex online content like interactive, multimedia courseware will, however, take considerable time, effort, skill and money to develop.

However, it is very important not to overlook the fact that the technology can also be used to support **communication** and **collaboration** activities between students, and between student and teachers on a course. For instance, it can help you to

- keep in touch with your students
- run virtual office hours and one-to-one tutoring sessions
- have online discussions
- facilitate your students working and learning together
- encourage your students to interact informally with one another

In most cases setting up systems to support communication and collaboration online takes very little effort, time, skill and cost to set up, as will be shown in Part 2.

In this chapter so far, we have discussed many possibilities for using technology in teaching and learning, so the question is now, what is the most appropriate way to use e-learning in **your** teaching activities? We look at this aspect in the next section of this chapter.

1-5 How do you create appropriate e-learning?

Most lecturers in Further and Higher Education are responsible for developing their own courses – both the materials themselves and the approaches to the delivery. So you will most likely be able to make decisions about how you use e-learning within your teaching.

The key to success is identifying the most appropriate way of using the technology that best suits your course, your teaching and your students – and this therefore requires a spot of planning.

Firstly, you will need to analyse the **teaching and learning environment** - this includes understanding the course itself, your students, and you (and your team). We cover this in Chapter 2. Secondly, you will need to take a look at the **technical environment** and we take a look at this in Chapter 3.

Once you have done this, you will then be in a better position to understand how you can most **appropriately** use e-learning and to answer the following questions?

- Are you going to use e-learning to **support** a traditional course? Or are you going to **integrate** e-learning elements within a traditional course? Or are you going to use it to **deliver** a course completely online?
- Are you going to focus on the development of online **content** or on using the technology to foster **communications** and **collaboration** between students.
- How will you need to **support** your students as they study your course? We take a look at this in Chapter 4.

If you are new to e-learning it is unlikely that you will want to plunge straight into creating a fully online course. You will want to take small steps to gain your confidence. But at the same time you need to think about the long term plan for blending the technology with the traditional features of your course, so it does help to have a strategy about your future direction. The following advice is useful.

- **Think big**. Think about the "big picture", what you would **like** to achieve in the long term.
- **Start small**. Think about what is going to be effective now in your courses and what you are capable of and comfortable with achieving now. Don't walk before you can run!
- **Have a planned approach.** Think about the time span for achieving your long-term goals - it might be months, it might be years. Consider how you are going to work towards this goal. For instance if you would like to move your course completely online, then start with simple things to support it in its traditional format (in the first semester) and then begin to integrate online elements into the course (in the second and third semester), and finally move it completely online.

Finally, one of the important things to bear in mind with e-learning, is that it opens up new opportunities and new ways of working. Although in the early days, you may well use it to replicate your existing ways of teaching, you should be thinking about how you can use it to really make a difference in your teaching. Take a look at this resource which looks at how education should be using the technology to move forward.

Innovations in online learning: moving beyond no significant difference	By Carol Twigg, Center for Academic Transformation, 2001

1-6 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide links to topics discussed in this chapter.

What is e-learning?	Links to very general resources on e-learning to help you understand what it is and its potential in education and training
e-Learning in Further and Higher Education	Links to resources that look at online teaching and learning with particular emphasis on the FE and HE environments.
Academic case studies	Links to case studies on the use of e-learning in Further and Higher Education
Rethinking education	Links to general resources concerned with using the Internet to re-think education in the 21st century.

2

Understanding the teaching and learning environment

In this Chapter we are going to help you consider the different aspects of the teaching and learning environment necessary to identify how you can use e-learning most appropriately within your courses.

Contents

2-1 Your course(s)

There are a number of aspects to consider about your course:

Course mode

The first thing to think about is the mode of your course, i.e. whether it is full-time, part-time or distance learning and the opportunities you think this will have for using the technology. In particular, whether these opportunities will mean that you could best use the technology to create online **content** or support online **collaboration.**

The opportunities for using the technology are going to be different in a full-time, part-time and distance learning course.

Full time courses will primarily be classroom-based, so that means opportunities will be found in integrating the technology in the classroom, whether it be presenting to the students, or by engaging them in group or individual activities. Online **content** will mainly support the learning rather than replace the traditional learning, although there will be opportunities for online activities.

Part-time courses provide great opportunities for using the technology to support the learners between the sessions they spend in the classroom, either to provide them with online content that can extend or enhance the face-to-face sessions, or to improve **communication and collaboration** between students who see each other, say, once a week.

The classroom sessions should be used optimally to ensure that the time is well utilised, e.g. spending all the time presenting information to students is not the best use of time, when they could access content of this type themselves online outside of the classroom. Classroom time is best used explaining and discussing the content.

Distance learning courses mean there are considerable opportunities for the use of the technology – not only in the delivery of the **content** in many different formats, but also to support the development of a **learning community**

Now take a look at some examples of online learning at a university in Australia.

Teaching online: stories of contemporary practice	From Deakin University, Australia

Course subject matter

The next thing to consider is the **subject matter** of your course, and in particular what you think are the strengths and weaknesses for using the technology in this subject area, and the opportunities the subject matter will offer. For instance, how you might use e-learning in a theoretical, academic subject like History or Business Studies or a practical, vocational subject like Hair and Beauty.

Whilst **knowledge-based** subjects might seem to lend themselves more easily to the use of online content, **skill-based** subjects can also make significant use of e-learning – not only in the provision of online content but also in fostering communications between students. Blended learning is also a very appropriate approach for practical subjects, in that the face-to-face time can best be spent on the practicing and honing of the skill, whilst the theoretical elements can be offered online to support the practice.

Now take a look at this article on integrating e-learning into the classroom:

Using technology to enhance the classroom environment	By Lawrence E Levine, THE Journal, June 2002

What's working and what's not?

You also need to take a good, hard look at your course(s) and think about what is really working and what is not going so well. You need to be brutally honest! Problems might be issues that the students are encountering or ones that you are having difficulties with. On the other hand it might be aspects of the course that are particularly enhancing the teaching or learning experience.

You may think of some of the following problems with your course:

- Students find the course boring – it doesn't stimulate or engage them as they spend a lot of time writing notes.
- Some students are unable to attend all the classes – due to family or other circumstances – and this has an impact on their ability to keep up.
- Students seem to have forgotten all they were taught from one week to the next.
- Students find it difficult to work on group projects when they live quite a distance apart.
- You spend more of your time photocopying materials for your students than you do in the classroom.

If you are encountering these or any other problems, as you work through this Guide to e-Learning you should think about how the technology might help to overcome them

Hopefully, you also identified things that were working well in your course, so clearly it is important to ensure that you don't disrupt these things. It is easy to use the technology without thinking of the consequences. Here is a classic example of an inappropriate use of the technology.

> In the early days of online learning an over-enthusiastic lecturer decided that her part-time students should now only communicate with her by email. Unfortunately, at that time, most of the students didn't have email at their work, so they had to come into the university to a computer room beside the lecturer's officer to send her an email!

Forcing a technology solution onto a problem where inappropriate will not work. If the use of the technology in learning that is not instinctive, intuitive and natural, it is unlikely to be successful.

Now take a look at this article which provides some ideas about using online learning.

My three principles of effective online pedagogy	By Bill Pelz JALN, Vol 8, Issue 3, June 2004

2-2 Your students

There are a number of aspects to consider about your students.

Age

You need to consider the age of your students and how you think this will effect their expectations for the learning experience. In FE the age range of the majority of the students is 14-19, in HE it is 18-21. But in both cases there will also be adult learners. If you are teaching students at the bottom of the age range, their expectations of the learning experience are likely to be quite different from the adult learners.

Younger learners have been termed **digital natives**. These learners have been brought up with computer games, PCs, email, instant messaging and so on. In other words they are "native" speakers (or users) of digital technology. Adult learners, on the other hand, are **digital immigrants**, they have had to learn how to use these new tools. Hence the demands and expectations of the two groups are going to be very different.

Digital natives will want to see the technology reflected in their learning experience as they do in their daily lives, whereas digital immigrants will need more support with the use of technology in their learning. In other words digital natives will be much happier using the technology than adult learners who will likely want more access to people. Digital natives will also probably have access to a range of technology either about their person (in the form of mobile phones, PDAs etc) and at home (with PCs and a broadband connection). The Internet is likely to be the first place they will go to for information, whilst digital immigrants will be less likely to have access to computers and a library will be their first port of call. You can read more about digital natives and digital immigrants in this article: You can read more about digital natives and digital immigrants in this article:

Digital Natives, Digital Immigrants	By Timothy VanSlyke, the technology source, May 2003

Digital natives are also referred to as the Net Generation (or Net Gen). A recent collection of articles by Diana and James Oblinger explores the Net Gen and the implications for institutions in areas such as teaching, service, learning space design, faculty development, and curriculum.

Educating the Net Generation	An Educause eBook, February 2005

Other characteristics

There are other characteristics of your students that might also influence the use of the technology in your course. Here are some that you will need to take into account:

- Their **motivation** and **enthusiasm** for learning.
- Their ability to be **self-directed** learners.
- Their **perceptions** of online learning

Take a look at the following article which looks at what one student thinks about e-learning.

Through the looking glass: student perceptions of online learning	By Linda Peters, the technology source, September/October 2001.

2-3 You

There are a number of things you will need to consider about yourself to identify the opportunities for using the technology in your courses.

Teaching style

Your teaching style will have implications for your use of the technology in your courses? There are three main teaching styles:

- **Didactic** – you stand at the front of the class and present to your students.
- **Interactive** – you involve your students in the class through activities.
- **Facilitative** – you support or guide your students in their learning through, for example, problem-based learning approaches.

Didactic teaching styles generally mean that students have a passive learning experience as they are recipients of large quantities of information. The implication of a didactic style, however, is that you need to create a lot of content. Although there are many ways of integrating existing Internet-based content into a presentation, building your own online content can be a time-consuming business.

An **interactive teaching style** means that students have an active learning experience. It also means that you can use the technology to create interactive learning resources to engage the learners

A **facilitative** approach means students have a collaborative approach to learning. For the learner the emphasis is not on being a passive recipient of content, but on building understanding of the subject by working and learning together and sharing knowledge on a particular activity that has been designed to help students learn. The teacher plays a guiding role in the learning process.

Teaching styles can also be categorised as **formal authority**, **demonstrator**, **facilitator** or **delegator**. Take the following teaching styles quiz to find out your actual teaching style.

Teaching styles self-evaluation	By Jennifer Stein, Linda Steeves, Christine Smith-Mitsuhashi, 2001

Teaching approaches

How do you feel about trying out new ideas in teaching approaches or using new tools? Although e-learning has always been regarded as a way of changing teaching – in particular from moving from a didactic style to a more facilitative style – often phrased as moving from “sage on the stage” to “guide on the side” – if you are starting out with using the technology, it is probably best not to try and change too much at once. So it might be a good thing to start with something that supports your existing teaching style.

For example, in Chapter 6 we look at how to use the Internet as a course resource, and this is probably how those with different teaching styles will want to approach this.

- **Didactic** teachers will want to use Internet resources to build exciting and engaging presentations and content.

- **Interactive** teachers will want to use Internet resources as activities for individual or group work.

- **Facilitative** teachers will want to build problem-based learning activities around the use of Internet resources.

Now read the following articles which describe two teachers' experiences with e-learning.

Extending the walls electronically	By Tom Creed of St John's University, 2002
Why I teach online	By William Wade, THE Journal. September 2004

Time and commitment

You also need to consider how committed you are to using the technology in your courses, and how much time you are prepared to invest to get your ideas off the ground.

Depending on the approach you decide to take to e-learning, this would probably require an investment in **development** time (particularly if you want to create some exciting online materials) and/or **maintenance** time (if you decide to set up systems to support online communication within your course).

Even if you see yourself as primarily creating content for your course, it is not just about putting a number of course materials online before the course begins and then doing nothing during the running of the course, successful use of the technology requires a dynamic approach to course delivery.

Confidence with technologies

Finally, you should now rate your ability and confidence with basic technology. The core ICT skills for e-learning are to:

- be able to use Microsoft **Windows** (or Apple Mac OS)
- be able to make basic use of Microsoft **Word**
- be able to make basic use of **PowerPoint**
- have a basic understanding of how **Internet** work
- be able to use a **web browser**
- be able to use **email**

Use the ICT skills audit in section 2-4 to self-assess your ability and confidence with the technology.

If you are unable to complete all the tasks listed, then find out how you can brush up your ICT skills in readiness for e-learning in section 2-5.

2-4 ICT Skills audit

In the six categories below, tick the box(es) beside the tasks you can comfortably achieve.

Using Microsoft Windows

❑ Locate and launch desired applications
❑ Search for and find a file stored on the computer
❑ Name, rename, copy and delete files
❑ Save files to a storage device, e.g. hard disk, CD

Using Microsoft Word

❑ Load, edit and save documents
❑ Use formatting like bold, underline, different font sizes
❑ Use headers and footers
❑ Use tables

Using Microsoft PowerPoint

❑ Create and run a presentation
❑ Use slide transitions and slide animations
❑ Use clipart and sound in a presentation

Understanding the Internet

❑ What is the Internet?
❑ What is a URL?
❑ What is a search engine?
❑ What is an intranet?

Using a web browser

❑ Enter web addresses (URLs)
❑ Use a browser's refresh button to reload/refresh a page
❑ Save a web page in your "bookmarks" or "favourites"
❑ Download documents and other files onto your computer
❑ Use a search engine

Using email

❑ Send and receive email
❑ Forward an email to another email account
❑ Attach a file to an email
❑ Use an address book
❑ Use a distribution list

2-5 Brush up your ICT skills for e-learning

If you were unable to complete some or all of the tasks in the categories of the ICT Skills audit in section 2-4, then you could do with a little help before you begin. Take a look at the resources below.

Using Microsoft Windows

For PC users, understanding Windows is vital. If you are not confident with Windows then you might find it useful to work through one of the tutorials below.

MS Windows XP Tutorial	From helpwithpcs.com
Microsoft Windows 98	From helpwithpcs.com

Using Microsoft Word

A basic knowledge of Word is very helpful for e-learning. Here is a useful tutorial for educators. It will provide you with step by step details on using some of the facets of the program.

Word Tutorials	From Electric Teacher

Although Word is a very common productivity tool found on most people's desktops, in many cases users only make use of a very small percentage of the features provided by the program. If you want to take your use of Word to the next stage, then you might find the following resources of interest. Here is a series of articles on how to use intermediate level features within Word

Using Microsoft Word like a Pro	By Daniel Lake, techLEARNING.com

Using Microsoft PowerPoint

A basic knowledge of PowerPoint is also very helpful for e-learning Here are a couple of useful tutorials on its use in education.

PowerPoint in the Classroom	From Electric Teacher
PowerPoint in the Classroom	From Act360° Media Ltd

Understanding the Internet

A basic knowledge of how the Internet works is valuable in e-learning. If you would like to check your understanding of the Internet further, take the following test.

Test your Net IQ	From Learn the Net

If you want to find out more about the Internet and the different services available on it, the following resource is useful.

Using the Internet	From the State of Victoria Dept of Education

Using a web browser

A basic knowledge of how the Web works is also of use. Take a look at the following resource.

The Web at a glance	From Learn the Net

If you use Internet Explorer and want to find out more about how to use it in the classroom, then work through the following tutorial.

Internet Explorer 5 in the Classroom	From ACT360° Media Ltd

Using Email

A basic knowledge of email is also ideal. If you use Microsoft Outlook or Outlook Express, then you could take a look at these tutorials.

Tutorial – Managing email: A practical guide for teachers	From Microsoft
Outlook Express in the Classroom	From ACT360° Media Ltd

2-6 Chapter resource list

Reading

Here are links to pages at the e-Learning Centre which cover some of the topics discussed in this chapter.

Learner perceptions of e-learning	Links to resources that look at what learners think about e-learning
Instructor perceptions of e-learning	Links to resources that look at what instructors think about e-learning
What it is to be an online learner	Links to resources that take a look at what it is to be an online learner - from both a learner and tutor perspective
What it is to be an online teacher	Links to resources that are primarily concerned with the issues involved in teaching online
Using Word	Links to resources that provide you with information about using Microsoft Word: reviews, tutorials, etc
Using PowerPoint	Links to resources that provide you with information about using Microsoft PowerPoint: reviews, tutorials, etc
Using Email	Links to resources that provide you with information about using email, particularly Microsoft Outlook: reviews, tutorials, etc

3

Understanding the technical environment

In this Chapter we are going to look at the technical environment – both the infrastructure (i.e. the hardware) and the software (the tools and systems) available for e-learning.

Contents

3-1 Technology in and out of the classroom

The availability of technology in and out of the teaching rooms will determine to what extent e-learning can be integrated into your teaching.

Technology in the classroom

You should take a good look at the technical infrastructure in your institution as this will determine what you will be able to do in the teaching rooms. These are some of the questions you need to answer.

- Are there **PCs/laptops** in the teaching rooms? Do you know how to use them?
- Are there **network connection**s in the teaching rooms? Do you know how to connect your PC/laptop to the network connection?
- Are there **digital projectors** in the teaching rooms? Do you know how to use them?
- Are there **interactive whiteboards** in teaching rooms? Do you know how to use them

If the answer is no to some or all of these questions, you should talk to an IT support person in your college or university. If you are looking for some general guidance on using a data projector or whiteboards, then take a look at these resources.

Simple instructions for using a data projector	From Queen Mary Westfield College, London University
Interactive whiteboards	From Connected at Learning & Teaching Scotland

- Is the campus **wireless**? Or are there wireless "hot spots"? Do you understand what wireless computing is? Do you have the right equipment to work "wirelessly"?

Wireless computing involves accessing a local area network, an intranet or the Internet without a fixed cable connection. This is also known as Wi-Fi. It involves a desktop PC, laptop or other device being equipped with a wireless network card, and a building installed with at least one base station/access point.

This means you can move around the building and still maintain a connection to the network and the Internet. Other places like airports, hotels, coffee shops are installing wireless networks, which means you can use your computer or PDA to access the Internet in these places too. So, if you have a wireless campus this will mean that all staff and students will have access to the network and the Internet at all times and from all locations.

Technology out of the classroom

The availability of PCs **on** and **off-campus** will determine to what extent you can require students to work on Internet-based activities outside the classroom or whether all work will have to be done on-campus. These are the questions you will need to consider.

- Do students have their **own** computers? Do students have **access** to the Internet? Are these (slow) dial-up or (fast) broadband connections?
- Are there computers in the **halls of residence**? Are these connected to the Internet?
- Can students have access to computers and network connections **on campus** – in PC suites, or in the Library or Resource Centres?

3-2 Mobile technologies

In this section we look at mobile learning in order for you to understand how you might make use of mobile devices in your teaching and your students' learning.

What is mobile computing?

The term "mobile computing" originally referred to the use of laptop computers which freed learners from their desktops. In other words they could use their computers to work as they moved around. However, the use of mobile phones and PDAs (Personal Digital Assistants) means that computing (and learning) has moved from the classroom onto the desktop and now into your pocket. Let's take a closer look at the different mobile devices:

Mobile phones: In the early days these were used solely for making phone calls and sending text messages. Many phones now have GPRS to allow "always-on" connectivity to the Internet. The newer multimedia phones are also able to display multimedia and interactive content. Smartphones are those with some PDA functionality.

PDAs: There are two main types of Personal Digital Assistant: the ones that use Windows Pocket PC (an operating system that works in a very similar way to Windows) and ones that use the Palm Operating System, which we will collectively refer to as Palms. Both types of PDA can be synchronised with computers to transfer content to and from the different devices. Palms (which are also compatible with Macs) tend to be cheaper than Pocket PCs, and have more 3rd party software (particularly educational software) available for them. But Pocket PCs are very popular as they integrate very well into a Microsoft Windows environment. Some Pocket PC devices also have mobile phone functionality, so these are also known as Smartphones.

iPods. iPods are the newest toys on the block. An iPod is essentially an MP3 player produced by Apple. MP3 is a format for compressing digital audio files and is popular for downloading across the internet and for use with memory-based audio players Although there are other MP3 players on the market, it is iPods that are making the headlines.

What is mobile learning?

We have all become much more mobile in recent years. We all do a lot more traveling (on buses, trains and planes), and in the educational environment there is high mobility of staff and students; they move between classes, around the campus and from home to college or university. There is also quite a bit of evidence to show that students would like to make more use of this "dead time" for learning purposes. So mobile learning is beginning to take off.

As PDAs and phones are now very sophisticated, with increased screen size and resolution, they have become suitable devices for learning for both content and collaboration purposes, and as such are viable alternatives to the PC as learning devices.

Although most students have a mobile phone, there has not been that much activity in integrating them into learning. On the other hand, far fewer students have a PDA, and yet they are considered to be important devices that can be used to enhance the learning and teaching environment. Students and staff enjoy using them and they seem to increase student motivation. Take a look at this article which considers they use in schools

Handheld computers (PDAs) in schools	David Perry, Becta ICT Research 2003

Why are PDAs so popular?

Some of the reasons why PDAs are popular in education include:

- They are scaled-down versions of PCs.
- They require minimal energy.
- They are a reasonable price (compared to laptops).
- There is a quick turnaround time for enhancements and updates.
- There is a wide variety of software available for PDAs.

There are also plenty of sites that support the use of PDAs (both Pocket PCs and Palms) in an educational context (both for Further and Higher Education as well as schools). Here are just two.

pdaED.com	Articles, products, discussions and news.
Handheld Learning	dedicated to the use of handheld technologies in education for leading, teaching, and learning

We are also beginning to see the use of iPods in an educational environment. In particular a couple of universities are piloting their use in courses to deliver audio course materials.

Using mobile devices in learning

If you would like to consider delivering course materials on a PDA, mobile phone or iPod, you will obviously need to consider the availability and use of these devices by you and your students. In each of the solutions we describe in Part B we also look at developing the solutions for mobile devices.

Now read the following article which describes the mobile technology available today and lists the benefits the technology could bring to education.

Introduction to mobile learning	By Karen Wood, from the Technology for E-Learning resource bank at FERL, March 2003

Bluetooth

Another type of wireless connection is Bluetooth. This is useful for creating ad hoc connections with other Bluetooth devices. It is commonly used for headsets to connect with mobile devices, but it also means that devices like PDAs can connect with one another and share files.

Individual learners working on PDAs can therefore collaborate with one another by sharing files - either through infrared sharing (one-to-one) or by establishing an ad hoc Bluetooth network. This might be use for students who are working together on a group project. Here is a useful guide to Bluetooth.

Bluetooth Networking for your Palm, Pocket PC and Computer: A Primer	From the PDA Buyers Guide

3-3 e-Learning tools and systems

There is a huge variety of software tools used in e-learning. The availability and accessibility of e-learning tools and systems will help to determine what you can achieve in your courses. So you might like to take a look around and find out what is available to you using the list below. Note: you won't need all these tools and systems to get started with e-learning!

e-Learning Tools & Systems

Content authoring tools

These are the types of tools available for creating e-learning content. Some of these support the rapid development of content whilst others are used for the development of more sophisticated content.

- Office tools (like Word and PowerPoint)
- Web page authoring tools (like Dreamweaver or FrontPage)
- Graphics and animation tools (like Photoshop or Flash)
- Testing tools (like HotPotatoes or QuestionMark)
- Streaming presentation tools (like Producer or Boxmind)
- Blogging tools (like Blogger or TypePad)
- Course authoring tools (Authorware or CourseGenie)

Communication and collaboration tools

These are the types of tools available for communication and collaboration between learners and teachers:

- Instant messaging tools (like MSN or Yahoo Messenger)
- Email tools (like Outlook or Eudora)
- Discussion tools (like WebCrossing
- Groupware tools (like Groove)
- Live meeting/virtual classroom tools (like HorizonWimba or Centra)

Course management systems

These are tools for managing learners use of course and other materials. These are commonly referred to as Course Management Systems (CMS) or Virtual Learning Environments (VLEs) (like Blackboard or WebCT or Moodle) or even Learning Platforms

User tools

These are tools to help individuals with their e-learning as well as sharing resources with other learners (like Bloglines and Furl).

Selecting e-learning tools and systems

There are a couple of things to note about e-learning tools and systems:

1 They might be **dedicated** e-learning tools or **multi-purpose.** For instance, Authorware is a dedicated course authoring tool, whilst Dreamweaver is a web authoring tool that can be used to create web content for different purposes. It is therefore important not to overlook multi-purpose tools as they can have an important part to play in e-learning.

2 They might be **uni-functional** or be **multi-functiona**l. For instance, a tool like HotPotatoes is a dedicated testing and quizzing tool, whilst a course authoring tool like Authorware includes the functionality to create tests as well as other educational content.

3 They might be intended for the **educational** environment or for the **corporate** environment or for **both.** For instance, Blackboard is a course management system that is primarily intended for the educational market, whilst Centra is a live meeting tool that is used in both environments . Whilst educational tools are clearly aimed squarely at the educational environments, multi-use tools are very flexible in that they can adapt to different situations.

4 They might be **commercially** available or **free**. For instance, Hot Potatoes is a free testing tool, whilst QuestionMark is commercially available. It is important to remember that e-learning tools don't have to cost the earth. In fact there are a large number of tools available that are free. In this Guide we provide examples of free tools you can use to help create and deliver e-learning.

We are also now seeing a trend towards **open source** systems. Open source refers to the fact that the source code for the software is freely available and modifiable, which means that as people use it and improve it, the software evolves and improves. This differs significantly from systems that are licensed for use by organizations and although they might be customizable, they are not fully modifiable. This article explains how important the open source movement is in education.

Lens on the future: open source learning	By Anne H Moore, Educause, September/October 2002. [PDF]

Learning technology standards

One of the important aspects in selecting e-learning tools and systems is ensuring that they work with other systems and content. This has been one of the drivers for the development of industry standards.

There are, in fact, a number of standards in place, and one that you will hear a lot about is SCORM (which stands for Shareable Content Object Reference Model). A SCO (Shareable Content Object) is a "learning object" or resource that can be tracked by a LMS. A LMS that is said to be SCORM-compliant is therefore able to track content developed by authoring tools that produce content that is also SCORM-compliant.

Other standards in use are AICC and IMS. Although it is not necessary to have an in-depth understanding of these learning technology standards to get started with e-learning, if you do want to find out more about them, take a look at this document.

Packaging and publishing learnng objects: Best practice guidelines	From Becta, January 2005 [PDF]

3-4 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide links to some of the topics discussed in this chapter.

Using interactive whiteboards	Links to resources on interactive whiteboards and how to use them
Mobile and wireless learning	Links to resources on mobile learning (or m-learning) as well as wireless learning
Standards organisations	Links to organisations developing, maintaining or supporting learning technology standards
Learning objects and standards	Links to resources that deal with the concepts of learning objects and learning standards

Tools and systems

Here are pages at the e-Learning Centre which provide links to some tools discussed in this chapter.

Data projectors/Interactive whiteboards	Links to data projectors and interactive whiteboards

4

Evaluating and supporting e-learning

In this Chapter we want to look at how you can measure the success of your e-learning initiatives as well as how you might support your e-learners.

Contents

4-1 The measures of success

Clearly everyone who creates an e-learning solution wants it be successful. But it is important to clarify what is meant by "successful" as this can mean different things to different people.

There are probably three main ways that you will determine the success of your e-learning initiatives, that is in terms of

- **student satisfaction**, i.e. how positive they are about their learning experience
- **student learning**, i.e. how much they have learnt on the course
- **student performance**, i.e. how well they have performed in final examinations

Which is the most important success measure? Well, it will depend on your standpoint. If you are preparing students for examinations, then examination results will obviously be very important. But since success in examinations can only be measured at the end of the course, if the students don't perform well, then it is too late to do anything about it. So it is necessary to keep track of how well it is going as the course progresses by measuring both student satisfaction and student learning on a regular basis. This way you will be able to attend to any issues that arise that could impact on the success of the course.

Student learning

Student learning could be measured both by self-assessed and lecturer-assessed quizzes and tests taken at regular points during the course. In Chapter 9 we look at how to create a variety of online tests and quizzes.

Student satisfaction

Student satisfaction can be measured both by structured and unstructured means, that is by getting them to give general feedback on the course, as well as gaining information on specific elements of the course. Although it is important to find out regularly what your students think about the course, it is imperative that you don't burden them with large, complex questionnaires to fill in too often.

Unstructured feedback might be collected by requesting comments at any time by learners on their general attitude to the course.

Structured feedback, on the other hand, might be collected via a number of questions that ask specific points. For example, students might be asked to rate a particular activity, event or service you have provided. Rating skills of the following types might be useful.

How did you find the interactive classroom activity?
❑I liked it ❑ didn't like it ❑ t was OK

How did you find the interactive classroom activity?
❑ 5 Very Good ❑ 4 Quite Good ❑ 3 OK ❑ 2 Not Very Good ❑ 5 Very Poor

In Chapter 10 we look at how you might collect feedback of this type.

Now take a look at this tutorial on collecting student feedback.

Collecting student feedback	From the Vocational Learning website of the Learning & Skills Dev Agency

4-2 Problems e-learners might encounter

Although you will have thought carefully about how you are going to use the technology with the particular students you teach, you will also need to consider how you are going to support them as they make use of it in their learning so they have a good online learning experience. Learners might encounter problems in a number of key areas. Here are some problems experienced by learners in one group using e-learning.

Technology

- "My PC's broken at home."
- "What is a Discussion Forum"
- "I don't like Discussion Forums – I don't like putting down my ideas in black and white – I don't mind talking about them"
- "I keep getting the error message 'File not Found' when I try to access the materials"
- "I can't see any images in my browser"
- "How do I save the materials"

Working on their own

- "I'm not used to working on my own – I easily get side-tracked and find other things to do"
- "I panic if there is a problem"
- "I want a teacher to teach me"
- "There's just too much to do – I can't get my head around it all"

Managing learning

- "I don't know if I'm doing enough work or too much"
- "What are my results like compared to other students"
- "If I don't do any work for a month, nobody notices"
- "Who do I speak to about my results"

There are a number of ways that problems like these might be supported – both by you as a lecturer and the institution as a whole. Here are some suggestions

Technology problems

It would be ideal if all learners had a good set of technical skills before they started the course, in particular using a PC and web browsing skills (so they would know how to do basic tasks like saving files, or troubleshoot problems with error messages like "File not found" or why their browser did not display image). One way to find out about a student's technical skills is to ask them to self-assess their skills, and then recommend any courses or support for those with particular difficulties – as we did in Chapter 2.

As far as course-specific tools are concerned, e.g. discussion forums, it will be up to you to help them understand how to use these tools and make best use of them, particularly if they haven't encountered them in other courses.

However, addressing other technical problems – like PC failures at home - is obviously outside of your remit. Students would either have to be able to troubleshoot these problems themselves or by contacting an IT Help Desk in your college or university.

But it will be imperative for your students to understand what you can and will help them with, and who will deal with other problems.

Problems due to working on their own

If your course is going to place reliance on students to do more work online for themselves or with other students and less in a classroom with a teacher, then students will also need to acquire new study skills like:

- **making time** to work on online materials
- **finding** a suitable **place** to work online
- being **disciplined** about completing online work
- maintaining **motivation** to work online
- being **self-reliant** and able to deal with their own problems
- staying **positive** if things become frustrating

As learning online becomes more commonplace, students will begin to acquire these skills, but in the interim you may well need to help your students come to terms with the implications of becoming an online learner.

Problems with managing learning

If students are working off-campus for a part of the time, they may well feel out of touch with what is happening around them. In particular, how they are performing in relation to other students.

With courses that have a large online element then it will be important to provide them with some sort of virtual community that they can discuss general (rather than academic issues) with their peers. This is often known as a Virtual Café, since it tries to replicate the environment of the college coffee bar or canteen, where students can chat together.

A Virtual Café could be set up using one of the discussion forum or collaborative learning tools (which we will discuss in Chapters 18 and 19). Generally these Cafés are unmoderated by academics, so that it gives the students the freedom to express their feelings. However, it would be advisable, nevertheless, to set guidelines for acceptable behaviour in the Café.

It is also important in courses with large online elements, that there is frequent contact with the students to ensure they do not feel alone and uncared for and to reassure them they are keeping on track.

It is clear from all this then, that the greater the percentage of online work there is in a course, the more you as a lecturer will have to ensure that the students feel comfortable with the experience.

As we have seen there is quite a lot that can be done by you to support the learners, but in a college or university that is committed to online learning as the way forward, it will be important that there should be in place resources to support learners institutionally

Take a look at this resource, which looks at institutional policies for supporting e-learning.

A model for effectively supporting e-learning?	By Leslie Hitch and Pamela MacBrayne, the technology source, March/April 2003

4-3 Preparing students for e-learning

In section 4-2 we looked at how you and your organization might support e-learners. Now we look more closely at this support. This support will be of two types – reactive and proactive.

Reactive support is support that is provided in response to a student's problem.

Proactive support is support that is provided to address or pre-empt problems students are likely to encounter. This type of support might be provided in a number of formats (paper, face-to-face, online) and at different points in the course. You will need to ask yourself the following questions:

- What support do you think you should proactively provide?
- What format(s) do you think this support information might best be presented in?
- At what points in the course should you present it? In other words, what are the essential things students should know at the beginning of the course and what can be provided in-course?

Here are some suggestions on the proactive support information you might want to provide, when to provide it and in what format to provide it. It is important to drip-feed the information, rather to overwhelm the students with lots of Guides and Guidelines.

At the beginning of the course

Induction [face-to-face or virtual]

- ICT skills audit (and follow up courses)
- Meet the lecturers and, if appropriate, the IT Support Team
- Online orientation (where to find the course website and how to use it)

Quick Guide [paper]

- How to get online, i.e. basic start up information

Study Guide [PDF]

- How to be a successful online learner
- Who to ask for help
- Virtual café and how to use it
- How you will keeping in touch with your students

In-course

- FAQs, i.e. commonly occurring questions in using your course - of both a technical and pastoral nature [online]
- Quick Guides, e.g. how to use course tools (e.g. Discussion Forums, and Guidelines for use) [PDFs]

Now take a look at the following resource about preparing students for online learning.

Preparing students for e-learning	By George Siemens, elearnspace, October 2002

4-4 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide links to some of the topics discussed in this chapter.

Evaluating the effectiveness of e-learning	Links to looks at how to evaluate the effectiveness of e-learning
Supporting e-learning	Links to resources that deal with the different types of support services that need to be put in place to support distance learning and e-learning initiatives

PART B: E-LEARNING SOLUTIONS

5

The Internet as a course resource

One of the easiest ways of getting started with e-learning is to use the Internet as a course resource as this requires little expertise with the technology. This Chapter explains how to locate resources and use them in your teaching.

Contents

5-1 Locating resources on the Internet

The Internet is a rich source of materials that will help you provide a more engaging learning experience. You will therefore need to be able to locate appropriate resources and then integrate then into your teaching in the most effective way.

Resources on the Web

These can be both informational and instructional:

Information and reference resources are materials like newspaper articles and general reference websites. Here are a couple of examples:

LibrarySpot	Free virtual library resource center.
Virtual Reference Shelf	From the Library of Congress.

Educational and instructional resources are instructional materials like learning games, activities, quizzes and even online tutorials. Here are a two examples:

BBC Languages	Start up or brush up a language
MIT Open courseware	Free and open educational resources

Resource collections

There have been a number of initiatives to collect resources of either a subject-specific nature or for a specific level (e.g. FE or HE). Here are two examples of **subject specific** resource sites:

Biz/ed	For Business Studies
HUMBUL Humanities Hub	For Humanities

You may find that librarians in your college or university have already created subject-specific guides for your subject. These may also include paper-based resources, i.e. books, journals and other reference materials as well as online databases. Here are two examples of resources sites for different **levels**:

FERL	For FE
RDN Resource Discovery Network	For HE

Searching for resources

You will undoubtedly also want to locate relevant, free-standing resources yourself on the Internet, so you will need to search the Web for suitable resources. You will also need to evaluate these resources for their appropriateness for your students, in terms of their level, style, approach, currency, author and intended audience. The free online tutorials (below) are designed to help students, lecturers and researchers improve their Internet information literacy and IT skills.

Virtual Training Suite	From RDN

5-2 Sharing Internet resources

As you locate Internet resources you will want to record those of interest. One way of doing this is to use the "bookmarking" or "favorites" feature of your web browser. But there are a number of free tools you could use, not only to store the resources but also to share them with your students. They are sometimes known as "social bookmarking" tools.

Furl

Furl is becoming a familiar tool in education. It acts like a "digital filing cabinet". There are three steps to using Furl:

1. Sign up and add Furl to your browser
2. Browse the Web and save any page with a single click
3. Retrieve and share your pages easily.

The easiest way to do this is to have a "Furl It" button right on the toolbar of your browser. When you find something you want to save, you click the "Furl it" button.

Furl	From Looksmart

Here is a useful guide how to make use of Furl:

Furl, Furled, Furling	Jim Wenzloff, February 2005 [PDF]

Other tools

Here are some other free tools you might like to investigate to store your resources and share them with your students.

Backflip	"It's the easiest way to save and share important things you see on the Web. With Backflip's organization and powerful search, you'll never lose anything interesting again. You can use it from any computer."
del.icio.us	"del.icio.us …. allows you to easily add sites you like to your personal collection of links, to categorize those sites with keywords, and to share your collection not only between your own browsers and machines, but also with others."
MyBookmarks	"MyBookmarks … allows you to keep your browser bookmarks and favorites online so you can access them from anywhere. Add instant content to your homepage by optionally making your online bookmarks public."

5-3 Using Internet resources

Here we look at four ways of incorporating Internet resources in your teaching:

1. Creating a resource list in Word
2. Using Internet resources in PowerPoint
3. Using Internet resources with interactive whiteboards
4. Using Internet resources in group activities

But first, a note on copyright: If you want to make use of Internet resources in your teaching, you will need to be aware of current copyright legislation. Copyright laws differ from country to country so it is impossible to list all the legislation here.

The best way to find out information on copyright is to talk to a librarian at your institution. He/she should be able to tell you about your college or university policy. If you are in the UK, you can also take a look at the following resource:

Intellectual property and copyright	From NGFL (National Grid for Learning)

[1] Creating a resource list in Word

If you prefer not to use a tool like those described in 5-2, another way of sharing relevant resources is to create a resource list using Word. This can then either be distributed as hard copy or made available online (as will be shown in Chapter 7).

A resource list (like a reading list) provides the outline details of relevant online resources, usually in the form of URLs. Take a look at the following resource list created in Word.

Grant Administration Resource List	From the US Department of Education [DOC]

To make resource lists usable by students, you will need to give details about what the students will find at the website and what they should look for. It is also better to provide the URLs of a small number of online resources on a subject rather than a long list of URLs on their own. This way students will actually be more likely to use them. You might want to include online resources as part of a more substantial reading list, which also includes paper-based articles, i.e. books, journal articles, etc.

If you want to create an online resource list for your learners so that they can simply click on the resource in question rather than having to re-type the URL, you will need to create hyperlinks in your Word document. If you don't know how to do this or can't remember, then take a look at the following resource:

Using Microsoft Word like a Pro: "Jumping" to other resources using the Insert Hyperlink feature	By Daniel Lake at techLEARNING.com.

[2] Using Internet resources in PowerPoint presentations

There are a number of ways you might want to integrate Internet resources in a presentation, for example, you could (as shown in the example slides):

1. use **elements** of the resource, e.g. quotes, images, etc, in your presentation

2. include **hyperlinks** to the online resources, so that when you click on the presentation it launches the resource directly.

e-Learning Centre

The e-Learning Centre provides a free information resource about all aspects of e-learning – in the Workplace, in education and in continuing professional development

www.e-learningcentre.co.uk

The first may be required where there is no network connection in the teaching room, the second would allow you to provide a live demonstration of the site.

[3] Using Internet resources with interactive whiteboards

Resources found on the Internet could be used with a whole class or small groups using an interactive whiteboard. Interactive whiteboards are becoming more commonplace in classrooms and lecture rooms.

> *"Interactive whiteboards create a range of learning opportunities for both students and teachers. Studies have found them to be highly motivating and learner-centred when integrated innovatively. They offer a powerful facility for integrating media elements into teaching to enhance content and support collaborative learning … They are ideal for small group, collaborative work, where several people can cluster around the board and interact with it as they develop ideas, work with an application or deconstruct an image."*

This is a quote from a Techlearn Briefing document for senior managers in Further and Higher education with responsibility for curriculum development and delivery strategies. Take a look at this Briefing document for ideas about how to use whiteboards.

Interactive Whiteboards in Education	TechLearn Briefing, JISC [PDF]

For some further examples of how whiteboards are used, take a look at the this resource.

Teaching interactively with electronic whiteboards	By John Walley, available at FERL

[4] Using Internet resources in group activities

Another way of using Internet resources is to incorporate them into group activities in the form of student-centred, problem-based or inquiry-based activities. These could be used in class or for coursework or assignments.

WebQuests are an example of inquiry-oriented activities in which some or all of the information that learners interact with comes from resources on the Internet. Although they were originally intended for use with school-age students, they have been found to be of use with adult learners. The concept of WebQuests was created by Bernie Dodge at San Diego State University.

> *"WebQuests are designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis and evaluation."*

A WebQuest consist of the same 6 elements:

1. An **introduction** that sets the stage and provides some background information
2. A **task** that is doable and interesting
3. A set of i**nformation sources** needed to complete the task
4. A description of the **process** the learners should go through in accomplishing the task
5. Some **guidance** on how to organise the information required
6. A **conclusion** that brings closure to the quest, reminds the learners about what they've learned, and perhaps encourages them to extend the experience into other domains.

Now take a look at the following examples of WebQuests:

Advertisers: interpreters of our dreams	From San Diego State University
Fact or fiction: truth, opinion and the web	By Carmen Gonzales.

Designing a WebQuest

If you want to create a WebQuest, then you might find the following resource of use. It explains how to work through the process of creating a WebQuest. It also includes some templates that you can download for those who want to create web-based WebQuests. These are for those who are familiar with web authoring. However, WebQuests can just as easily be created as Word documents - to be handed out as paper documents – so in this case Internet resources will need to be given as URLs rather than as links.

The WebQuest Design Process	From San Diego State University.

5-4 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide links to topics discussed in this chapter.

Copyright and intellectual property rights	Links to resources that consider the issues of copyright and IPR (intellectual property rights) when creating e-learning solutions
Using interactive whiteboards	Links to resources on interactive whiteboards and how to use them
Using Word	Links to resources that that provide you with more information about using Microsoft Word: reviews and tutorials and other materials
Using PowerPoint	Links to resources that provide you with more information about using Microsoft PowerPoint: reviews and tutorials and other materials on how to use it

Content

Here are pages at the e-Learning Centre which provide further links teaching and learning resources on the Internet.

Learning and teaching resources	Links to some collections of learning resource materials suitable for educators in schools, Further and Higher Education

6

A course website

In this Chapter we are going to look at why you might want to create a course website and the different options for doing this, as well as guidance on to how to get started.

Contents

6-1 What is a course website?

Setting up a course website is not imperative for e-learning – you might simply want to use Internet resources within a course without having a formal presence on the web. However, most lecturers will find that a course website is useful as a focus for their course's online activities.

What actually is a course website?

In education it is often referred to as different things - a **course webspace** or even a **course portal** - or as we shall see - even a **virtual learning environment**. But essentially a course website could be:

- a place to store **course content**. This content might include administrative resources like the course syllabus and the course handbook as well as class documents like lecture handouts and presentations, reading lists, assignments and course readers. It therefore acts like an online course repository so that students can easily get hold of materials if they miss lectures or lose them.

- a place where learners come to **communicate and collaborate** with one another. This might may be an essential feature for a course where students meet less frequently face-to-face, e.g. for part-time learners who want to keep in touch and work together online, but where the content is delivered in a traditional format.

- a place to store both **course content** and facilitate **course communications.**

Take a look at these examples of two course websites:

Econ 317	This is an example of a basic course website that **stores online materials** to support or supplement the traditional class. (From Montana State University-Bozeman)
Introduction to Philosophy	This is an example of a course website that stores **online materials** but also provides access to **course communication systems.** (From Montclair State University.)

Setting up a course website

So how do you go about setting up a course website? Well this will depend upon a number of factors:

- the **resources and tools** in place within your department, college or university (as you might have identified in section 3-3)
- whether you are obliged to use university/college tools or want or are able to **do your own thing**; and
- your **skill and confidence** in using the technology (as identified in section 2-4).

In many colleges and universities, staff are encouraged to use an internal Virtual Learning Environment – a system designed to manage, track and deliver online learning to students. (and in section 6-2 we take a look at what this entails). However, there are other ways of establishing a course website, and in section 6-3 we look at some of the other options available to you.

Static or dynamic course website

If the main purpose of your course website is to be a place to store content, then one of the most significant things you will need to consider, is whether it is going to be static or dynamic, and if dynamic, how dynamic it is going to be.

A **static** website is one where you create all the materials in advance and put them all in place prior to the start of the course, and don't modify them as the course progresses.

Of course for the lecturer this might seem like an easy option – providing he/she has all the materials ready in advance of the class. But what is likely to happen is that students will go to the site once, download everything they need and never return – possibly also not attending face-to-face sessions either, believing they have everything they need. So this would not lead to a very propitious start.

A **dynamic** website, on the other hand, is one that changes and grows over the lifetime of the course as new materials are added. A dynamic website will become the focus of the course and students will return to it on a regular basis. You can add to the dynamism of the website by adding announcements and highlighting new resources on a regular basis.

Of course for the lecturer it will take time to maintain the site – but the savings in photocopying and dealing with students who have lost course materials will be recouped, and it will be well worth the effort as it will create a much more supportive learning environment for your students.

You can keep your course website dynamic by putting up new, fresh and interesting information on a fairly regular basis. You should try to give your students a new experience every time they visit the website.

Here are a few simple ideas how to do this

- Provide a daily quote or witty saying.
- Highlight and link to a new, useful resource every week.
- Make course announcements on the site, e.g. assignments due this week, project details ready to download, etc.
- Run a short quiz or poll on a regular basis
- Include some news from another site (see 13-8)

Take a look at this resource which looks at creating a dynamic website.

How do I keep my website fresh, alive and interesting?	From WebsiteTips Newsletter

6-2 Using a Virtual Learning Environment (VLE)

In this section we are going to look at what a Virtual Learning Environments is and how to get started using one.

What is a VLE?

Virtual Learning Environments (VLEs) are becoming commonplace in colleges and universities in the UK as they are a relatively easy-to-use tool for lecturers to create course websites.

JISC defines a Virtual Learning Environment as “a collection of integrated tools enabling the management of online learning, providing a delivery mechanism, student tracking, assessment and access to resources”.

You may well have found out that your institution has a VLE, and its role will be to provide a common delivery platform across a department or college/institution. Examples of VLEs include commercial products like Blackboard and WebCT as well as open source systems like Moodle.

The main **advantage** of a VLE is that it fairly easily lets you build a course website online (without the need for sophisticated web page skills) and populate it with course material. It may also include some communication and collaboration functionality. Students will be required to log in to the VLE to access course materials and communication systems, so there is security and confidentiality within the course space. This also allows lecturers to manage and track student accesses to their site.

One **disadvantage** of VLEs, however, is that they have a lot of functionality, some of hich
may either not be necessary or even appropriate for your course or on the other hand may not be sophisticated enough for your needs.
The functionality of a VLE is normally as follows:

- It provides a method for uploading content to the VLE by the lecturer to be used for creating courses
- It contains an assessment tool to create online tests
- It offers navigation through the content for students
- It provides a range of tools to support communication between students and teachers
- It provides secure, password-controlled access to course content and tools for both students and teachers
- It tracks student accesses, activity and test results

It may seem rather overwhelming when you first take a look at the VLE. So you need to be very clear about what you need and want to do with the VLE. But if you have limited ICT skills and a VLE is in place in your college, then it is probably the easiest place to start since there will also be people to provide you with support on how to use it in your institution.

Take a look at this resource which explains more about VLEs, their features and how they have been used within an Economics Department.

The Handbook for Economics Lecturers: Virtual Learning Environments	From ltsn Economics

Now take a look at these courses created in WebCT that were winners in the WebCT Exemplary Course Project 2003. These provide good ideas for how you might use a VLE.

Spanish 101	From WebCT
Linear Systems and Control	
Open Thinking	

Setting up a course on a VLE

Because of the differences between the VLEs and versions in use, it is impossible to provide generic instructions on how to use them here, especially too since institutions frequently customise the software in different ways.

The first step to getting started is for you to contact your VLE Administrator, so that they can set you up with an account to create courses. They will also be able to point you to some online documentation to help you use the VLE in your college or university.

However, here are some freely accessible resources from a couple of universities that will give you a flavour of how to use Blackboard or WebCT.

Introduction to Blackboard	From The Educational Technology Center at Northeastern University
Using WebCT	From Red River College in Winnipeg, Canada

Initial tasks using a VLE

Once you have an account, you can then begin to set up your course identity:

- Create an individualised look for your course by selecting:
  - course colours
  - button colours and shapes
  - fonts and colours
- Add a short biography of yourself together with contact information and if possible a picture.

Ongoing use of a VLE

Once you have set up your VLE, you will then need to decide how it is going to work for you and your students – rather than how you are going to force fit the functionality of the VLE into your course!

In particular, as VLEs also have functionality to track learners' use of the VLE, you might want to consider how you will make use of this aspect of the system.

Also take a look at this PowerPoint presentation for some ideas on using your VLE.

Deciding what to do with your VLE	By Kevin Silber, Staffordshire University. [PPT]

Keeping your VLE dynamic

You will need to decide how regularly you are going to post materials to it. As the focus of your course you should ideally be managing it daily.

VLEs generally have announcement functionality, which allows you to post a message on the front page. If you are using a VLE you should find out how to do this.

Here are some general instructions on using Announcements in Blackboard and WebCT.

Blackboard communication tools: announcements	From Case Western University
WebCT: Class announcements	From Iowa State University

Further features of VLEs

We will discuss some specific features of VLEs in further Chapters in this Part of the Guide.

6-3 Other options for creating a course website

As explained in the previous sections of this chapter, the commonest approach in education to setting up a course website is to use an institutional VLE, which is a software tool with templates, tools and functionality within it to build the course website in a pre-defined way.

However, you may not need all the functionality contained within a VLE or you may find that the functionality may not be appropriate for your needs so that you would be prefer to develop a course website that is a better fit your own circumstances as well as your students

So, if you don't have access to a VLE, you don't want to use one and you prefer to have the flexibility to design your website's "look and feel" and use a tool or set of tools to develop a course website that will allow you to expand its functionality at your own pace and in your own time as appropriate, here are number of other options that you have

Set up a course blog

Course blogs provide the tools to create a chronological view of your course by posting course materials and generating course discussions at the appropriate time. There are a number of tools to create course blog – both free and commercial. However, course blogging is beginning to take off in education, and is a very good alternative to using a VLE. In Chapter 13 we look at blogging in general as well as how to set up a course blog.

Use a group workspace

There are a number of tools available that provide a place to store files to be used by students as well as functionality for communication between learners. Although these are not dedicated learning tools - the free tools tend to be used by clubs and other organizations like this, whilst the commercial ones are used by project teams in businesses - they do provide the core functionality for creating a course website. In Chapter 19 we look at using a group workspce for course or group purposes.

Use web-based tools

There are a number of tools that provide the functionality to build content online as well as deliver it online whereas others based on open source VLE technology, offer full functionality. Here are a couple of examples.

ScribeStudio	" web portal to quickly assemble an e-learning site where their students can access the courseware, program or assessment materials"
OurWebClass	"it includes course modules assignment, quiz, journal, chat, workshops, etc"

Use web page/site authoring tools

This approach provides you with full flexibility in terms of look and feel of your website design. However, it does require you to have a good knowledge of web page design as well as space to host your course. In section 6-4, we are going to take a look at how to use web authoring tools to create a course website in this way.

6-4 Using web page authoring tools

To set up a course website using web page authoring tools you will first need to have access to some space on a webserver where you can store your web pages - possibly a department or college webserver.

However, if you don't have access to a webserver in your college or university to store your webpages, then here are some suggestions as to where you might start.

- **Your ISP's webserve**r: If you have a personal dialup or broadband connection, you might find that you are entitled to some free webspace.
- **A webhosting service**: There are many web hosting organisations that provide either free web space or else charge for it. However, with free webhosting service you will have to put up with adverts on the pages.

Here is an example of a webhosting service that offers both free and paid-for web hosting:

Yahoo! GeoCities Free	Also includes free SiteBuilder software

A course home page

A course home page is the first or main page of the course website and acts as a gateway to the course materials. Hence it needs to provide a usable entry point so that students can find what they need.

Take a look at these examples of course home pages and in particular the different approaches that have been taken to providing a "gateway" to the course materials.

American History 102	From the University of Wisconsin
Strategic Accounting	From the University of Memphis
Galaxies and the expanding universe	From the University of Oregon
Humans in the natural world	From the University of Guelph

A course home page provides an opportunity for establishing a distinct course identity that is enticing and interesting, and as you are creating the home page yourself, you will have an opportunity of designing something that expresses your own identify.

Of course the sophistication of the design of your course home page will depend upon your design skills and the tools you use to build web pages. However, if you are a beginner at designing a webpage, it is probably best to keep it simple.

Web page development

In the early days of the Web, web page designers had to build web pages using HTML (Hypertext Mark up Language). Nowadays there are a number of web page authoring tools available, which range from the very simple to the very sophisticated. Here are just three.

Microsoft Word	From Microsoft
Microsoft FrontPage	
Macromedia Dreamweaver	From Macromedia

Although a knowledge of HTML is no longer necessary, it can sometimes be very helpful. Here are a couple of examples of useful resources on HTML if you want to find out more.

Sizzling Jalfrezi	A comprehensive guide to writing web sites
Learning HTML	A free web-based course from TrainingTools.com

Note, creating sophisticated web pages nowadays actually requires more than just a knowledge of HTML, and that includes JavaScript, XML, etc.

Web pages can be significantly enhanced by using graphics, images or photos. There are a number of good tools to help you create and edit images, and these range from those intended for amateurs to those suitable for graphic design professionals. Here are just two.

Paint Shop Pro	From Jasc Software
Photoshop® CS software	From Adobe

Some of the major web development tools come with clip art galleries within them that you can use. But if you can't produce images, graphics, animations or photos yourself, then you could always use a public domain graphic or icon to illustrate your page, although you need to make sure you observe any copyright restrictions.

JAC Clipart Archive	Public domain images
Animation Factory	Easy to use animations
Freefoto.com	Large collection of free photographs for private non-commercial use

Web page design

Designing web pages requires some thought, in particular about the ways people read and use materials on screen, rather than on paper.

There have been a lot of excellent resources written on web design, but this is one of the best Guides available.

Web Style Guide	Now in its second edition By Patrick Lynch and Sarah Horton.

These are the principles we try to adhere to when creating web pages:

- Keep the width of the page to between 600-800 pixels. Use a table to create the correct page width.
- Ensure the reading line is no more than about 12-13 words.
- Watch the length of the page; although users are happy to scroll down pages, they shouldn't have to go too far.
- Use lots of white space.
- Use a light background with dark text.
- Use a non-serif font (like Arial) and a standard font size of 10-12 point.

And here are some thoughts from Jakob Nielsen, an expert in web usability, which should be borne in mind when creating web pages.

> "People rarely read web pages word by word; instead they scan the page, picking out individual words and sentences."

> "Reading speeds are more than 25% slower from computer screens than paper, but that doesn't mean you should write 25% less, you should write 50% less. Users recklessly skip over any text they deem to be fluff."

Find out more about website usability at Jakob Nielsen's website.

Useit.com	Jakob Nielsen's website

Web announcement

To ensure your course website is dynamic, you can display web announcements on the home page. There are a couple of ways to do this

- simply enter a static text message in a prominent position on the homepage. This could be just a few lines with a line to page of further information
- use some scrolling text to guide the learner's eye visually to the message.

Scrolling text messages are also known as marquees. If you use a tool like Word, FrontPage or Dreamweaver, you should be able to select this functionality to create a marquee automatically. If however, you are using a less sophisticated authoring tool, then you can include a piece of JavaScript.

Take a look at this resource which explains how to include a piece of JavaScript code into a web page.

Scrolls: Marquees	From the JavaScript Source

Accessibility issues

Something that you will need to give some thought to, is making sure your site is accessible by all – particularly those with visual and other impairments. Take a look at this chapter of an online book which provides some advice for creating accessible e-learning.

Creating accessible e-learning resources for disabled students	Teachability, University of Strathclyde

6-5 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide links to topics discussed in this chapter.

Virtual Learning Environments	Links to resources that explain what VLEs are and how to use them
Using Blackboard	Links to a number of resources that provide you with more information about Blackboard: reviews and tutorials and other materials on how to use it
Using WebCT	Links to a number of resources that provide you with more information about using email, in particular WebCT reviews and tutorials and other materials on how to use it
Web design	Links to resources that deal with general style and web design guidelines when creating e-learning solutions for the Web
HTML	Links to resources that help and support with using HTML to create web-based e-learning solutions
Javascript	Links to resources that offer help and support with JavaScript
Animation	Links to resources concerned with creating animation
Accessible e-learning	Links to resources on accessible e-learning, with particular emphasis on its accessibility to people with disabilities

Tools and systems

Here are pages at the e-Learning Centre which provide links to tools discussed in this chapter

Educational course management systems and VLEs	Links to commercial Course Management Systems/Virtual Learning Environments intended for the Higher Education market
Open source educational course management systems and VLEs	Links to open source Course Management Systems aimed at the Higher Education market
Web page authoring tools	Links to some web authoring and site management tools
Graphics and animation tools	Links to a variety of tools that can be used for the production of graphics, animation, pictures and for photo editing
Image galleries	Links to number of image galleries where you can find clipart, photos and animation etc to use in e-learning

7

Course documents and presentations

In this Chapter we are going to look at the type of documents and presentation you might want to put online and how to do this.

Contents

7-1 What are course documents and presentations?

The type of documents and presentations you might want to put online will be:

- **administrative materials** like the syllabus, study guide, etc;
- **teaching materials** like lecture presentations, lecture handouts, reading lists, activities, assignments etc.

Below are some examples of courses that provide materials of this type online.

These materials are in different formats, so to view them you will need a web browser to view the HTML materials, Word (or Word viewer) to view the DOCs, PowerPoint (or PowerPoint viewer) to view the PPTs and Adobe reader to view the PDFs Here are some free viewers and readers to download if not already installed on your computer

Viewers for Word 97/2000	Free Word viewer from Microsoft if you don't have Word installed
PowerPoint Viewers	Free PowerPoint viewers if you don't have PowerPoint installed
Viewers for PowerPoint 2003	
	Free Adobe Reader 7.

Li.2 Language history and use	Details of lectures and supervisions for Section A of Li.2 (Language history and use), Cambridge University [PDF]
Operating Systems	Lecture Notes from MIT Laboratory for Computer Science [HTML]
SP479: Politics and the Internet	An online reading list from the National University of Ireland, Galway [DOC]
BA (Mod) Information and Communications Technology	Course handbook from the Dept of Computer Science, Trinity College, Dublin [HTML]
Econ 317	Lecture presentations form Montana State University [PPT]
Anthropology 212	Lecture presentations [as PDFs] from the University of Nebraska-Lincoln

Course documents and presentations have an important part to play as supporting course resources, but they should not be allowed to replace instructional resources.

Documents and presentations cost very little to produce and the tools to create them - Word, PowerPoint - are generally available in house. Documents and presentations created in these formats take very little time to produce and place online

7-2 Putting course documents online

There are a number of ways of placing textual documents online. If you have created a document using Word, there are three options:

1. Leave the file in its original Word format
2. Convert the file to a PDF file
3. Convert the file into a web page.

These are described in detail below

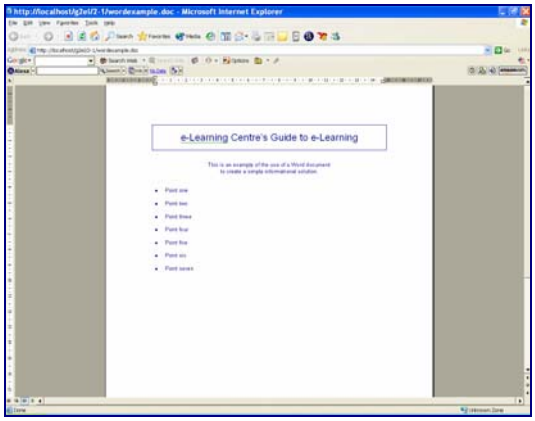
[1] Leave the file in its original Word format

To place a Word document online:

- Upload the Word document into your course webspace.
- Create a hyperlink to the Word document using its full file name, e.g. **name.doc** Note, it must have the file extension .**doc**

  If the document is based on another server or in another directory, you will have to add those details too, e.g. **www.host.com/directory/name.doc**

When a user clicks the link, depending on the browser and version of the browser they are using, the Word document will load in Word itself. However, this does require users to have Word (or a Word viewer) installed on their computer to view the file.



[2] Convert the Word file to a PDF document

PDF stands for Portable Document Format. The advantage of a PDF file is that it preserves the original formatting, so for instance if your Word document uses a special font or is laid out in a particular way, this will be retained in the PDF file. Additionally, a PDF cannot be edited by anybody else (unlike the original Word document).

To convert a Word document into a PDF, you will need to have a copy of PDF creation software. Here are two tools:

Adobe Acrobat	From Adobe – a commercial product
CutePDF Writer	CutePDF Writer is free

These are the instructions to convert a Word document into a PDF file using Adobe Acrobat and Cute PDFWriter, which you first need to install on your computer.

Using Adobe Acrobat

- Open the Word document.
- Convert this Word document into a PDF by selecting “Convert to Adobe PDF” from the menu item “Adobe PDF”.
- Give the file a name – you can use the same name as the Word document – but the file extension will now be **.pdf**

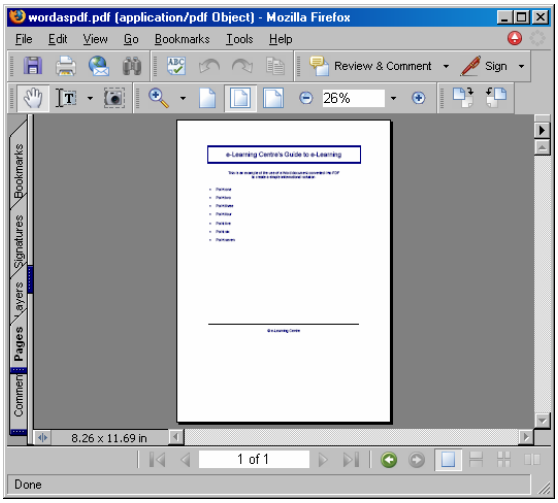
Using CutePDF Writer

- Open the Word document.
- Select Print from the File menu.
- In the Printer name select “CutePDFWriter” and click OK.
- In the Save As box, you will need to give the file a name. This can be the same as the Word document, except it will now have the file extension **.pdf**

In both cases:

- Upload the PDF file into your course webspace.
- Create a link to it using the correct filename extension **.pdf** e.g. **name.pdf**

For learners to view the PDFs, they will have to have a copy of the free Adobe reader.



[3] Convert the Word file to a web page

Word has functionality to convert a document into a web page automatically and effortlessly without requiring you to have any knowledge of HTML or web design.

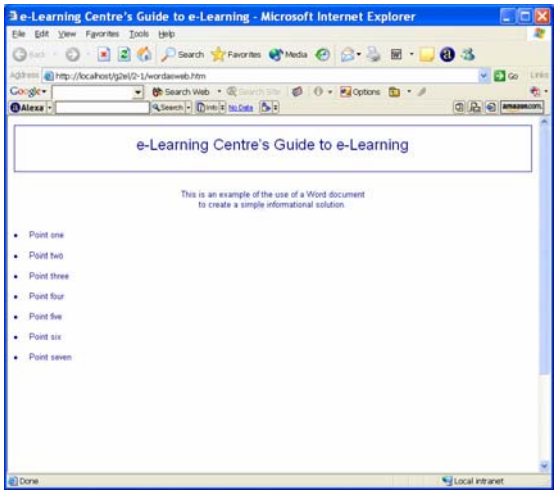
- Open the Word document.
- Select “Save as ...” from the File menu.
- Select the File type “Web page” from the pull-down list. (Note with older versions of Word, it might be “Save as HTML” or “Save as Web”.).
  This document will now have the file extension **.htm**

If you want to, you can now enhance the web page you have created to give it a more consistent look with, say, your website design or any other web pages you have created.

Take a look at this quick tutorial which explains how to use Word's HTML functionality:

Word pages on the Web	From UMIST.

Now you are ready to upload the file into your course webspace and link to it using its full filename, e.g. **name.htm** When users click the link, their browsers will load this page like any other web page.



More complex online documents

If you want to put more complex documents online like e-readers, these are discussed in Chapter 8.

7-3 Putting course presentations online

There are a number of ways of placing presentations online. If you have created a presentation using PowerPoint, there are three options:

1. Leave the file in its original PowerPoint format
2. Convert the file to a PDF file
3. Convert the file into a web page.

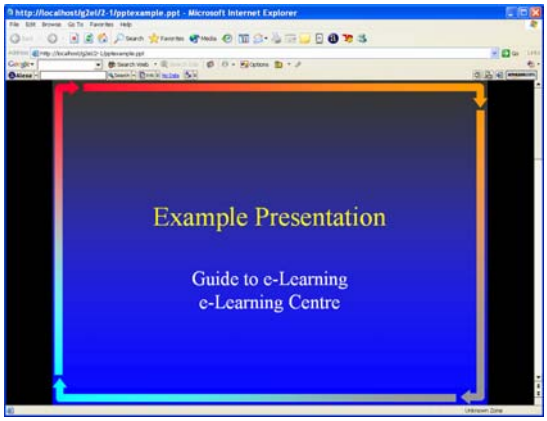
These are described in detail below:

[1] Leave the file in its original PowerPoint format

To place a PowerPoint presentation online:

- Upload the PowerPoint presentation into your course webspace.
- Create a link to the PowerPoint presentation. Once again this will depend on where you are hosting the documents, but will mean creating a hyperlink to the PowerPoint presentation using its full file name, e.g. **name.ppt** – that is it must have the file extension **ppt**
  Note: If the presentation is based on another server or in another directory, you will have to add those details too, e.g. **http://www.host.com/directory/name.ppt**

When a user clicks the link, depending on the browser and version of the browser they are using, the PowerPoint presentation will load in PowerPoint itself. However, this does require users to have PowerPoint (or a PowerPoint viewer) installed on their computer to view the file.



[2] Convert the PowerPoint file to a PDF document

PDF stands for Portable Document File. The advantage of a PDF file is that it cannot be edited by anybody (unlike the original PowerPoint presentation). However, the disadvantage is that pages are static and any animation in the original presentation is lost. To convert a PowerPoint presentation into a PDF, you will need to have a copy of PDF creation software

Adobe Acrobat	From Adobe – a commercial product
CutePDF Writer	CutePDF Writer is free

Here are the instructions to convert a PowerPoint presentation into a PDF file using Adobe Acrobat and Cute PDFWriter, which you first need to install on your computer.

Using Adobe Acrobat

- Open the PowerPoint presentation.
- Convert this presentation into a PDF by selecting “Convert to Adobe PDF” from the menu item “Adobe PDF”.
- Give the file a name – you can use the same name as the PowerPoint presentation – but the file extension will now be **.pdf**

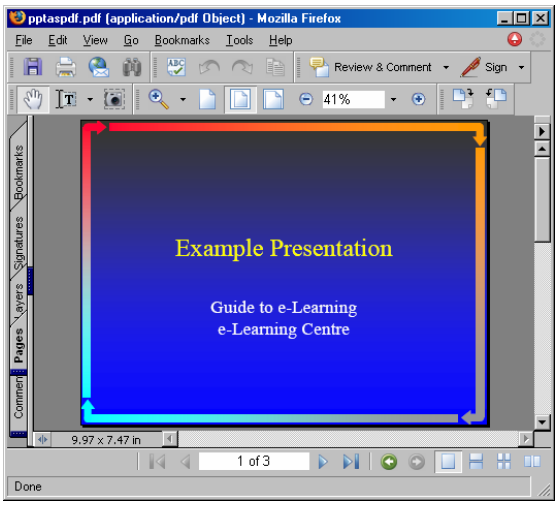
Using CutePDF Writer

- Open the PowerPoint presentation.
- Select Print from the File menu.
- In the Printer name select “CutePDFWriter” and click OK.
- In the Save As box, you will need to give the file a name. This can be the same as the PowerPoint presentation, except it will now have the file extension **.pdf**

In both cases:

- Upload the PDF file into your course webspace.
- Create a link to it using the correct filename extension **.pdf** e.g. **name.pdf**

In order to read the PDF file, the user will need to have a copy of the free Adobe reader installed on their computer.

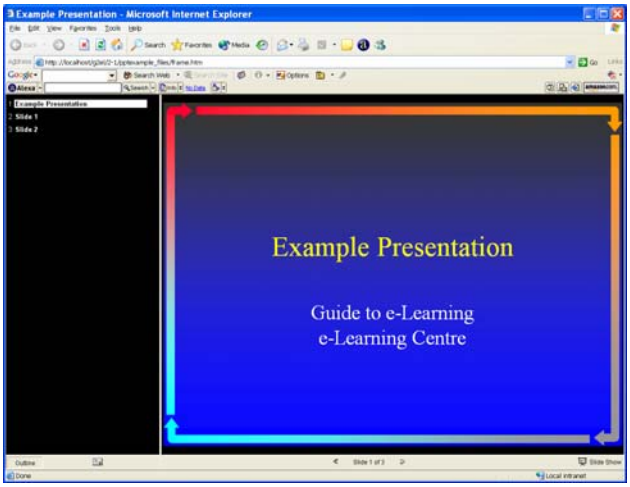


[3] Convert the PowerPoint file to a web page

PowerPoint has functionality to convert a presentation into a web–based version automatically and effortlessly without requiring you to have any knowledge of HTML.

- Open the PowerPoint presentation.
- Select “Save as ...” from the File menu.
- Select the File type “Web page” from the pull-down list. (Note with older versions of PowerPoint, it might be “Save as HTML” or “Save as Web”.)
- This document will now have the file extension **.htm**
- Upload the files into your course webspace. Note that there are also a number of files in a folder with a similar name that will have to be uploaded too.
- Link to the web-based presentation using the full filename, e.g. **name.htm**

When users click the link, their browsers will read this page like any other web page.



Other ways of delivering PowerPoint presentations

There are a number of other ways of delivering presentations

- with recorded audio and/or video narrations – see Chapter 12
- within instant messaging sessions with small groups – see Chapter 17
- within live, virtual classrooms – see Chapter 20

7-4 Documents and presentations on a PDA

Microsoft Word documents

Pocket PCs generally have built-in support for Word documents in the form of Pocket Word, which means that Word documents can be easily read on them. Palms on the other hand do not generally have support for MS Office documents, but there is a lot of 3rd-party support which does provides this functionality.

Microsoft PowerPoint presentations

Neither Pocket PCs nor Palms come with built-in support for PowerPoint. However, in both cases there are 3rd party products that can provide this, for example:

PocketSlides	From Conduits.
Pocket SlideShow	From CNetX

Adobe PDF files

PDF files can be read on Pocket PCs and Palms using the appropriate reader.

	Free Adobe reader.

Web pages

Pocket PCs come with a version of Internet Explorer on board and Palms have their own web browsers, which means that web pages can be viewed on PDAs, either online or having been transferred to the PDA and viewed locally.

Although Internet Explorer attempts to make normal Web pages fit the small screen using its "Fit to screen" option, this isn't always ideal, and not many web pages are optimised for viewing on the small screen.

If you are creating web pages for use on a PDA, you can use normal web authoring tools to do this (as described in Chapter 6), but of course when designing a web page for viewing on a PDA you need to be aware of the limitations of the screen size etc. Here is a useful resource.

Downsize your web site	"Don Sorcinelli, apc Magazine, February 2004

7-5 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide links to topics discussed in this chapter.

Using Word	Links to a number of resources that provide you with more information about Word: reviews and tutorials and other materials on how to use it
Using PowerPoint	Links to a number of resources that provide you with more information about PowerPoint: reviews and tutorials and other materials on how to use it
Using Adobe Acrobat	Links to a number of resources that provide you with more information about Adobe Acrobat: reviews and tutorials and other materials on how to use it

Tools and systems

Here are pages at the e-Learning Centre which provide links to tools discussed in this chapter.

PDF tools	Links to tools for creating and viewing PDF (portable document files). Listed in alphabetical order
PDA tools for mobile learning	Links to tools for PDAs for use in creating or reading mobile learning solutions

8

Course readers and academic e-books

In this Chapter we are going to take a look at e-book technology and how to create a course reader or course textbook.

Contents

8-1 What is an e-book?

In the early days of the Web, authors often produced "hypertext books" - essentially a series of linked, linear web pages. However, we have now seen the emergence of e-books. So what is an e-book? Take a look at this article, which provides a brief history.

"In the beginning, there were e-books…" A Brief History of the e-book Revolution	ByKaty Davies, Anita Fitzsimmons and Eleanor MacLeod. SoCBytes, 2001, Napier University.

e-Books offer much more than just turning the pages electronically by hand. This short slide-show introduces you to some of the advantages of e-books. Read more in the link below.

> *"Twenty years ago, the word processor gave us a more flexible, powerful approach to writing. Today, the e-book promises a similar revolution in how we read. Why? Because we don't just read an academic text, we work with it: making notes in the margin or in a notebook, searching for related ideas, organizing its contents according to your research needs. E-books give us the tools to do all of those tasks more efficiently."*

Making text more accessible	From Academic Materials

e-Books also mean:

- They can be produced on demand.
- They can include only the relevant chapters or materials that are required.
- The content in books and documents can be better controlled; i.e. only the legitimate owner of the book can read it. It cannot be copied or "lent" to another reader. This is an area known as digital rights management (or DRM).

e-Books - and in particular academic e-books have an important place in Further and Higher Education. This article explains why.

Digitizing education: a primer on e-books	By Michael A Looney and Mark Sheehan, Educause (PDF)

It is now possible to buy academic textbooks in e-book format, and e-book technology means that you don't have to have the complete textbook in its original format, you can customise it to your needs by taking the chapters you like, changing the order and adding in syllabus and class notes. So, with e-book technology you can create your own course reader or course pack, bringing together in one place all the readings required for your course. The following article puts the case for online course packs and readers in education.

> *"In order for an online course to be truly digital, all aspects of it must be converted so the student has similar experiences within this delivery system. Although some individuals feel that a traditional textbook is more appropriate, the difference in look, feel, and quality is almost the same when electronic books are adopted. Students have an option of downloading and printing the electronic materials or of just reading the material while connected to the Internet."*

The case for online coursepacks and course readers	Barry W Birnbaum, e-Learning Dialogue, Campus Technology, 23 June 2004

Formats for e-books

There are a number of formats for e-books for PCs, so you have to have the correct reader to read an e-book. Here are the two free main readers

DOWNLOAD Microsoft Reader	Microsoft Reader for desktop and laptop Windows-based PCs.
Get Adobe Reader	Adobe readers for Windows and Mac computers.

Finding e-books

e-Books and academic e-textbooks are available both free and at cost. Here are some places to find e-books.

Free e-Books	Free-eBooks.net
The e-Book Directory	e-Book Directory
Taylor and Francis	Academic eBookstore from Taylor and Francis
eBooks.com	Academic bestsellers from eBooks.com

Creating e-books

There are organization that will convert existing materials to an e-book for you, often also providing print on demand (POD) services (in hardback or paperback) so that you only have to print the copies you want as you need them. Here is an example of a service offered for the academic community.

McGraw Hill Primis Online eBook service	"your leading provider of custom products in print and electronic formats."

However, in the next section, we explain how it is possible to create your own academic e-book or course reader yourself.

8-2 Creating an e-book

Once you have decided to create an e-book, you will first need to decide in what format you are going to distribute it, and then use the appropriate tool to create it.

Here are the tools required to create e-books for the two main e-book formats:

Read in Microsoft Reader	This add-in for Microsoft Word enables you to convert any Word document into a Microsoft Reader format e-Book in just a few simple steps." Free to download.
Adobe Acrobat	This is a commercial product to convert a book written in Word into an Adobe e-book.

However, to create an e-book you don't just need to know how to use the tools, you will also need to know how to lay out the book. Here are two guides which will help you create e-books using the relevant tool.

Layout Guide	"This guide explains the various types of books that Microsoft Reader can handle and provides sample code for common layout features, from tables of contents to drop caps, and from poetry to cookbooks." From Microsoft. (DOC)
How to create Adobe PDF ebooks	"A step-by-step guide that covers the basics of creating and optimising Adobe Portable Document Format files so that they can be viewed as electronic books." From Adobe. (PDF)

Here are some basic instructions for creating an e-book using Microsoft Read in Microsoft Reader and Adobe Acrobat

Using Microsoft Read in Microsoft Reader to create an e-book

Once you have installed Read in Microsoft Reader a new command will appear in the File menu: Read. To convert a document in Word into a Microsoft e-book, just select Read.

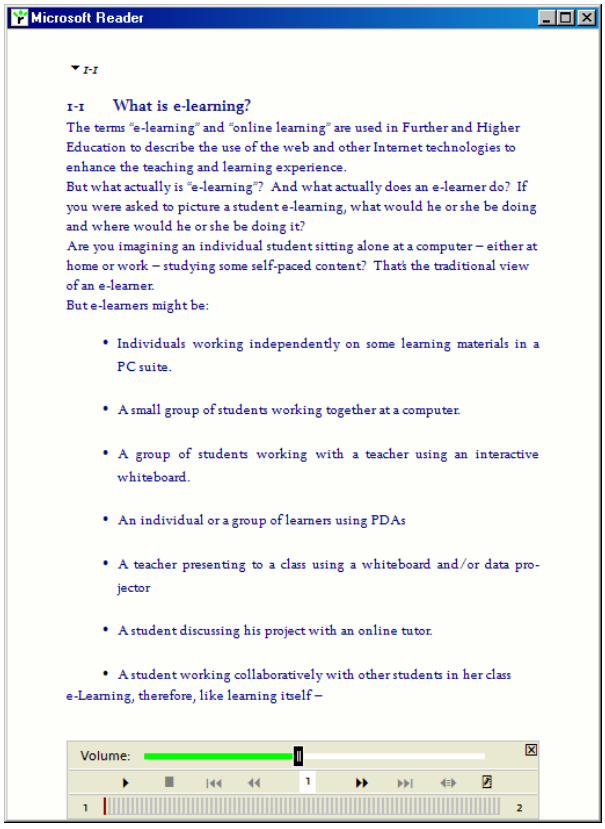
Using Adobe Acrobat to create an e-book

Once you have installed Adobe Acrobat, a new item will appear on the Word menu bar - Adobe PDF. To convert a document into an Adobe e-Book (PDF), select "Convert to Adobe PDF" from the new menu item.

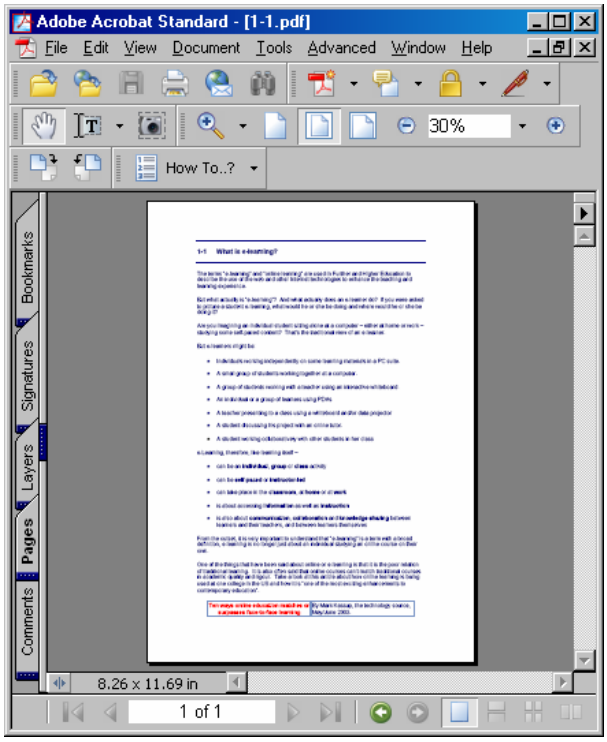
If you want to protect an e-book so that it can only be read by a bona fide user or set it up so that it can only be viewed online and not printed, then you can assign a password to an e-book.

In the examples on the next page are screenshots of a page from the Guide to e-Learning converted into both Microsoft and Adobe e-book format, so that you can compare the output.

Example A: Page from Guide to e-Learning in Microsoft e-book format



Example B: Page from Guide to e-Learning in Adobe e-book (PDF) format



8-3 e-Books on PDAs

The two main readers for e-books on PCs - Microsoft Reader and Adobe Reader - are also available for PDAs. Hence the e-book tools described above can be used to create e-books in these formats for PDAs. Here are the readers for PDAs.

	"Microsoft Reader for Pocket PC comes pre-installed on most Pocket PC 2002 and Pocket PC 2003 devices."
	Free readers for Palms and Pocket PCs

There are also a couple of other e-book formats for PDAs.

Palm Digital Media

This format is available for both Palms and Pocket PCs. Here are some links to the reader, a guide to using the reader, and a document on how to create e-books in this format.

	You can try out the Pro features for up to 15 days." Also available for Pocket PC. From Palm Digital Media
Using Palm Reader	A guide to using the palm reader. From Palm Digital Media
Make your own books	Palm DropBook and MakeBook From Palm Digital Media

Mobipocket reader

With the Mobipocket reader you can read e-books produced in this format including dictionaries, you can synchronize e-news channels and also view your personal documents.

Mobipocket Reader	Free 14-day trial version available

See also the Mobipocket site for e-books that can be read using the Mobipocket reader and create e-books using the Mobipocket Creator

Mobipocket eBookstore	eBooks, eDictionaries, eMedical and eLearning
Mobipocket Creator	Free 14-day trial version available

8-4 Chapter resource list

Reading

Here are links to pages at the e-Learning Centre which provide more information on e-books.

e-Books and e-textbooks	Links to resources about e-books and e-textbooks and the part they can play in education and training
Digital Rights Management	Links to resources on digital rights management (DRM).

Content

Here are links to pages at the e-Learning Centre for more off-the-shelf e-books.

e-Books	Links to collections of e-books and e-textbooks

Tools

Here are pages at the e-Learning Centre where you will more information about e-book tools.

e-Book tools	Links to tools useful for creating and reading e-books on your PC or mobile device
PDA tools for mobile learning	Links to tools for PDAs for use in creating or reading mobile learning solutions

9

Interactive resources, quizzes, tests and games

In this Chapter we are going to look at different types of interactivity, quizzes, tests and games and how to create them.

Contents

9-1 What is interactivity?

Learning is not just about presenting information, it is also about providing opportunities for action, application and interaction.

"Interaction" is an over-used word, but it is meant to describe a learner's engagement or involvement in the learning process. "Interaction" can be with content and with people. In this Chapter we are concerned with interaction with content; in later chapters of this Guide we will look at interaction with people.

A definition of interaction is: "where some response is elicited from the user AND in turn the content is able to respond the user's input".

Frequently, learning materials are described as "interactive", when all they require is the learner to click on a forward button to move to the next page. Although, that description of interactivity is consistent with our definition of interaction above, here we want to look at much richer types of interaction.

Interactive activities can be used as reference materials, practice or exercise materials as well as for testing purposes. Interactive materials can also provide students with "on demand" resources to help them develop their understanding of their subject and test their knowledge.

The examples below are provided to give you a feel for the range of interactive activities, quizzes, tests and games possible - from the very basic to the more sophisticated.

Examples of basic interactivity and testing

Fact or opinion	An interactive PowerPoint activity By Stephen Woulds, FERL website
Word choice	Keep track of your results with these exercises. From Get Bitten! Grammar Bytes.
Subject-Verb Agreement	
Biochemical engineering quiz	A very basic self-assessment. From Rensselaer Polytechnic Institute.

More complex interactivity and testing

Highway code quiz for UK: What's this sign?	Score your results. From QAX.
Microsoft Word assessment	This test processes the results and stores them for reporting. A demo from QuestionMark Perception. (Select it from the list)

Animated interactivity

To view these animated, interactive activities and games you will need the Flash player.

	Free Flash Player to download

Skull	This very visual exercise has been designed to help you learn about the skull. You drag the labels to the correct positions. Produced by Sean Jackson.
Britain's Rocky past	An interactive timeline from the BBC.
Blood Typing	Here you have to find out about blood typing to ensure you save all the patients' lives. From Nobelprize.org
The Reconstructors: Solve medicinal mysteries from the past	A series of games, e.g. Episode 1 is about pain relief. From Rice Unversity, USA.

9-2 Creating quizzes, tests and games

The type of quiz or test you create will depend upon whether it is to be:

- an **informal** quiz for self-assessment purposes – this way you won't have to gather results, nor need to mark the quizzes yourself
- a **formal** test – that will require results to be collected and scored

In the following parts of this chapter we look at some different tools for creating online quizzes, tests and games. Some are suitable for informal situations others for more formal testing.

Basic interactivity, tests, quizzes and games can be achieved very quickly and cheaply, but more complex interactive resources require more sophisticated tools and systems and skills. Development time involves both designing the interactive activity itself as well as developing it using the relevant tool.

Developing good quizzes and tests

Although there are a number of testing tools on the market which are very easy to use, this means it can actually make the whole area of creating online tests too easy. In other words, it is very easy to create an online test, but it is also very easy to create a poorly written online test which has many ambiguous questions. Hence test writers need to understand how to create effective tests. Take a look at the following resources:

Building better e-assessments	Margaret Driscoll, Learning Circuits, June 2001
What are objective test questions?	From CAAC, the Computer Assisted Assessment Centre.

Security of online testing

One of the obvious problems with formal testing online is ensuring that the person taking the test is bona fide. Take a look at this article which discusses current practices in online testing.

Security for online testing	From the Encyclopaedia of Educational Technology

Tests and quizzes are therefore best used for less formal assessment purposes and for helping learners keep on track. When they are used in critical testing situations, other security measures may need to be put in place to ensure the correct person takes the test.

9-3 Using PowerPoint

PowerPoint is much more than a linear presentation tool. The 97 and later versions of PowerPoint support branching navigation, including custom buttons and menus. These features make PowerPoint a powerful and flexible tool for creating interactive resources: quizzes, lessons or tutorials, and as such are one of the simplest ways of creating interactive learning materials for students without requiring a high level of IT expertise.

Resources created using PowerPoint [like the *Fact or opinion* example in 9-1] can be also be used with an interactive whiteboard or placed online for individual use by students.

Creating an interactive resource with PowerPoint

By making good use of **action buttons** and **hyperlinks**, you can allow the learner to control the resource and navigate in different ways through it. For instance, you can place action buttons/hyperlinks on slides to

- allow the student to move backward and forward through the slides
- take the user to another slide (out of a linear sequence)
- create a template with a fixed table of contents (this is useful for a more extensive interactive resources like a tutorial).

Take a look at the following resources which explain how to get started with creating interactive resources of this kind.

Making PowerPoint interactive with hyperlinks	By Victor A Matheson, Dawn Abt-Perkins and Diane Sneddon, The Higher Education Academy, Economics Network
Interactive PowerPoint	By Connie Campbell
Creating interactive presentations using PowerPoint 2002	From the College of Education and the University of Illinois at Urbana Champaign [DOC]

And here are some resources which explain how to create interactivity with PowerPoint.

Creating interactivity with PowerPoint 2000	From the College of Education at the University of Illinois at Urbana-Champaign [DOC]
Creating interactivity with PowerPoint XP	

PowerPoint templates

It is also possible to download PowerPoint templates which have the structure of a quiz already in place – ready for you to enter the content. Here you can download the template to crate a quiz based on the “Who wants to be a millionaire?” TV gameshow, including all the relevant sound files.

Who wants to be a millionaire template	By Mark E Damon [ZIP]

9-4 Using Hot Potatoes

Hot Potatoes is a well known educational testing tool, It includes six applications, enabling you to create interactive multiple-choice, short-answer, jumbled-sentence, crossword, matching/ordering and gap-fill exercises for the World Wide Web

[The *Word choice* and *Subject-Verb Agreement* exercises were created using Hot Potatoes.]

Getting hold of Hot Potatoes

Although Hot Potatoes is not freeware, it is free of charge for those working for publicly-funded non-profit-making educational institutions who make their pages available on the web. Other users must pay for a licence.

If you do not have a copy of Hot Potatoes, you can download it here and install it on your computer.

Hot Potatoes	For Windows 98/ME/NT4/2000/XP

Using Hot Potatoes

Run the program and work through the Hot Potatoes Tutorial. The presentation will introduce the main exercise types produced by the programs, and take you through the basic steps involved in creating an interactive exercise and creating a web-based version. You will then be ready to create your first exercise using Hot Potatoes.

Here is a guide that you might find useful in helping you to use Hot Potatoes

Using Hot Potatoes – a guide to the top 3	From Peter Symonds College Winchester, October 2000 [DOC

Once you have created your exercise or test, you will want to make it available to your students. If you have a licence for Hot Potatoes then you could upload it into any password protected site, otherwise you will need to put it in a place where it is publicly available.

The Hot Potatoes hosting and results service allows you to upload your exercises and record results. You can even set up accounts for your students to log in.

hotpotatoes.net	hosting and results service

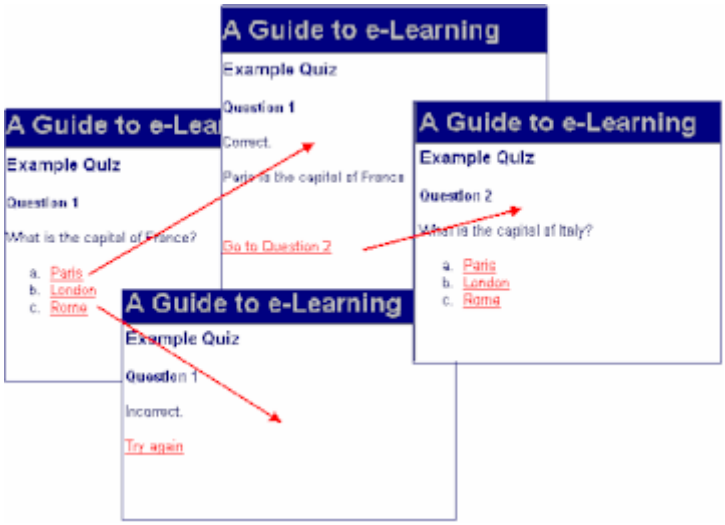
9-5 Using Word or a web authoring tool

Very simple web-based quizzes [like the *Biochemical engineering* quiz shown in 9-1] can be created by simply linking together a number of web pages using Word or a web authoring tool.

Take a look at the following example of a simple quiz which consists of just two questions and has been set up to let learners self-assess their knowledge of European capitals.

Capitals quiz	From the e-Learning Centre

It consists a number of web pages linked together to create the quiz. Here's how the pages have been linked together.



If you are using Word, you will need to use the HTML hyperlink functionality to join the pages together. Here is a resource which explains how to using hyperlinking.

Using Microsoft Word like a Pro: "Jumping" to other resources using the Insert Hyperlink feature	By Daniel Lake at techLEARNING.com.

Note: When creating the web pages, make sure you use the same colour for both the link and the visited link to the incorrect page, otherwise learners will be able to spot the correct answer when they return to the question having visited the incorrect page, since the links to all the other incorrect answers will now appear in the same colour!

9-6 Using other testing and gameshow tools

More sophisticated testing tools not only score user input, but also record it and make it available to authorised parties. This is done by server-based testing tools that use a database for the recording of data.

VLEs

If you are using a Virtual Learning Environment tool for your online course presence, e.g. Blackboard or WebCT, you will find that it contains functionality to create quizzes and tests within it as well as record results.

Since the instructions to do this are different for each system, if you want to use your VLE to create a quiz or test, it will be necessary for you to find out how to do this yourself. But here are some general resources that might help:

Create a Blackboard Quiz	From Virginia Commonwealth University
Creating a quiz in WebCT	From Academic Computing Services, Northern Michigan University

Other testing tools

More complex tests [like the *Highway Code quiz* shown in 9-1] give the user an immediate response to their input by processing the data and keep a running record of their score.

In the case of this quiz, this was done using a CGI script. This is a small program that sits on the server and processes the input data and then returns a result. Programming and scripting languages, like CGI scripting, Java programming and JavaScript, can therefore be used to add far more functionality to web pages than is possible with basic HTML.

In Chapter 10 we look at creating activities that process input data from learners using web authoring tools and online forms services

However, there a number of other powerful testing tools on the market that score and store results for you [like the *Microsoft Word assessment* shown in 9-1]. This was created using the commercial product Questionmark Perception. Questionmark can be run as a stand-alone product or integrated with a VLE so that the test data created is managed by the VLE.

Perception	From Questionmark

However, there are free alternatives, for example:

Questionmarker	for teachers and trainers to set on-line questions for tests and exams

Also some of the sophisticated course authoring tools (to be discussed in Chapter 15) have the functionality to create scored tests.

Gameshow tools

If you want to give your material a more "gamesy" feel, then there is quite a lot of gameshow software available. A marketplace for gameshow tools has begun to develop, especially since learning games are now being embraced in corporate training. Games like "Who wants to be a millionaire?" or Solitaire are particularly popular.

Here are some examples of commercial gameshow software.

Gameshow Presenter	"Game Show Presenter is presentation software for training games that help people pay attention and learn your subject matter."
Learningware	"LearningWare, Inc. is the leading provider of software templates designed to make training more engaging and fun!"
eGames Generator	"With this unique software you can integrate motivating, challenging activities into your courses."

9-7 Using Flash

Macromedia Flash has become the de facto standard for animation and interactivity and is used on many websites both commercial and educational. Flash allows you create exciting interactive and animated resources as the *Skull* and *Britain's Rocky past* examples [shown in 9-1] demonstrate.

Flash is a commercial product from Macromedia. You can find out about it here.

Flash MX 2004	From Macromedia

Using Flash

After you have installed Flash, you should go through the lessons that are included in the program. These lessons will provide you with the basics of Flash.

However, if you are looking for a tutorial on how to use Flash, here is one you can download.

Macromedia Flash MX Tutorial	From the Macromedia Flash Support Center [PDF]

As with most tools, it is not just about using the tool itself but having the underlying knowledge and skill to use it to best effect. In this case a good understanding of graphic design is vital. Flash is very powerful and with imagination and creativity, it is possible to build some very powerful learning activities.

Flash in e-Learning

Here are a couple of articles that look at the use of Flash for designing e-learning content.

Using Macromedia Flash MX 2004 as an e-learning authoring environment	Garin Hess and Steven Hancock, Learning Circuits, July 2004
Getting interactive: Rich, rapid e-Learning with Macromedia Flash and Breeze	Paul Clothier, eLearning Developers Journal, September 2003 [PDF]

Usability

Usability is also an important factor in design, so here is a resource on Flash usability.

Flazoom: developing user-friendly Flash content	A whitepaper on Flash usability From Flazoom

9-8 Interactive resources, quizzes, tests and games on PDAs

PowerPoint resources

See 7-4 for information about using PowerPoint resources on PDAs.

Interactive web pages

See 7-4 for information about creating web pages for PDAs.

Testing tools

There are a number of tools available to create tests and quizzes for PDAs. These can then be played in "learning mode" or "test mode". These tests are generally created on a PC and then uploaded to the Web or transferred to the PDA. Additionally, there are products to analyse the results of tests. Here are a few examples of testing tools for PDAs.

Pocket Exam	Download a demo version
Quizzler	From Pocket Mobility.

Interactive resources using Flash on PDAs

It is also possible to view content created in Flash on a PDAs and smartphones. To do so the user needs to have the Flash player installed on the device.

	Flash Player for Pocket PCs, Flash Lite for mobile phones

Here is an example of interactive content developed in Flash for Pocket PCs. You will need to download it to view it on your PC

Catalyst 8540 MSR Modules/Adapters Guide	From Cisco Systems.

If you are developing Flash content for a Pocket PC, then here is a useful resource.

Using Flash to build m-learning	By Garin Hess and Stephen Hancock, Learning Circuits, February 2005

Off-the-shelf games for PDAs

Games have been played on small handheld devices for some time, e.g. the Nintendo Gameboy, so this is not an unfamiliar form factor for them. In fact games are one of the biggest selling applications for both phones and PDAs. Complex games, however, need to be built using programming languages like Visual C++ or Java. A discussion of these programming languages is outside the scope of this Guide.

9-9 Chapter resource list

Reading

Here are links to pages at the e-Learning Centre which provide more information on interactivity and testing.

Testing and assessment online	Links to resources look at the role of testing and assessment in e-learning.
Games-based learning	Links to resources on games-based learning
JavaScript	Links to resources about JavaScript including JavaScript code libraries
Using Flash	Links to resources to provide you with more information about using Flash

Tools

Here are pages at the e-Learning Centre where you will more information about the tools to create interactive resources and tests.

Web page authoring tools	Links to web authoring and site management tools as well as other content that can be delivered via a web browser
Testing, quizzing and gameshow tools	Links to software tools useful for the production of online tests, quizzes and games
PDA tools for mobile learning	Links to tools for PDAs for use in creating or reading mobile learning solution

10

Reflective learning activities, online forms and surveys

In this Chapter we are going to look at how to create activities that require learners to input data and then how we can process that data.

Contents

10-1 What are reflective learning activities?

Sometimes you might want students to think about a topic and record their thoughts for their own reference on the page itself. Normally this would mean printing out the document and then writing on the page. However, it is possible for users to make comments directly onto a web page.

In the example below, the learner is encouraged to enter information on the page as a reference point to check against some data provided.

Stages of child development	From Foster Parenting at Washington State Department of Social and Health Services

Note, that in this case the data that is input is **not** processed in any way. The page would simply be printed out to view the comments made. However, it is also possible to collect the data and process it in some way, for example:

- to provide a response to a piece of input (as shown in some of the testing examples in the previous chapter)
- to write it to a file so that it can be viewed by the instructor and/or other users
- to email it to an instructor for marking or other purposes.

This might be a useful way of checking learners have worked on an activity or perhaps for collecting test data. This example demonstrates how input from the learner is written to a file and made available for others to see. You can try it out yourself below.

Data Input Example	From the e-Learning Centre

This technique could be used for collecting free text responses to a question, for feedback forms or more complex online surveys. Here is an example of an online form used to capture student evaluation data.

Distance Education Student Questionnaire	From the University of Southern Queensland

10-2 Using Word or a web authoring tool

You can create a simple reflective activity with Word (or other web authoring tool) using the HTML form functionality. Forms are usually used to collect data that are going to be processed in some way by the server. However, in this case the form element merely provides a space on the page for a learner to make annotations and then print out their annotations with the page – the data will not be processed.

Form elements include:

text boxes

text areas

check boxes and radio buttons

Take a look at this resource which explains in some detail how to create forms using Word.

How to create forms using Word for Windows 6.0	From Essex University.

If you want to keep the document in Word format then it could be placed online to be downloaded and filled in on the learner's computer and then returned electronically via email as in the following example.

Standard Student Questionnaire	From the University of Southampton

Processing data

But if you want to collect the data from an online web-based form in order to process the data you need to have a program running on the server. Usually this either means writing a small program (known as a CGI) or else using a web authoring tool like for instance Microsoft FrontPage, which, provided FrontPage server extensions are installed on the webserver, will process the data for you. The Data Input Example shown in 10-1 was created using Microsoft FrontPage.

If you want to process data in this way at your college or university, you will need to ask your system administrator what the possibilities are. If it is not possible, then you could consider using a forms service explained in 10-3.

10-3 Using an online form service

If you are unable to process form data on your website, there are a number of online form services that let you create an online form and process the data that has been input.

Although most of these services are commercial and intended for corporate customers, there are some that offer free trials and others that even offer a free service. Generally, too, they have templates that you can use to create your form very quickly.

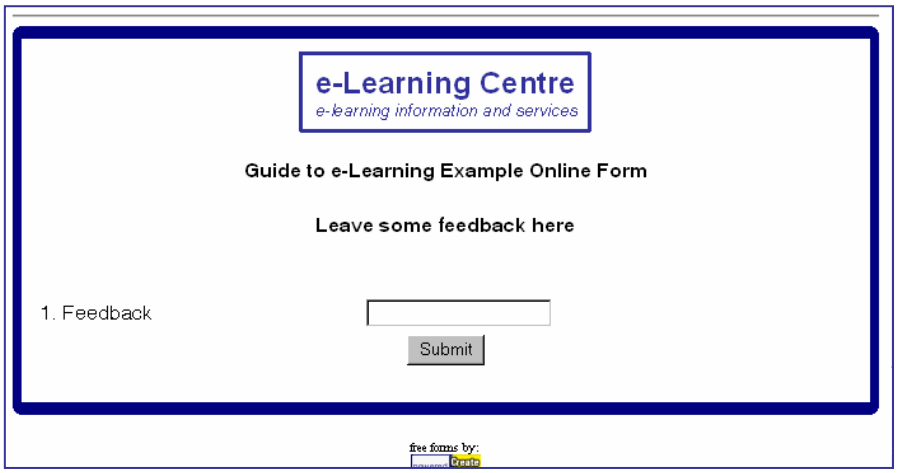
Take a look at this service which lets you create free online forms, and which will process the form data for you.

Createforms.com	"Want to let your website visitors enter information at your site but don't have the programming or HTML know-how? Now you can create custom HTML forms."

To create a form using Createforms.com

- Sign up for free
- Create the fields for a short questionnaire about your course.
- You will then be given the URL of the form page for your students to use.
- You will also be able to login from time to time to check the responses to your form.

Here is a form created using Createforms.com. You can try it out below



Example Form	Created using Createforms.com

10-4 Chapter resource list

Tools

Here are pages at the e-Learning Centre where you will more information about the tools to create reflective learning activities and forms.

Web page authoring tools	Links to web authoring and site management tools as well as other content that can be delivered via a web browser.
Forms, survey and polling tools	Links to a selection of tools for creating online forms and surveys
Using FrontPage	Links to a number of resources that provide you with more information about Microsoft FrontPage: reviews and tutorials and other materials on how to use it
Using Dreamweaver	Links to a number of resources that provide you with more information about Macromedia Dreamweaver: reviews and tutorials and other materials on how to use it

11

Demonstrations and simulations

In this Chapter we look at demonstrations and simulations, what they are and how to create them.

Contents

11-1 What are demonstrations and simulations?

Demonstrations

Demonstrations take a user through a series of tasks in using a system or process; they usually do not require any interaction or input from the user. They are particularly useful for showing a learner how a particular software application works. Demonstrations are normally quite short and quite basic.

Here is an example of a software demonstration.

Outlook Live Demonstration	From Microsoft

Simulations

Simulations take a user through a discussion or situation where a user is required to choose responses to questions and based on the user input different events occur. Hence, these do require interaction or input from the user.

Simulations can be used to help individuals in situations where the using the real system would be high risk or costly, e.g. in flight simulation. Simulations can sometimes be very complex and take some time to complete.

How do simulations differ from games? Well, games have goals. So not all simulations are games and not all games are simulations, but where they do combine, they can be a very powerful learning solution. Business games are in particular very popular.

Here are some examples of simulations and business games.

Leadership in Action Simulator	A business oriented simulation From Forio.
Flight to Freedom	An educational simulation From Bowdoin College, Brunswick, Maine, USA.
Lemonade Stand	A simple business game. Your goal is to make as much money as you can within 30 days.
Lemonade Tycoon	The business game for Pocket PCs and Palms

Simulations are very popular, particularly in areas where role playing is important. One prime example is in the legal profession.

The following article discusses the role of computer simulation in legal education.

Computer simulation in legal education	Robin Widdison, Michael Aikenhead and Tom Allen, University of Durham, 1998

11-2 Creating demonstrations and simulations

Demonstrations and simulations can be built in a number of ways. Basic demonstrations and simulations can be created very cheaply with both free and low-cost tools. Complex simulations, however, do need considerable time, skills and to develop.

Demonstration and simulation tools

There are a number of tools available to create demonstrations and simulations. Since these tools are primarily intended for the corporate marketplace, most of them are commercial products.

These tools vary in their functionality - from simply capturing a task sequence within a particular software application to building powerful learning solutions that might even be termed animated, interactive tutorials. Some of the more sophisticated products can build solutions that can be delivered in both demonstration or learning mode as well as simulation or testing mode, giving the learner the opportunity to watch the demonstration first before they try it out.

Here are three well-established commercial tools. You can take a look at some demos created with the tools and in some cases download a trial version to evaluate it.

Captivate	From Macromedia
ViewletBuilder	From Qarbon
TurboDemo	From TurboDemo.com

But here is a nice little freeware tool, Wink.

> *"Wink is a Tutorial and Presentation creation software, primarily aimed at creating tutorials on how to use software (like a tutor for MS-Word/Excel etc). Using Wink you can capture screenshots of your software, use images that you already have, type-in explanations for each step, create a navigation sequence complete with buttons, delays, titles etc and create a highly effective tutorial for your users."*

Wink	From Debugmode.com

You can download Wink for free. The distribution contains the Wink installation with documentation (in PDF) and two sample projects.

Building educational simulations

The use of simulated activities in education is widely becoming recognized as an important tool in education. Take a look at this resource examines the role of simulations in education, paying particular attention to their potential for delivery alongside other learning materials in an online environment.

Simulations in education: A primer	From INSIDE, Heriot-Watt University, 2000

11-3 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide more information on simulations and demonstrations.

Simulations in e-learning	Links to general resources on the use of simulations in learning.

Tools

Here are pages at the e-Learning Centre where you will find more information about the tools described in this chapter.

Simulation and demonstration tools	Links to simulation and demonstration tools for creating e-learning solutions

12

Streaming media and presentations

In this Chapter we look at streaming media and presentations: what they are and in particular how to create streaming presentations.

Contents

12-1 What is streaming?

"Streaming" refers to the technical process of sending audio and video across the Internet. It means that the user can begin to view the content immediately without having to wait for the whole media clip to download.

The use of streaming audio and video for e-learning purposes is now becoming much more prevalent. Although media can be accessed over the Internet via a dial-up connection, for an optimum experience, users need to have a fast connection and hence learning materials in this format are known as “broadband learning solutions”.

Streaming events in the form of webcasts or webinars are delivered both as live, i.e. real-time events or recorded, archived versions of live events made available on demand, when they are also known as Audio or Video On demand.

Streaming presentations are presentations that include an audio or video narration in addition to the slides, and hence are a step further than just placing presentation slides online as described in Chapter 7.

Many lecturers are already making significant use of streaming presentations and see it as a very powerful technology within education, recognising it as is the next step on from simply making their lecture presentation slides available on the Web. Presentations of this kind are also very positively received by learners as they are very engaging, since the use of both audio and video is very potent even when it is only a "talking head" it can have a beneficial impact on the learner.

Take a look at the examples of streaming below. But first you will need to have the relevant players installed on your computer to view them. You can download them here.

Windows MediaPlayer 10 FREE	Microsoft Windows Media Player
real player FREE	RealPlayer
QuickTime Get 4.	QuickTime Player

Live and recorded webcasts

NASA Television	Real-time coverage of the Agency's activities and missions. [Requires Real player]
Live @ Exploratorium	Live video or audio broadcasts over the Internet. [Requires Media Player/Real Player/QuickTime Player]
The United Nations Webcast	Webcasts from the UN. [Requires Real player]
AuroraWebcam	First worldwide live webcast of auroras in history. [Requires Media Player]

Recorded lectures

Detecting genes from data on related individuals	A lecture by Elizabeth Thomson, MSRI [Requires Real player]
Psychics and Scientists Are you psychic?	Lecture from the Dept of Zoology, Oklahoma State University. Not viewable with 56K modem connection. [Requires QuickTime player]
Life and the Universe	A recorded web lecture from Gresham College in London. [Requires Windows Media Player]

Recorded presentations

E-Learning with Producer	This SimmaNar explains how Microsoft Producer can be used in e-Learning [Requires Windows Media Player]
Wylie Independent School District Symposium Overview	Dr. Robert A. Frederick at the University of Alabama at Huntsville introduces the Symposium. [Requires Windows Media Player]

12-2 Creating and delivering streaming media and presentations

Streaming media

The three main streaming technologies - Windows Media, Real and QuickTime - use a server approach to delivering streaming content. That means a dedicated media server looks after the whole process of streaming the content to the user.

The process for creating a streaming media clip involves:

- creating/capturing the audio or video content in a digital format, e.g. AVI or WAV file; or digitising analogue content e.g. audio from an audio cassette or video on a VHS tape
- converting the digital content into a streaming file (in the appropriate format)
- uploading it onto the media server
- embedding the streaming file into a web page.

For more information about creating and delivering streaming media take a look at these three reports.

Video streaming: a guide for educational development	From Click and Go Project
Streaming media in Higher Education: possibilities and pitfalls	Brian Klaas, John Hopkins Bloomberg School of Public Health at Syllabus conference, Summer 2003. (PDF)

Note: In Chapter 14: Podcasting we look at creating audio files for downloading to iPods and other MP3 players, suitable for audio lectures that do not require the use of streaming servers.

Streaming presentations

There are a number of different tools and approaches to creating streaming presentations. In the rest of this chapter we are going to look at three major tools.

- **Microsoft Producer** – in section 12-3
- **Boxmind Enlighten** – in section 12-4
- **Macromedia Breeze** – in section 12-4

12-3 Using Producer

If your college or university has the Windows Media server installed, then you can make use of Microsoft Producer. This is a free piece of software from Microsoft for licensed users of PowerPoint 2002 and 2003. You can download it here

Microsoft Producer	From Microsoft

There are three steps you will need to go through to produce the streaming presentation:

1. Create the presentations slides as normal using PowerPoint
2. Use Producer to record the audio or video narration (with a microphone and/or webcam) and synchronise the slides with the audio and video).
3. Host the presentation on the Windows Media server and provide the link for your users.

Getting started with Producer

When you start Producer, you have the option to use the new presentation wizard to guide you through the process of creating a new presentation. This is very useful for new users.

These are the steps to creating a narrated presentation:

1. Choose a presentation template
2. Choose a presentation scheme
3. Provide presentation information
4. Import slides and still images
5. Import or capture audio or video
6. Complete the presentation

Producer then builds the presentation for you and at the end you can preview the presentation before you upload it to the Windows Media server. Once you have linked to it, it is ready to be streamed to your users. If you are interested in creating streaming presentations with MS Producer, here are some useful resources.

Microsoft Producer: A Guide for Educators	113-page guide from Microsoft Press
Creating Streaming Media Presentations with Microsoft Producer for Microsoft Office PowerPoint 2003	Patrice-Anne Rutledge, 9 January 2005

Note 1: It is quite possible for individuals to capture their own audio and video using a microphone and/or a webcam. However, it may be preferred that this is done in a studio with more sophisticated equipment to ensure better quality files. If, on the other hand, an individual is to be recorded giving a presentation or lecture, then this will require more thought in terms of how to set up the equipment to video the presentation.

Note 2: If you don't have access to an internal media server to host your presentation then there are a number of other options;

1. Publish your presentation to a CD and distribute it that way.
2. Get the users to download the file (although this may take a very long time) and then run the presentation locally on their own PC.

12-4 Using other tools

There are a number of other tools available to create narrated presentations from PowerPoint presentations. These tools are either PowerPoint plug-ins or stand alone tools that allow you to capture, synchronize, and publish audio, video, slides, and images as rich-media presentations. In this section we look at just two.

Boxmind Enlighten

Boxmind Enlighten is intended for the educational market. There are two versions: Express and Professional.

> *"Crucially, material produced using "Enlighten" does not require plug-ins on the viewer's machine. It is also delivered through a standard web browser. Without modification the output file can be published online, saved to a hard disk or burnt to a CD for distribution."*

Enlighten Professional	From Boxmind

You can download a demonstration version of both the Enlighten Express and Enlighten Professional software to try them out and create a 30 second presentation

Macromedia Breeze

In the relatively short time that Breeze Presentation has been available, it has become a powerful tool for creating presentation-based e-learning solutions. Breeze Training adds course management, enrolment, deployment, and tracking features, so you can track and measure individual responses to quizzes and surveys.

Breeze Presentation and **Breeze Training** are available as hosted solutions or the software can be purchased to install on campus servers. The Macromedia **Breeze Live** module extends the Macromedia Breeze platform with interactive presentations and discussion capabilities.

For more information about Breeze, take a look here.

Breeze	From Macromedia

Here are some resources that show you how to create presentations using Breeze.

Creating and publishing a Breeze presentation	By Kimberly Roelands, From Macromedia
Creating a course with Macromedia Breeze training	A presentation from Macromedia

12-5 Streaming media and presentations on mobile devices

Many of the newer phones and PDAs include a pre-installed media player, which can both play a live stream of video or audio from the Internet as well as play media downloaded to the device.

Here are the two main free players for PDAs and smartphones:

	Windows Media Player
	RealPlayer

Streaming presentations

As for streaming presentations, here is an example of a product which you can download to try out on a Pocket PC. It demonstrates how a presentation can be viewed on a PDA, either as a live stream or as content downloaded to the device. An example is also included with the client software.

Presentation Studio Mobile Client	From WebEx

12-6 Chapter resource list

Reading

Here are links to pages at the e-Learning Centre which provide more information on streaming media and presentations.

Using streaming media	Links to resources that offer general help and support with using video and streaming media
Streaming learning	Links to resources on the use of streaming media in e-learning to create educational and training webcasts, etc
Using PowerPoint	Links to resources about Microsoft PowerPoint e.g. reviews, tutorials, etc
Using Producer	Links to resources about Microsoft Producer, e.g. reviews, tutorials, etc
Using Breeze	Links to resources about Macromedia Breeze e.g. reviews, tutorials, etc

Tools

Here are pages at the e-Learning Centre where you will more information about the tools described in this Chapter.

Presentation and streaming media tools	Links to a variety of tools that can be used for the production of web-based presentations and streamed e-learning
PDA tools for mobile learning	Links to tools for PDAs for use in creating or reading mobile learning solutions

13

Blogging and RSS

Chapter we are going to look at blogging: what it is, how to create a blog, as well as how RSS fits in.

Contents

13-1 What is blogging?

Blogging is a relatively new phenomenon that has been attracting a lot of attention.

A weblog (or blog for short) is defined as "an individual's log of the web - a diary of web pages to recommend to others". In other words, blogs are a form of online publishing or journalism.

Blogs can be of two types: single author or multi-author. Bloggers can also choose whether they want to restrict the blog to their own comments and views, or invite others to contribute to their blog.

Blogs are useful in e-learning in a number of ways:

1. they can be a source of ideas or information about a subject
2. they can be used to disseminate your own ideas or information about a subject
3. they can create a community or network of like-minded individuals

There are a number of ways that blogs are used in Further and Higher Education.

- **As personal tools** - both students and staff can write about any subject they like – it doesn't have to be related to education.

ProfessorBainbridge.com	An eclectic mix of law, business and economics, politics and current events, Catholicism, and wine from a corporate law professor at UCLA
OxBlog	The off-the-cuff political commentary of Josh Chafetz, David Adesnik, and Patrick Belton, graduate students at Oxford

- **As student tools** - students can keep personal notes on their learning and link to web sites that are helpful. These blogs could even be kept private. The following is an example of how a student uses blogging in his studies, followed by an interview with the student.

Dan Saffer :: what I'm studying	Dan's blog on his course at Carnegie Mellon University
Dan Saffer: Why I blog my postgrad course	Dan's nterview with Naish Michani, elearningpost, 25 February 2004

- **As educator tools** - educators/teachers can keep notes on their own teaching and ideas. These blogs can be kept private or shared. Here are a couple of examples of educators who share their thoughts with the community.

elearnspace blog	By George Siemens, an educator in Canada.
Weblogg-ed - Using weblogs and rss in education	"the read/write web in the classroom" Hunterdon Central Regional High School

- **As course tools** - educators can use blogs to provide a whole teaching and learning environment, so that they can post daily news about the course, link to assignment materials, etc, and students can contribute to class discussions. Here are some examples.

technology and children's development: a course blog	Cognitive Studies in Education program, University of Washington by Philip Bell."
Journalism and Mass Communication Class Blog	By Beth Grobman Burruss at DeAnza College
LIS450LW - Web Design & Construction for Organisations	From the University of Illinois at Urbana-Champaign.

- **As group tools** – groups of students can use them to create a project on a particular topic or subject. Here is an example:

Rhetoric 1101	The questions, arguments, and musings of twenty-two very bright students at the University of Minnesota

Blogs can therefore be used for a variety of reasons within education. This matrix shows the diverse use that blogs can be put to in education.

Matrix of uses of blogs in education	By Scott Leslie, EdTechPost blog, 9 October 2003

Blogging is the easiest and cheapest way of getting an online presence - time to get up and running with blogging is minimal. Blogs are much easier to manage than a normal website. You don't need to use a web editor or know HTML, and you can update them from anywhere.

All these reasons have meant that that blogs have become a valuable tool within an educational environment, and in some cases are being used **instead** of Virtual Learning Environments to become the focus of a course,

The following article explains blogging in more detail.

The Art of Blogging - Part 1 Overview, Definitions, Uses and Implications	George Siemens, elearnspace, 1 December 2002

13-2 Characteristics of a blog

Here are the characteristics and features of a blog that make it different from a normal website.

- Blog **postings** appear in chronological order and generally show the exact time of posting. Where there are multiple authors associated with a blog, it will also state who has made the posting.
- Postings often have **comments** from those who want to respond to the posting.
- Postings are uniquely addressable through a **permalink**.
- As a blog generally displays only a set number of postings, e.g. 10, there are number of ways of accessing the older postings, through the **archives**
    - by the month's calendar
    - by the previous months or weeks
    - by category (set up by the author of the blog)
- There are **links** to other external sites or blogs (often in a "blogroll")
- There is usually a **syndication** link which provides a way for readers to keep up to date with new blog postings (more about this in 13-7)

13-3 Creating a blog

Before you start to create a personal blog, you first need to consider whether blogging is right for you. Some people are born bloggers - they want to share everything they do, hear and see. If you are not this type of person, then blogging is not for you. Ask yourself, if you wrote an entry yesterday, what would it have been about? If you write one today, what would it be about? If you are struggling to think of things you would say, then blogging is probably not right for you!

There are many examples of blogs that have only got a handful of postings on them since they started, as they were set up by people who started off with good intentions, but who didn't have the time to maintain them or weren't really bloggers at heart.

So why do people blog? Take a look at this article.

"I'm blogging this" A closer look at why people blog.	By Bonnie A. Nardi, Diane J. Schiano, Michelle Gumbrecht, Luke Swartz, submitted to Comm of the ACM [PDF]

However, if you want to set up a blog for a learning or course situation and want learners to contribute, you will undoubtedly have more to say and be a more successful blogger.

Blogging tools

There are a number of different blogging tools available. They differ in a number of ways, how they are hosted, and the functionality they offer, for example whether they support single or multiple authors and whether they create archives.

Here are some examples of major blogging tools.

Blogger	Blogger is a free web-based blogging service. This is a hosted solution. For a single author.
Movable Type	Movable Type is a server-based tool. Free for non-profits. Supports multiple authors
TypePad	TypePad is a hosted blogging service. Based on Movable Type. Commercial tool with a free 30-day trial.
Radio Userland	Radio UserLand is a commercial program but you can download a 30-day trial.

In the 13-4 and 13-5, we take a look at how to use Blogger and TypePad to create a blog.

Finally, take a look at this second article about blogging, which provides more ideas on getting started with blogging.

The Art of Blogging - Part 2 Getting Started, "How To", Tools, Resources	George Siemens, elearnspace, 1 December 2002

13-4 Using Blogger

If you are looking for a personal blogging tool that is easy to use, then Blogger fits the bill. If you are considering it as a course blogging tool, however, it will let you create course postings and permit students to write comments but it doesn't have any space to store content. If you have some webspace where you can store your course content, then you can always create links from Blogger to it. But Blogger is also an excellent place to start if you just want to try out blogging.

Get started with Blogger

Here are some instructions to get started with Blogger

- Go to Blogger

Blogger	"Create a blog in 3 easy steps"

- Now **create** an account.
- **Name** your blog.
- Choose a **template** - there are some very attractive templates available.
- Your weblog is now set up, but to customise it you can change the **settings** as follows:
    - **Formatting**: change the time stamp for the relevant country
    - **Comments**: state who can add comments
    - **Site feed**: find information about your site feed (See 13-7 for more about this)
    - **Members**: state names of people who can make postings
- In the **Dashboard**, write something about yourself in the **Edit Profile** section
- You are now ready to make your first posting. If this is going to be a course blog, take a look at 13-7 on suggestions on how to use it.

This is an example of a blog created with Blogger.

13-5 Using Typepad

If you are looking for blogging software that does all that Blogger can do PLUS also provides you with disk space to store content, then you need a more sophisticated solution like **Typepad**. This will also offer you additional functionality like password protection of your site as well as more control over the template and provide you with statistics of users.

The Basic level account will allow you to set up 1 blog and give you 50 Mb disk space, whilst the Plus account gives you 3 blogs and 100 Mb space and the Pro account unlimited blogs and 200 Mb space. You can get a free trial account to try it out for 30 days.

(Note: Typepad is the hosted version of Movable Type.)

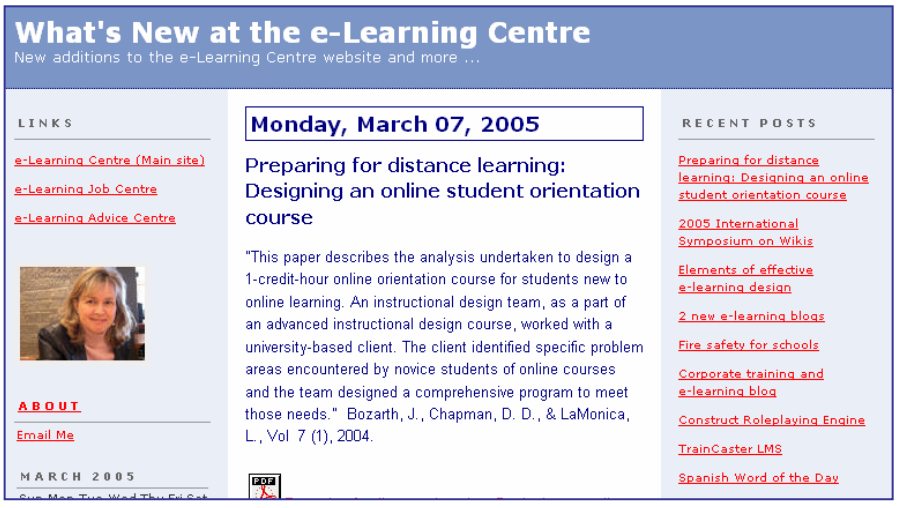
Getting started with TypePad

- Go to Typepad and create a trial account.

Typepad	"Personal weblogging service"

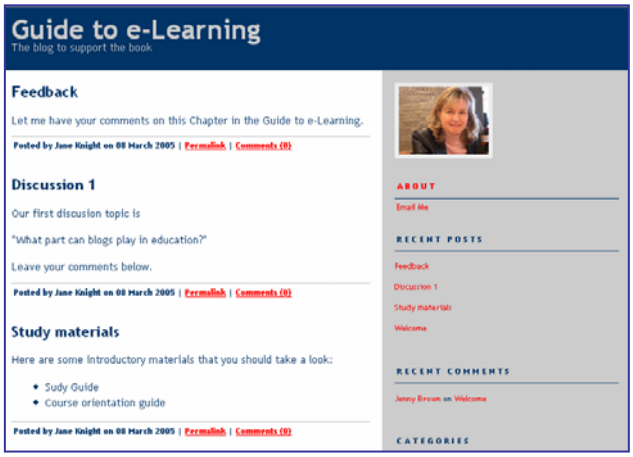
- Create a blog.
- Give the blog a **name**
- Decide whether it should be **public** or not (with course blogs it is probably better to be private. Note this does not password protect your site but just does not make it viewable by other Typepad users)
- Your weblog is now set up but to customise it you can use the default template or make changes to it using the design wizard. In Design you can edit the **Layout**, **Content**, **Order**, **Style** and **Basic**.
- Add information about yourself in the **About Me** page
- You are now ready to add your first posting. If this is going to be a course blog, take a look at 13-7.

The e-Learning Centre's What's New blog was set up using TypePad.



13-6 Developing a course blog

If you decide to use a blogging tool to create a course blog, then here are a few ideas how to make use of it. Take a look at the Guide to e-Learning example blog to view the suggestions below and to try it out by adding comments yourself.



Guide to e-Learning example blog [Username: e-learning Password: e-learning]	From the e-Learning Centre

The first posting

This will probably be a welcome posting, with some information about yourself and an opportunity to get your students contributing straightaway, maybe asking them to introduce themselves briefly.

Storing content at your blog

If you are using your blog space to store course documents, you will need to find out how to upload materials into that web space.

Discussion and Feedback

You can also use your blog to manage course discussions and also solicit feedback.

Announcements

Once you have set up your course blog, you will need to decide how frequently you will make postings. Blogging software, by its very nature, lends itself to creating a very dynamic course website, since it allows you to make postings to the blog on a regular basis.

Using your course blog

Take a look at how this course blog is being used.

Current themes in IT	By Prof Elizabeth Lane Lawley, Rochester Institute of Technology

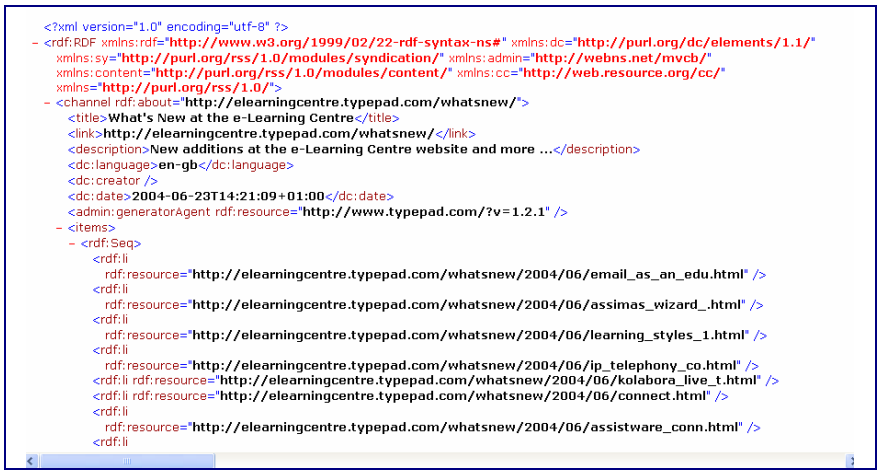
13-7 What is RSS?

RSS stands for Really Simple Syndication (or Rich Site Summary). It's a file which holds the postings or entries in the blog marked up in XML. It is a useful way for keeping readers up to date with news and announcements on a blog (or indeed any website).

If a blog or a news site has an RSS feed, this is usually marked by

- an icon like XML or RSS
- or text like: **Syndicate this site (XML)**

If you click on the icon on the RSS icon or text link, you will see the XML feed itself. Here is an example what it might look like.



Reading an RSS feed

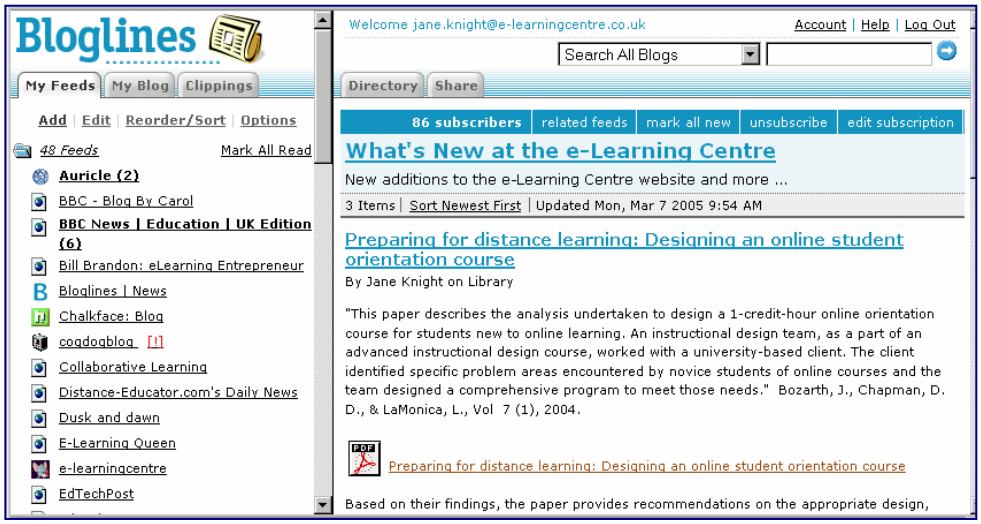
This file is clearly pretty unreadable in itself, so what you need is a "reader" or an "aggregator" to read it. This is a piece of software - either web-based or a desktop programme - that regularly checks whether the feed has been updated and displays the feed in an understandable fashion. This means you don't have to visit each individual blog in turn to check if there is a new posting - you can read all the up-to-date feeds you have chosen to subscribe to in one place. Here is a popular web-based aggregator that is free to use.

Bloglines	From Ask Jeeves

Here are some instructions how to get started with reading RSS feeds using Bloglines.

- Go to Bloglines and sign up for a free account
- Locate the RSS feeds in the example blogs mentioned above by clicking on the RSS icon or the syndication link
- Copy the URL of the RSS feed, and then paste it into Add feed section of Bloglines

On the next page you will see an example of Bloglines in use. In the left hand frame are the feeds and in the right hand frame, the recent postings from one feed – the What's New at e-Learning Centre blog feed.



If you are working on your own computer, you can also download the free Bloglines Notifier tool. This lets you know when your subscriptions have new items to read. Otherwise you will need to go back to Bloglines yourself on a regular basis, to find out what new postings there are.

Importance of RSS in education

The potential for RSS together with blogs is enormous and is still being explored, particularly in an educational environment, that is how it will be an essential tool for ensuring that your students keep up to date with postings, for instance at a course blog, if you choose to create one. Take a look at these articles which provide some examples of how it can be used.

RSS: The next killer app for education	Mary Harrsch, the technology source, July/August 2003

Blogging and RSS in education

Take a look at this article for some further ideas on how to use your course blog as well as RSS.

Blogging and RSS: The "What's It?" and "How To" of Powerful New Web Tools for Educators	By Will Richardson, Information Today, January 2004

More technical information about RSS

For more technical information about blogging, including RSS versions, Atom, blogrolls, trackbacks and pingbacks take a look at this article.

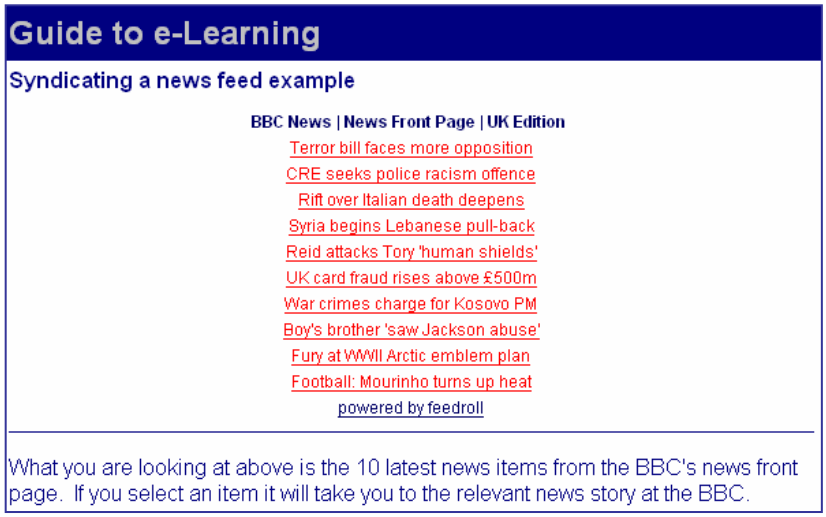
All about blogs and RSS	Aaron Skonnard, MSDN Magazine, April 2004

13-8 Syndicating an RSS feed

Note that it is not just blogs that have RSS feeds, other websites have news feeds where you can keep up to date. Here is a link to a popular newsfeed service.

BBC News RSS feed	From the BBC

One way of keeping your readers up to date with such a news feed – rather than expecting them to access it themselves, is to add it to your website, as in the example screenshot below.



This screenshot above is actually of a web page displaying the 10 news items from the BBC's news feed on 8 March 2005, but you can take a look at the live example here, where you can click on a link to take you to the relevant news item.

Syndicating a news feed example	From the e-Learning Centre

To include an RSS feed into your web page, you need to use a service like Feedroll and then add a small piece of JavaScript into the HTML code of your web page.

To find out how to do this, take a look at this resource:

Using RSS Feeds to Provide Dynamic Content	By Keir Clarke at FERL

13-9 Moblogging and RSS on mobile devices

Moblogging

One way to post to your blog is through mobile blogging, or moblogging as it is often called. This is where you use your digital camera, PDA, or mobile phone camera to send pictures or text to your weblog while you're away from your desktop computer.

If you think you are going to be posting a lot using mobile phones, then you should select a blogging service that provides for this. Both Blogger and Typepad offer this functionality.

And if you are looking for a place to store your digital photos, then take at look at Flickr. Basic accounts are free.

Flickr	"online photo management and sharing application"

RSS

PDAs can be used to read RSS feeds from blogs and news sites. Here is an example of a product for Pocket PC. It is a Today Screen plugin and stand-alone application which provides a quick and easy method of displaying various types of RSS/OPML compliant data on your Today Screen.

Pocket RSS	From HappyJackRoad.net

If you would like to read more about RSS on a PDA, and see some more RSS readers, take a look at this article.

RSS and mobile devices	By Phillip, daily wireless, 9 April 2004

Podcasting

This is the term used to deliver MP3 audio files to Apple iPods or other MP3 players using RSS technology. This subject is discussed in Chapter 14.

13-10 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide more information on aspects of blogging and RSS.

Blogging and RSS	Links to general resources about blogging as their use in educational contexts as well as RSS
e-Learning blogs	Links to blogs about e-learning and online learning
Selecting a blogging tools	Links to resources on choosing blogging tools
RSS feeds	Links to a number of RSS newsfeeds to help you keep up to date with news in e-learning and e-learning related issues

Tools

Here are pages at the e-Learning Centre where you will find more information on blogging and RSS tools.

Blogging tools	Links to tools that will help you to create blogs and manage your blogs
RSS tools	Links to tools that will help you to create and read RSS feeds

14

Podcasting

In this Chapter we look at podcasting: what it is and how to listen to podcasts as well as create them.

Contents

14-1 What is podcasting?

A podcast is an MP3 audio file that you download from the Internet and either listen to on your computer or transfer to an Apple iPod or other MP3 device like a Pocket PC or other MP3 player to listen to "on the go". The name "podcasting" is derived from iPod + broadcasting, but it could quite simply also be called audiocasting since you don't have to have an iPod to listen to one. Now take a look at this definition of podcasting.

Podcasting	From Wikipedia

Although it is possible to listen to a podcast **manually**, that is by locating an audio file yourself on the Internet, downloading it to your computer, and then transferring it to your iPod or MP3 player, there are a number of tools that can **automate** this process.

Podcasts can be delivered using RSS to your computer (see 13-7 for more information about RSS). You can then use an RSS aggregator (sometimes called a podcatcher) to keep track of all the RSS feeds or subscriptions you are interested in, regularly check them for updates, download them to your computer, and transfer these podcasts to your MP3 player. For its similarity to blogging, podcasting is therefore also known as **audioblogging**.

Here is a useful free podcatcher tool available for various platforms and devices.

iPodder	For Windows and Macs

Once the software is installed, you can then set up the feeds you want to subscribe to. There are podcasts created in all types of categories. Here are a couple of places to find podcasts.

Higher Education Directory	From iPodder.org
Podcast Alley	Featuring the best Podcast Directory and the Top 10 podcasts

To set up a feed in iPodder

- Copy the feed address. For instance the feed address for Edupodder Podcast - Steve Sloan @ San Jose State University, San Jose, California, USA is **http://www.edupodder.com/edupodder_rss.xml**
- Paste this address into the "Add Feed" part of iPodder
- iPodder will now regularly check this feed for new podcasts
- You could also add iPodder's Daily Source Code, this is the top ten feeds from Podcastalley (shown above) which demonstrates the best and the worst of podcasting.
- Your iPod will now be automatically updated with new shows to listen to.

Note: unless you are downloading very short audio shows, you really need broadband Internet access, otherwise with dial up it will take a very long time to download the files, as unlike with streaming audio the whole file has to download before it plays.

14-2 Creating and delivering a podcast

Why would you want to create a podcast? Here's a blog posting that discusses some of the possible uses of podcasting within education.

Podcasting for education	By Darcy Norman with comments from contributors

So, if you want to produce an audio lecture or language lesson even an audio book as a podcast, here's how to do it.

There are three steps to creating a podcast:

1. Create the audio content in MP3 format.
2. Upload your podcast to your website or blog.
3. Post a blog entry that references your podcast in an RSS 2.0 enclosure tag.

The following article explains these steps in more detail.

How to podcast in 3 (relatively) easy steps	By Michael Lehman, howtopodcast.org, 25 November 2005

Creating the audio content

There are obviously a number of ways to create the audio content and this will depend on the resources you have to hand. The low cost options will of course not be as professionally produced as those with sound studios and editing equipment, and it will also depend on whether you are simply recording your own voice or a number of voices in conversation.

Here is a popular piece of free, open source software to help with creating audio files.

Audacity	For Mac OS X, Microsoft Windows, GNU/Linux, and other operating systems

More on creating podcats

Here are some more links to resources that explain how to create podcasts.

Podcasting documentation	From iPodder.org

Of course, if this all sounds too technical, the easiest way of making a podcast available is to simply host it at your course website and let students download it themselves manually.

Podcasting is still very much in its infancy, so new tools will soon become available to make the whole process as easy as blogging itself.

14-3 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide more information on podcasting.

Podcasting	Links to general resources looking at the phenomenon known as podcasting and its application in education.

Tools

Here are pages at the e-Learning Centre which provide more information on podcasting tools.

Podcasting tools	Links to a number of tools for reading and creating podcasts

15

Online tutorials

In this Chapter we are going to look at online tutorials and courseware and how to create a basic online tutorial.

Contents

15-1 What are online tutorials?

Online tutorials provide a structured approach to learning a subject, i.e. they take the learner through the content in a progressive way, but they can also develop learning by providing the learners with opportunities to practice what they have learnt as well as test the learning outcomes.

However, in practice, online tutorials can differ quite considerably in terms of:

- **presentation or interactivity** - they can merely present information to a (passive) learner or require the learner to be an active participant in the course.
- **learning functionality** - they might include a variety of practice exercises, interactive activities, quizzes and/or tests to ensure that the learner has fully understood the material.
- **format** - they can be primarily text-based or they could include other multimedia formats: animation, audio, video, etc.
- **length** - they can take 5 minutes, 15 minutes, 1 hour, 3 hours, 1 term, 1 semester or even 1 year (or longer) to complete.

Here are some examples of a variety of online tutorials and more complex online courses.

Basic web-based tutorials

These tutorials simply present information on a subject in a structured way.

Digital Imaging Tutorial	From Cornell University Library Research Dept
Ancient Egyptian Society and Family Life	A seminar from Fathom
Infection Prevention	From EngenderHealth.

Interactive, animated tutorials

These tutorials are more visually attractive and also provide the opportunity for interaction. To view some of examples in this and the following list you will need the Flash player.

	Free Flash player

.

What is a print?	From MOMA (Museum of Modern Art) [Requires Flash player]
Cisco IP Phone 7960	From Cisco Systems

More complex interactive, multimedia courses

These more sophisticated learning solutions also require the Flash player to view them.

Food safety induction	From Creative Learning Media For best results view full screen) [Requires Flash player]
Becoming human	From the Institute of Human Origins [Requires Flash player]
Shakespeare: Subject to Change	From Cable in the Classroom [Requires Flash player]

Creating online tutorials

Basic web-based tutorials can be created very cheaply, but large scale multimedia projects can be extremely expensive and take a lot of time and effort to develop. In the following sections of this chapter we look at the fundamentals of creating basic web-based tutorials.

15-2 Designing an online tutorial

Once you have decided that the formal tutorial structure is the most appropriate way to provide content for your students, you will then need to make some decisions about the general approach and complexity of the tutorial:

- whether it is to be **informational** or **instructional**
- the type of **learning functionality** it is to contain (e.g. practice exercises, quizzes)
- the **media** to be used (i.e. text, graphics, animation, audio, video)
- its **length** (5 minutes, 1 hour, 3 hours, 1 month etc)

These considerations will be determined by how soon it needs to be ready, how long its shelf life is to be, the technical infrastructure in place to deliver it, and your budget. There may need to be a trade-off between the time and cost to develop a solution. For example, an interactive, multimedia solution may be the most appealing but it can take many months and cost a lot to develop, so if the tutorial is needed pretty immediately and/or there is very little time and money to design and develop it, then you may have to re-consider your options.

Designing tutorials

Once you have made some general decisions about your tutorial, you can then think about the design. You will need to answer these questions.

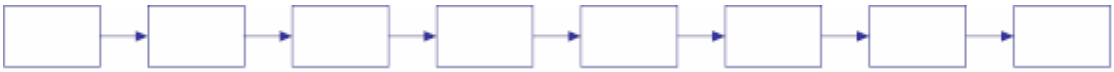
- What are the objectives of the course?
- What do the learners need to know?
- What order do they need to know it in?
- How best should the content be presented or "taught"?

Designing a tutorial requires a considerable amount of time and effort in order to present the content in the most logical way to learners. Instructional design is a complex subject, and a full discussion of it is outside the scope of this Guide, but here are a few things to think about when developing even the simplest web-based tutorial.

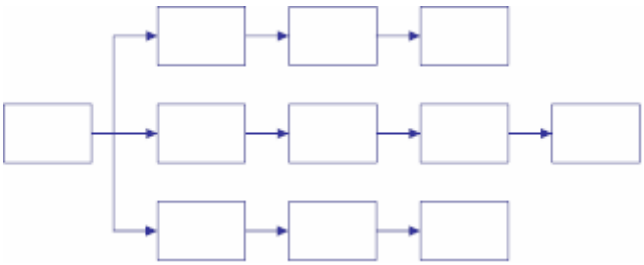
Structure

There are a number of different structures:

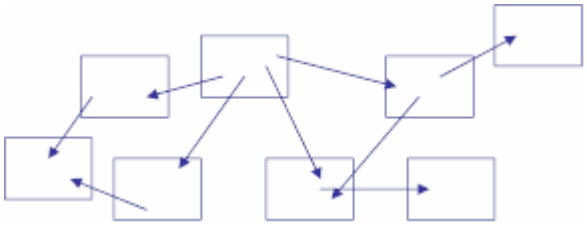
- **Linear** structure: This leads the learner through the tutorial page by page.



- **Branching** structure: This offers the learner the opportunity to move in and out of the chapters/lessons and modules/pages and thereby have some control over their learning.



Hypertext structure: This lets the learners move around the pages with total flexibility.



Note, that a lot of research shows that providing learners with too much control can actually decrease learning effectiveness. So the ideal structure is one that provides a series of flexible materials which support even the most expert learner who just wants to explore. Learners should have some choice, so they can skip the bits they know; go to places of interest, repeat sections if they wish and so on.

Template

Templates ensure a consistent "look and feel" across the pages. A template should include information on the use of colour and typography as well as the placement of key items, e.g. navigation icons. You should design and build the template before you start work on the tutorial content itself and then use it to build all your pages. Here is an example of a template.

Page design

You should aim to create small pages or "bite-sized" chunks of learning. If these are going to be primarily text based then bear in mind some of the advice given in 6-4. If you are going to be using multimedia items, remember that although it may seem very appealing, the use of different media should serve a clear instructional purpose otherwise it can simply add "noise" to the message, i.e. it interferes with understanding. However, it is very useful for different learner styles, as the following shows:

Visual/verbal	text
Visual/non-verbal	graphics, e.g. charts, tables, images, animation, video
Auditory/verbal	audio
Tactile/kinesthetic	interactive activities

Instructional Design resources

Here are a few resources on designing online tutorials and courses.

Creating web courses	From ReadyGo, 2004
Reference Guide for Instructional Design and Development	From IEEE

15-3 Using tools to create online tutorials

Web page authoring tools

Simple tutorials like the *Digital Imaging Tutorial*, *Ancient Egyptian Society and Family Life* and *Infection Prevention* examples shown in 15-1 can easily be built using basic web-page development tools as described in 6-4, where basic web page design principles still apply.

Flash

Interactive and multimedia tutorials and courses (and elements within courses) can be built using Flash, as has been done in the *Hand Anatomy, What is a Print? Food Safety Induction* course and *Shakespeare: Subject to change*, and *Becoming Human* examples in 15-1. As you will have appreciated from looking at these examples, Flash is a very powerful tool for creating very engaging e-learning solutions. The use of Flash is discussed in 9-7.

Course authoring tools

There are a range of specialist course authoring tools on the market which vary considerably in their sophistication (mainly in terms of their intended user - subject matter experts or professional developer) and consequently their ease of use. Here are just a few of the many course authoring tools available.

CourseBuilder add-on for Dreamweaver Extensions	From Macromedia
Macromedia Authorware	From Macromedia
Lectora	From Trivantis

Word-based tools

There is also a new breed of course development tools, which have been created with ease-of-use in mind and are intended for use by teaching staff rather than professional developers. These tools build or convert materials from within Word, so that for instance you can create a complete course as one Word document and then automatically generate an online course with export to plain HTML, WebCT or IMS formats. Here are two examples.

eLearning Objects	From teknical.com
courseGenie	From coursegenie

Web-based tools

There are also a number of web-based tools that let you create courses online, upload materials, manage content and invite and manage learners. They therefore offer more functionality than just content creation, but are not as sophisticated as VLEs (as described in Chapter 6). Here is an example. You can also get a free 30-day trial to check it out.

ScribeStudio	From Distance Learning Inc

15-4 Tutorials on PDAs

PDAs are an excellent device for viewing content of this type, since it means that users can work though short tutorials at "dead" times.

Here are some examples of online tutorials that you can download and try out on your PDA.

Knowledge Net Mobile solutions	From Knowledge Net For Pocket PCs
Lead by Values	From Empowering Technologies For Palms
Mobile Samples	From Trivantis For both Palms and Pocket PCs

Mobile tutorials and courses can be created in much the same way as those for PCs.

- **Web page authoring tools** can be used to create basic web-based tutorials.
- **Flash** can be used to create short animated, multimedia tutorials.
- **Course authoring tools for mobile devices** are specifically intended for the development of instructional materials for PDAs. Here is one example.

Zirada PDA Publisher	From Trivantis For both Palms and Pocket PCs

15-6 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide more information on the following aspects of design of online courses and tutorials.

Designing e-learning	Links to resources concerned with designing e-learning solutions
Instructional/learning design	Links to resources on the principles of instructional design
Storyboarding	Links to resources concerned with how to create a storyboard - both high-level storyboarding, i.e. creating the conceptual design and graphical storyboarding, i.e. detailing each frame of piece of courseware
Learning styles	Links to resources that look at the role of learning styles in the design of e-learning solutions
Using Word	Links to resources about Microsoft Word, e.g. reviews, tutorials, etc
Using Flash	Links to resources about Macromedia Flash, e.g. reviews, tutorials, etc
Using Authorware	Links to resources about Macromedia Authorware, e.g. reviews, tutorials, etc
Using Coursebuilder	Links to resources about Macromedia Coursebuilder, e.g. reviews, tutorials, etc
Selecting a content development/ authoring tool	Links to resources that give guidance on selecting both web authoring and course authoring tools

Tools

Here are pages at the e-Learning Centre where you will find more information about course authoring tools

Course and lesson authoring tools	Links to tools are useful for the production of formal e-learning solutions, i.e. online (or web-based) courses.
PDA tools for mobile learning	Links to tools for PDAs for use in creating or reading mobile learning solutions

16

Email and SMS messaging

In this Chapter we are going to look at some uses of email in an educational environment.

Contents

16-1 What is email?

Email is very prevalent, and yet it is frequently described as “the most important but most abused, misused and misunderstood Internet tool". Most people are very familiar with its use as a communications tool, but they are not quite as familiar with its other uses within an educational context.

Within Higher Education, in particular, email has, for some time now, been seen as an important means of online communication between students, and between students and teachers.

Email can be used as a useful one-to-one communication tool or as a means of communicating the same message to a whole group of learners (through a distribution list), for example:

Learners can use email to:

- ask questions of their tutors
- submit work for assessment
- provide feedback about the course

Tutors can use email to:

- make announcements about the course to all the students
- give feedback about an individual or a group’s performance.

However, it can also be used in a number of ways within education, for instance:

1. as an alternative delivery medium for courses
2. as a way of delivering a course newsletter

In this Chapter we will look at these two different ways that email can be used in an educational environment.

Although most people access and read their email on their desktop or laptop computers, because of the ubiquity of mobile devices, some people may also read them on their PDAs or smartphones

However, the main messaging system on mobile phones is, of course, SMS or text messaging, so we will take a look at how this might be exploited in a learning environment in 16-4.

16-2 Using email as a communication tool

Although most colleges or universities organisations provide email accounts for their staff sometimes even their students, if you or your learners don't yet have an email account, then it is very easy to set one up using one of the free web-based email providers. Here are a couple of examples.

Hotmail	From Microsoft
Yahoo! mail	From Yahoo

The advantage of these web-based email systems is that they can help with two of the main problems with using email: spam and viruses. However, for those who have other personal email systems, these two issues need to be dealt with in other ways.

Here are two short articles on these two problems aimed at "new-to-technology educators".

How to fight spam	By Jeffrey Branzburg, techlearning.com, 15 March 2003
Protect your computer from viruses	By Jeffrey Branzburg, techlearning.com,15 October 2002

Managing email

Many tutors and instructors are very happy to use email to communicate with their students but there are others who are not so happy. The main reason for this is due to the fact that they feel overloaded with emails from learners, and they are not always able to respond to them as quickly as the students would like. Due to the immediacy of the medium, many learners expect to have an almost instantaneous reply from their tutors. But this is not likely to happen even in the best case scenario.

Therefore tutors need to make sure they make their learners aware of their likely response time, which should ideally be within 24 hours and really should not exceed 48 hours. If the response time is likely to be longer than this, then they should notify their learners of this. The best way would be to set up an "auto-responder", so that an email reply is automatically sent to anyone letting them know that their message has been received and when they can expect a response.

In fact, if email is to become a primary communication tool within a course, then it is only fair to set guidelines on how it should be used - both by the learners and the instructor. Finally, it goes without saying that it is essential that there are adequate acceptable use policies in place to prevent the abuse of email, e.g. the deliberate distribution of viruses and junk mail.

Guides to using email

Here are some useful general resources on using email as well as those relevant to the use of email within an educational setting.

A Beginner's Guide to Effective Email	Webfoot Press
Save yourself from drowning in online interaction	Written by Rita-Marie Conrad of Florida State University.

Writing emails

Although using email tools is very easy, writing an effective email is more difficult, especially since its main purpose is to create an online rapport with the learner. The reasons for this are quite striking. Research shows that 55% of what we learn comes from body language, 38% comes from the tone of the voice but only 7% comes from the words. So it is clear, that where email is a prime communication tool for learning, the writing of emails needs to be carefully handled.

Using email as a feedback tool

Email is a potentially effective tool for providing regular student feedback. In the following article Jason Huett offers research studies and creative ideas to help online instructors develop instructional plans that wisely use emails to foster productive communication patterns between instructors and their students.

Email as an Educational Feedback Tool: Relative Advantages and Implementation Guidelines	By Jason Huett, International Journal of Instructional Technology & Distance Learning, June 2004

16-3 Delivering courses by email

Course materials don't always need to be delivered to students through a website. Email courses are quite simply a way of distributing course content in a similar way to the old correspondence courses as the following examples testify.

My word a day	"Your daily dosage of vocab vitamins. We package them every weekday and send them to your inbox via email for free!" From Mywordaday.com.
Adobe Photoshop Basics course by email	"The lessons will be sent to you by email once a week, for a total of ten emails." From About.com
Daily Email Language program	"A new lesson arrives in your email each business day Monday through Friday." From Alta Language Services

The advantages of email-delivered courses are that you don't have to rely on your learners visiting your site and *pulling* down the information, you can *push* it out to them on a regular basis. This could be daily, weekly, fortnightly, or whenever you think it is appropriate, to give them a regular "dose" of learning.

In this way you can control the pace of their learning, making sure they don't take on too much, too quickly, and yet also ensure that they keep on target. Language learning, for example, needs to be practised and reinforced on a regular basis, so this approach is very useful.

The material in your email course needs to be divided up into manageable chunks. For instance, you might want to chunk it up into a 10-part course sent weekly. Depending on the type of content each part might consist of an email a few paragraphs long or might contain an email attachment of, say, a Word or PDF file, containing much more significant amount of material.

How you manage the distribution of the course materials depends upon you. If you are dealing with a group of people who will all receive the materials at the same time, then this could be handled manually. If, however, you are inviting people to join up to your course at any time, then this would require the use of an auto-responder to automate the process for you.

Your college or university email system might be able to set up an autoresponder for you. For more information, though, take a look at this article.

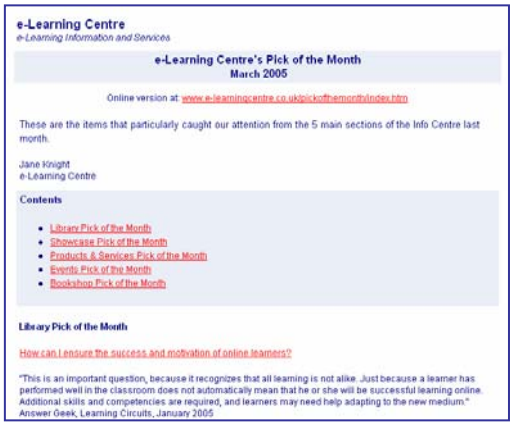
Essential Guide to Email Autoresponders	Autoresponder Review.

Here's another article on creating an online course by email. Although this one is intended primarily for a site's marketing purposes, it does contain some useful information. It is an email course itself, so you can sign up for a 3-day course to see how it works.

The Nitty-Gritty of e-Courses	From TipsForTop.

16-4 Creating a course newsletter

Course newsletters are a useful way to keep students – especially those on a distance learning course – up-to-date with what is happening on the course. One way to create course newsletters is by using HTML emails. These are emails not in the traditional plain text format, but ones which also include graphics, animation, different fonts and layouts, marked up using the Hypertext Markup Language (HTML) as in the example below. This is the monthly Newsletter sent to subscribers of the e-Learning Centre's Pick of the Month.


e-Learning Centre
e-Learning Information and Services

e-Learning Centre's Pick of the Month
March 2005

Online version at: www.e-learningcentre.co.uk/pickofthemonth/index.htm

These are the items that particularly caught our attention from the 5 main sections of the Info Centre last month.

Jane Knight
e-Learning Centre

Contents

- Library Pick of the Month
- Showcase Pick of the Month
- Products & Services Pick of the Month
- Events Pick of the Month
- Bookshop Pick of the Month

Library Pick of the Month

How can I ensure the success and motivation of online learners?

"This is an important question, because it recognizes that all learning is not alike. Just because a learner has performed well in the classroom does not automatically mean that he or she will be successful learning online. Additional skills and competencies are required, and learners may need help adapting to the new medium."
Answer Geek, Learning Circuits, January 2005

HTML newsletters therefore offer an appealing way to send targeted course information – even course materials - to students. Once again this means you can push information to learners rather than requiring them to go and find it and pull it down for themselves.

Take a look at this article which looks at how HTML Newsletters can be used. Although this article is aimed at creating training newsletters, it still makes some valid points for education

Email Newsletters	Creative Approaches to Training, February 2002

It has to be said, however, that there are a few disadvantages with HTML emails. Some browsers don't support them, some won't accept them, and some can't read them because they are set to plain text format. In addition they can take up a lot of bandwidth and take time to download. But despite this HTML emails and newsletters are still pretty popular. So, here are a couple of articles on how to produce them.

All about HTML email	By Carter Stowell, webmonkey, February 1998
Creating Your First HTML Ezine - Traffic Tips and Secrets	From edu-com

Of course, newsletters can also be created in plain text format, although, clearly, they are not quite as visually engaging as HTML newsletters, but may be quite appropriate in some circumstances, e.g. for users who are perhaps more interested in the content than in its appearance.

Another approach might be to attach a newsletter in Word format as in this example.

Marchmont Web Flash	28 February 2005 edition From the Marchmont Observatory [DOC]

16-5 What is SMS messaging?

SMS (short for Short Message System) or text messaging is one of the most popular functions of mobile telephones.

The use of text messaging in online courses was one of the early applications of m-learning. This involved tutors and coaches sending reminders and alerts to students on courses, and it is still a powerful way for instructors to support their students and help to keep them on track.

Obviously, the significant way of using SMS is to maintain contact with students. The following article relates the experiences of one lecturer/tutor using texting to stay in contact with her students and how this contact has supported and encouraged students to persist.

Using SMS as a way of providing connection and community for first year students	By Louise Horstmanshof, Proceedings of ASCILITE 2004

But another use of text messaging is sending a daily message to learners – in the way that you might receive news alerts, daily horoscope or football scores - thereby providing them with a daily dose of learning (just like the courses by email described in 16-2). The SMS message is pushed to the learners so that they don't have to actually go out and get it every day.

Here are some examples of how SMS technology is used to deliver a short text message or "learning byte" to mobile phones.

BBC uses mobile phones to teach the English language in China	BBC, 9 September 2003
Life coaching tips sent direct to your mobile phone	From inspireyourlife.com

If you are interested in sending bulk SMS messages to your students, then take a look at this presentation which explains the alternatives: an SMS server or using a bulk SMS service.

Engaging students through SMS messaging	David Sugden and Lilian Soon, Ferl 2003 Conference Workshop, November 2003 [PPT]

Since some phones now support picture messaging or multimedia messaging (MMS) short) – which means you can create messages that incorporate an image, audio or video clip - this now opens up whole new opportunities for learning by MMS yet to be fully explored.

Finally, here are some further suggestions for using SMS in education.

Ideas and solutions for using SMS in teaching and learning	Lilian Soon, Ferl Website, 14 April 2004

16-6 Chapter resource list

Readings

Here are pages at the e-Learning Centre which provide more information on the following aspects of learning by email

Using Outlook	Links to resources to provide you with more information about Microsoft Outlook: reviews and tutorials and other materials on how to use it

Tools

Email tools	Links to some email tools

17

Instant messaging and live chat

In this Chapter we look at how to use Instant Messaging for learning purposes as well as how to use other real-time chat solutions including Internet phones.

Contents

17-1 What is Instant Messaging?

Instant Messaging (or IM for short) is a very powerful real-time communication tool as it facilitates instant, live, online interaction between users. Although it is often associated with "chatting", it does have a very useful part to play in education as it facilitates instant, live, online interaction.

One of the key aspects of the use of IM software is **presence awareness**, that is you can quickly see who of your contacts are online and available, so that you can then establish an immediate live session with them.

Once the connection has been made, and depending on the particular IM tool you are using, you can:

- have a text conversation with one or a number of people at the same time
- have a one-to-one voice conversation
- have a one-to-one video conference
- share applications running on your computer
- transfer and receive files
- set your status to "busy" or "away" etc if you don't want to be disturbed

There are a number of Instant Messaging tools available. Probably the most well known one is MSN Messenger (or Windows Messenger, as it is called, if you are a Windows XP user).

MSN Messenger, because it is built into the Windows operating system, is therefore to be found on most people's desktop or laptop computers.hones. But if you don't already have IM installed on your PC or PDA, you can get a free copy of it here.

MSN Messenger	For use with Windows versions other than XP
Windows Messenger	For use with Windows XP

However there are other free IM tools, here are some of the other major tools.

AIM	From AOL
Yahoo Messenger	From Yahoo For use with Windows, Mac and Unix

Instant Messaging in education

Serious attention to Instant Messaging use in academic institutions is only just beginning to happen, but IM could be used for a variety of purposes in an educational setting, for example:

- informal communication between students and lecturers, e.g. answering ad hoc questions
- virtual office hours
- student feedback sessions
- tutoring
- student group projects
- recruiting and admissions

17-2 Using MSN/Windows Messenger

In this section we look at how to use MSN/Windows Messenger. Microsoft has produced some useful how-to articles on the different features of the software to help you as you work through this page of guidance.

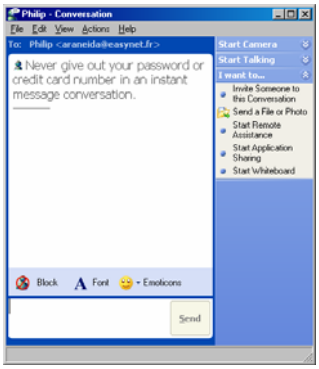
Learn more about Windows Messenger	From Microsoft

Getting started

Once you have installed MSN/Windows Messenger, you will now need to sign in and set up your contacts (students, colleagues, friends, family, etc).

When of the first things you will need to do is to establish guidelines for using Instant Messaging with your contacts so that you are not disturbed when you do not want to be. You can do this by controlling your online status. This includes settings to display “busy”, away” and “appear offline”.

One-to-one sessions



You are now ready to send and receive (text) Instant Messages. But you should also note that you can also use IM for making voice calls and if you have a webcam attached to your computer, you can make a video call.

However, in an educational situation you might want to carry out some of these other activities:

- go through a student assignment (written in Word)
- train a student on a piece of a computer software
- work on a document together with a student (in Word or Excel)

To do this you can use the application sharing functionality. This means you run your copy of the application (e.g. Word or Excel) and the student will see it on their computer. The student doesn’t even have to have the application on his/her computer. As you use the application, you can pass control to the student so that he/she can actually work on the document on your computer remotely. At the end of the session you can then send them the file through IM.

Small tutorial groups

Instant Messaging is also a useful tool for small group tutorials (say 5-6 people). You can do this by inviting participants to join the conversation. You might then want to make use of the application sharing functionality or whiteboard functionality to:

- go through a PowerPoint presentation (like you would in an actual seminar or tutorial)
- brainstorm using the whiteboard
- save the transcript of the tutorial (by copying and pasting into Word) for later review

For groups larger than 5-6, you would probably want to use a virtual classroom tool like those described in Chapter 20.

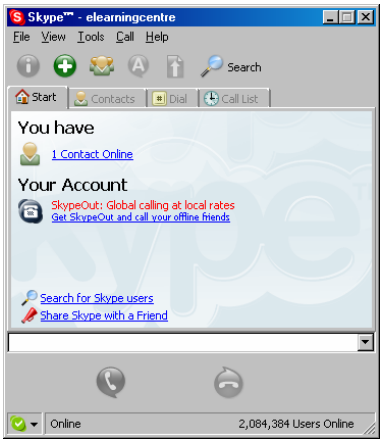
17-3 Using Skype (an Internet phone)

Landline telephone conversations are, of course, an obvious means of communication between individuals. However, if you have a fixed Internet connection or a broadband connection, then you might like to consider making use of an Internet phone. This essentially allows you to make a voice call over the Internet (using VoIP – Voice over IP), but it also includes other functionality like Instant Messaging.

There are a number of free Internet phone tools that can be downloaded. Skype is probably the most well known. You can find out more about it and download it here.

Skype	"Free Internet telephony that just works"

Once you have installed the software, this then sits on your desktop and waits for incoming calls or for you to make an outgoing call, just like an IM tool. Voice calls to other individuals on the Internet are free. There is also a service to make voice calls to landline telephones (called SkypeOut) and SkypeIn lets people from landlines call you.



Other features of Skype include:

- Instant messaging
- Conference calls
- File transfer
- Chat (i.e. instant messaging) – either one-to-one or with up to 48 people
- SMS messaging (coming soon)

Using Skype

There are a number of Visual and Text Guides that show you the most important things you can do in Skype, and point out tips and tricks to get you calling more quickly and efficiently.

Visual Guides for Windows	From Skype

Just like with Instant Messaging tools, if you are going to use an Internet phone system like Skype, you will need to set up some guidelines on how and when you can be contacted in this way.

Finally, here is an example of how Skype is being used for language learning across the Internet.

Russian lessons via Skype	From the Ukrainian Language Services

17-4 Using other live chat tools

An alternative to Instant Messaging tools or an Internet phone is to use a live chat room. Here are two ways

Live chat in a VLE

Your Virtual Learning Environment may include instant messaging or live chat functionality. For instance Blackboard has Lightweight Chat and WebCT has Chat. If you want to use the online chat functionality in your VLE, you will need to find out more about it, but here are a couple of resources to help you use these two systems.

Blackboard Lightweight Chat	From Temple University
WebCT Chat	From the University of Idaho

Web-based chat rooms

There are a number of free web-based chat room tools that you can use to let you set up your own private chat room for you and your invited learners. The advantage of this solution is that there is no need for the installation of software on a computer (by you or the students) and it works with any PC. You just need a web browser.

Here is an example of a chat room tool.

Chatzy	Free private chat service

Running a live chat session

There are a number of things to bear in mind when running a live chat session. This short tutorial will present you with several ideas and tips that might enhance your chats as well as provide some netiquette.

Establishing netiquette in your WebCT chat rooms	From Georgia Southern University

17-5 Instant messaging and live chat on mobile devices

Instant messaging

MSN Messenger is available for PDAs, as are other versions of Instant Messaging tools. There are also other 3rd party tools for Pocket PCs and smartphones. Here are some examples

MSN Messenger	For Pocket PCs and smartphones From Microsoft
Agile Messenger	For Pocket PCs, smartphones and Palms From Agile Mobile
AIM	For Pocket PC From AOL

Internet phones

Skype is also available for Pocket PCs.

Skype	For Pocket PCs

Skype on mobile phones

Motorola and Skype have formed an agreement that will “provide greater connectivity options and access for Skype’s more than 25 million registered worldwide users”. So look out for mobile phones with Skype functionality in the future.

17-6 Chapter resource list

Readings

Here are pages at the e-Learning Centre which provide more information on the following aspects of instant messaging and live chat

Instant messaging and chat	Links to resources that take a look at the importance of instant messaging and chat for learning.

Tools

Here are pages at the e-Learning Centre which provide more information on the following aspects of instant messaging and live chat

Instant messaging, chat and telephony tools	Links to Instant Messaging, chat and telephony tools for use in live, instant, real-time communications and collaboration
Live support tools	Links to a range of tools that could be used for providing live e-learning support

18

Discussion forums

This Chapter looks at discussion forums: what they are, how to create them and how to use them.

Contents

18-1 What are discussion forums?

Online discussions are **asynchronous**, that is they do not happen in real time (unlike live online chats which are real-time conversations) and they generally take place over a period of time - say a week, two weeks or a month or even longer.

Discussion forums – i.e. places where these asynchronous discussions take place - are also known as Message or Bulletin Boards. Discussion can either be

- **threaded -** which means that postings and responses are grouped together; or
- **unthreaded -** where the postings are simply listed in chronological order.

Educational discussion forums

Discussion forums are found in many different situations, but they are used in education for a number of reasons:

- as a formal course tool to encourage and foster discussion on academic subjects
- as an informal tool to support informal discussion amongst students (e.g. Virtual Café as described in 4-2)
- as a means of creating a community of learners
- as a tool for collaboration with other institutions across subject areas

Here are some examples of threaded discussion forums in an educational context.

STA261 Course Discussion Forum	The discussion form for Probability and Statistics at the University of Toronto
The student room	A free informal student discussion forum
History Teachers' Discussion Forum	Students and teachers of history can meet here to discuss historical, political and other issues. "From schoolhistory.co.uk"

If you are thinking about including an online discussion in your course, take a look at this resource which explains more about discussion forums and how they can be used in education:

You've got a discussion board ... so what are you going to do with it?	From EdTech at Virginia Tech

This resource which provides details of an experience of using a discussion board in a large undergraduate class in Hong Kong

Learning through asynchronous discussions	By Narasimha Bolloju in eLearn magazine

18-2 Using discussion forum tools

There are a number of ways of creating online discussion. The most appropriate will depend on what tools you are currently using for your course website as well as what other tools you have access to.

Using VLEs

Most VLEs have a threaded discussion functionality. If you want to use a discussion board within your VLE, you will need to find out how to make use of the discussion functionality. But here are a couple of resources if you are using Blackboard or WebCT

How to set up a Blackboard discussion board	From ISS at Southampton University
Using the WebCT discussion tool	From the WebCT manual at Georgia Institute of Technology

Using blogs

If you have created a course blog, then you can use the comments functionality for students to develop an unthreaded discussion. Here's an example:

Guide to e-Learning example blog discussion [Username: e-learning Password: e-learning]	From the e-Learning Centre

For more information on blogging, see Chapter 13.

Using web-based tools

There are a number of web-based tools that you could use to create a course discussion forum. There's nothing to download and nothing to install. You could then create a link to the forum from your course website. Here is an example of the use of a web-based discussion forum.

Guide to e-Learning web-based discussion	From the e-Learning Centre

This particular discussion was created using QuickTopic but there are a number of free tools that you can use. Here are two.

Quicktopic	A free hosted discussion facility. Start a discussion straight away.
World Crossing	A free hosted discussion facility.

Using web page and course authoring tools

Some web page and course authoring tools can be used to build discussion forums, e.g. FrontPage and Dreamweaver, so if you are using them to create your course website, you can also include discussion forums.

18-3 Running an online discussion

Just as with online chats, the easy part is setting up a discussion forum - the more difficult part is getting it to work. Discussion forums work best where there is a real need for them. Within an educational context they can require a lot of nurturing.

Here are some of the problems:

- Some participants don't want to participate in discussions, e.g. they don't like putting their ideas down in black and white, so many just read the postings and don't post (known as "lurking").
- Some participants can get very heated in their discussions and post very inflammatory messages (known as “flaming”)/
- Others use the discussion forum for junk or off-message postings (known as “spamming”).

Discussion forums therefore need to be managed by a "moderator" or instructor, who:

- Sets the guidelines for use of the discussion forum by the participants and what is to be expected of them.
- Seeds the discussion forum with new postings and encourages participation. But you should bear in mind that “lurkers” can get just as much out of reading as others do in posting.
- Ensures that all non-appropriate messages are deleted quickly.

Here are some guidelines on using discussion forums in a learning situation.

Tips for using discussion forums	Kate Britt, WebCT.

18-4 Chapter resource list

Readings

Here are pages at the e-Learning Centre which provide more information on aspects discussed in this chapter.

Learning communities	Links to resources that look at the importance of Learning Communities and Communities of Practice in e-learning
Facilitating online learning	Links to resources concerned with using collaborative learning tools effectively and the facilitation techniques required

Tools

Here are pages at the e-Learning Centre which provide links to discussion forum tools.

Discussion board and forum tools	Links to discussion boards and discussion forum tools for use in asynchronous, text-based discussions

19

Collaborative learning tools

In this Chapter we look at collaborative learning and a number of tools that support this approach: wikis, groupware as well as some other free tools.

Contents

19-1 What is collaborative learning?

e-Learning is not just about providing content it's also about providing the opportunities for learners and teachers to come together to learn together towards a common goal.

It's also about building a **learning community** – that is a cohort of students that learn together, so that they build a deeper understanding of the course they are studying through interaction with their peers and their teachers.

Take a look at this article about building a learning community in a high school class.

Building a learning community online	Chris Waters, techlearning.com, February 2004

Why collaborative learning?

There are many reasons why you might want your students to work together – both formally and informally. For instance, you might have set up study groups for students to support one another throughout the course or you might want them to work more formally together on a group project. Here is a general resource on setting up group work and study teams.

Collaborating Learning: Group work and study teams	By Barbara Gross Davis, Tools for Teaching, 1993

This article looks at what makes an online project work, how learners collaboratively design their own course, select tools for implementation, participate as learners, and evaluate the outcomes.

What makes an online group project work?	By Brenda Lopez-Ortiz and Lin Lin International Journal of Instructional Technology and Distance Learning February 2005

Tools for online collaborative learning

There are many ways of bringing individuals together to communicate and collaborate – and some of these have already been discussed in the preceding chapters, i.e by email, by instant, live online interactions as well as by asynchronous discussions. But here we want to look at some other tools that can support the ways groups of learners work and learn together.

In this chapter we want to look the following tools:

- **wikis** – these are tools for creating collaborative content
- **group workspaces** – these are tools that can be used for file sharing as well as discussions
- **other free collaborative tools** – that can be set up quickly and easily for collaborative learning purposes

19-2 Using a wiki

"Hypertext on steroids" is how one writer, Lars Aronsson, described a wiki website.

The word "wiki" comes from the Hawaiian word for quick. A “wiki-web” is one of the quickest way of setting up a website, but what is the most significant feature about wiki software is that it lets you build a website where the pages are editable by the users.

The Wikipedia is the best and well-known example of the use of a wiki. It is an attempt to create an “accurate and comprehensive encyclopaedia on everything”. Take a look at it below, and also visit the help page and experiment in the sandbox to learn how you can edit any article right now.

Wikipedia	A free content encyclopedia that anyone can edit

This articles at the Wikipedia are a useful resource on any topic, but take a look at how it defines wikis.

WIki	From Wikipedia

Wikis in education

> *“Wiki technologies allow teachers and students to painlessly and collaboratively develop resources and course materials online.”*

The potential for wikis in education is very powerful and is still being explored. This is a quote from the following resource that will help you find out more about wikis in education. In particular you can get some ideas for educational applications. Note the site is itself a wiki.

Teaching and Learning with Wikis	By Jonathan Aubrey and Jeff Nelson

Wiki tools

To find out more about how wiki software works, take a look at the Intro Tour at Jotspot (a wiki application). If you like what you see you can always sign up to create your own private wiki.

Jotspot	The application wiki

Most wiki software is open source, although there are some commercial products. Here are two further examples of wiki tools – one commercial intended for the educational market, and one open source intended as an “enterprise collaboration platform”.

CourseForum	CourseForum for educational purposes
Twiki	TWiki for enterprise collaboration

19-3 Using a group workspace

Group workspaces are useful for a wide range of activities, from managing a project to providing a dedicated workspace for a group or course.

In addition to supporting communication and collaboration between the group, these "workspaces" are also able to provide other features like:

- a document library for file sharing and file versioning (content/document management)
- announcements and communications - live chat and discussion forums
- polls and surveys.

There are many commercial products intended for the corporate market, but there are also a number of free tools that can be used as collaborative learning spaces. Here are two.

Yahoo! Groups	"The easiest way for groups of people to communicate on the Internet"
Smart Groups	"the place to go to get together online with a group of people"

Groupware of this type could be used for a class or group space to store course files as well as promote communication between the participants.

Peer-to-peer tools

There is also a type of collaboration tool called peer-to-peer (or p2p) tools. These operate in a very similar way to Instant Messaging tools, in that they allow users to set up connections between the different users (the peers), rather than using a server-based product to control access. One of the best known peer-to-peer tools is Groove.

Groove Virtual Office	From Groove Networks

Although Groove's product is called "virtual office software" it can be used for educational purposes, and here is a case study to explain how.

Groove educational case study: CAL State University	From Groove Networks

If you like what you see, Groove Virtual Office Trial is available at no cost for personal use. Groove Networks also produce some useful documentation on how to use Groove and a Learning Center to help you get up and running with Groove.

Groove documentation	From Groove Networks
Learning Center for Groove Virtual Office	

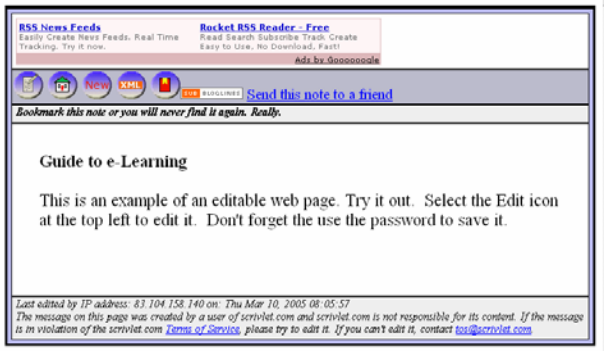
Note: In March 2005 Microsoft announced it was to acquire Groove to become part of its Office family of products.

19-4 Using other free collaborative learning tools

There are a number of other free web-based tools that can be used for collaboration purposes.

Scrivlet

The example below is an editable web page, created with Scrivlet. This is how the page looked when it began life. See how much it has changed when you take a look at it. You can also edit the page, but to save it you will need to use the password



Scrivlet example [Password: e-learning]	From Scrivlet

Scrivlet is a quick way to create and collaboratively edit shared pages on the web. It also creates an RSS feed which you can read in your aggregator (for more on reading RSS feeds see 13-7). To create a new shared web page, just select New.

Other tools

Here are some other collaborative tools to take a look at:

Webnote	You start by creating a workspace and creating notes in the workspace. You can share your notes with others by providing the workspace name (or url)
Bloki	"You can share your Bloki pages, blog, and forums with anyone you like. Authorize other users to edit your pages, and Bloki becomes a tool for communication and collaboration."
Jybe	"Jybe lets you browse the web in real-time with friends, family and business partners."

In addition, some of the user tools described in 5-2 for sharing of bookmarks could also be classed as collaborative learning tools.

19-5 Chapter resource list

Reading

Here are pages at the e-Learning Centre which provide more information on the following aspects of collaborative learning.

Collaborative learning	Links to resources that take a look at the importance of communication and collaboration tools
Selecting a collaborative learning tools	Links to resources that give guidance on selecting collaboration tools
Wikis	Links to resources that take a look at the use of wikis for e-learning
Peer-to-peer (p2p) learning	Links to resources that take a look at peer-to-peer software in general as well as their use for peer-to-peer learning activities
Using Groove	Links to resources about Groove, reviews, tutorials, etc

Tools

Here are pages at the e-Learning Centre where you will find more information about collaborative learning tools.

Wiki tools	Links to a number of wiki tools
Collaboration/groupware tools	Links to a number of collaboration, groupware and knowledge sharing tools
User tools – for e-learners and e-tutors	Links to a selection of tools that might be of use for an e-learner or e-tutor – for both individual or collaborative use

20

Live, virtual classrooms

In this Chapter we will look at live virtual classrooms: what they are and how they are used.

Contents

20-1 What are live, virtual classrooms?

In the early days of e-learning, it was very much promoted as a means of allowing learners to have 24 hour access to learning. In other words there was no need for all the learners to be in the same place at the same time to gain access to the materials. However, there is now the opportunity to bring learners together, at the same time, for a live learning event - although they don't have to be in the same physical place - through the use of online meeting, conferencing or virtual classroom software.

One of the things that many people have said was a big disadvantage with the early forms of e-learning was the lack of human presence, particularly a charismatic lecturer who can bring the subject alive and answer all your questions.

In a live e-learning event, the lecturer interacts with the students, who are remotely connected just as if they were all seated in a traditional classroom. In a "virtual classroom" lecturers can:

- give a lecture presentation
- use an interactive whiteboard to brainstorm with the group
- share desktop applications to work on documents with a group
- ask and answer questions of the learners both individually and as a group
- invite learners to contribute to the discussion
- get them to breakout into small groups for further interaction

Note: that much of this functionality can be achieved with instant messaging tools, so that if you want to run a live e-learning event with a small group of users (say 5-6 people), you should take at look at Chapter 17. However, virtual classroom tools are more sophisticated in many respects and can also support a large number of participants. Live e-learning events can also be recorded as they take place. This means that archived versions can be made available on demand for review by students or for anyone who was unable to take part in the live event.

Take a look at these archived recordings of live e-learning events which will give you a flavour of what it is like to participate in such an event. Note that because each of these examples uses a different live e-learning system, you will need to ensure you have set up your computer correctly before you view the recordings.

Archived Desktop Lecture Series	From HorizonWimba
Archived Events	From Centra

Live e-learning in education

Live e-learning events have an important role to play in Further and Higher Education. They are particularly useful for distance learning programmes, as they provide an opportunity for students to come together as a group to learn. For many distance learners this can also help to ensure they stay on track as they work through their programme remotely and at the same time feel part of a cohort of learners. In the case of institutions offering parallel tracks, this may also be a way of bringing together the campus-based students and remote learners. In other words, the class can be run live with the campus-based students in the classroom and the remote learners attending remotely. This is a case study of how one university uses a virtual classroom tool.

Centra helps Stamford University broaden its curriculum	From Centra

20-2 Using a virtual classroom tool

There are now a number of live e-learning tools on the market: Some are multi-purpose. i.e. they can be used for a range of live events across an institution, and there are others that are dedicated educational/training tools, which are more accurately known as "virtual classroom" tools. Consequently the functionality of the tools can differ quite significantly. Particular things to consider about the tool you are using include:

- whether you will also need a **teleconferencing** system for the participants to hear the audio, or whether the system supports VoIP (Voice over IP) - in other words the sound goes through your computer
- whether you can use **webcams** to show video of presenter and participants
- the **number** of users that can participate in the event
- whether the event can be **recorded** and played back on demand
- to what extent it operates with a **VLE** if you want to manage and track the use of live and recorded learning events

Setting up and running a live e-learning event

Once a system is in place in your college or university, live events can usually be set up by lecturers themselves, although, in some places there may be an administrator who looks after the system centrally.

Lecturers who are considering running live, virtual (learning) events need to be aware that it is not quite the same as running a real, live classroom event. And just as with classroom events, they do require some planning. In particular, thought needs to be given to the length of the event. It is more difficult to participate in a live e-learning session than in a traditional face-to-face session. There are a lot of things happening on the screen and participants need to concentrate, so of course there is only a limited time that they can remain focused. 45 minutes is actually a good length of time with perhaps 5-10 minutes either side getting ready and closing down.

You will also need to ensure that the event is as engaging and interactive as possible. Listening to a 45 minute presentation in a virtual classroom without any opportunity to participate is just as bad, probably even worse than, listening to a 45 minute presentation in a classroom. You will want to make sure that the students are involved as much as possible, so it should make use of the interactive features of the tool – annotating, whiteboarding, application sharing, etc.

You might also want to consider whether you can run the event single-handedly or whether you will need some support. A lot can happen in a virtual classroom event; you will not only need to give the presentation but also deal with any participants' questions. You might therefore want to seek the help of someone to act as a facilitator or moderator to help keep the event as flowing and interactive as possible.

Finally, of course, you need to be very familiar with the software itself so that you can concentrate on running the event rather than worrying about how the software works. It's therefore a good idea to have a few rehearsals to ensure you feel completely at home with the software and that it is not a barrier to running a good event. For some further advice on running a live event, take a look at the following article.

Designing and Facilitating Online, Web-Based Events: A *Very* General Checklist	By Nancy White, Full Circle Associates

20-3 Chapter resource list

Reading

Here are links to pages at the e-Learning Centre which provide more information on live virtual classrooms.

Live e-learning	Links to some general resources on live e-learning
Running a live e-learning events	Links to resources on how to run a live e-learning event
Selecting live e-learning tools	Links to resources on choosing a live e-learning tool

Tools

Here are pages at the e-Learning Centre where you will more information about virtual classroom tools.

Meeting, conferencing and virtual classroom tools	Links to a range of e-meeting, conferencing and "virtual classroom" tools that can be used for creating live (synchronous) e-learning environments

APPENDICES

Appendix A: e-Learning blogs and newsletters

If you want to find out what's happening in the world of e-learning, then there are a number of blogs where the authors make regular postings about e-learning.

You can keep up to date with the postings either by signing up for the emails or by reading the postings in your RSS reader. Note: If you are unfamiliar with blogging and RSS, then Chapter 13 explains how to do this.

Here are some interesting blogs and newsletters for educationalists, i.e. those that make regular postings about e-learning and online learning within colleges and universities.

OLDaily	The OLDaily is produced by Stephen Downes. Stephen is a senior research officer at the National Research Council of Canada. Every day he provides half a dozen or so daily links to e-learning resources.
elearnspace blog	The author of the elearnspace blog is George Siemens. He is an instructor at the Red River College in Canada, and has his finger on the pulse.
EdTechUK	Josie Fraser is the author of EdTechUK. Josie describes herself as "a UK-based educational/instructional technologist mildly obsessed with Japan"
e-Learning Centre's What's New Blog	Jane Knight of the e-Learning Centre uses this blog to make postings about new entries in the e-Learning Centre.
elearningpost	elearningpost is produced by Maish Nichani and is an "intelligent digest of daily links to articles and news stories about Corporate Learning, Community Building, Instructional Design, Knowledge Management, Personalization and more".

You will find links to more e-learning blogs and newsletters at the following pages at the e-Learning Centre.

Blogs in e-learning	Links to some blogs in the area of e-learning and learning in general
Newsletters, news services and news sources	Links to resources to help you keep up to date with what's happening in the area of e-learning
e-Learning Centre: RSS newsfeeds	Links to a number of RSS newsfeeds to help you keep up to date with news in e-learning and e-learning related issues

Appendix B: e-Learning conferences and networking events

If you like to meet people, hear their experiences of e-learning and share best practice, then attending a conference or networking event is a useful way of continuing your professional development in this area.

There are a number of e-learning conferences held in the UK as well as in Europe and other parts of the world. But here are some events you might be interested in.

BETT	"Over 550 leading educational ICT suppliers covering all curriculum areas and all levels of education . Over 100 seminars and workshops from industry experts focusing on current issues in ICT."
Learning Technologies	Europe's leading organisational learning & skills event. With over 100 exhibitors it is the single-most important learning event for the business, HR, IT and training manager"
The Education Show	The Education Show is the perfect platform to discover everything which makes learning and teaching exciting
Alt-C	Association for Learning Technology's annual conference. ALT is a professional and scholarly association which seeks to bring together all those with an interest in the use of learning technology.
Online Educa	Online Educa Berlin is the world's largest international conference on technology supported learning and training. Meeting the networking needs of the international e-learning and distance education industry, the annual Online Educa Berlin conference is the key networking venue for strategists and practitioners from all over the world.

If you are going to attend a conference, then take a look at this resource, which will help you get the most out of it.

Getting the most out of a conference: Six steps to reducing information overload	By Janelle Hall, American Management Association, October 2004

The e-Learning Centre maintains a calendar of e-learning conferences and events worldwide.

e-Learning Events Calendar	Links to e-learning events around the world in a monthly calendar

Appendix C e-Learning magazines

If you like to read magazines with up-to-date articles about e-learning trends and case studies, then here are some suggestions. These magazines have articles suitable for both academic and workplace e-learning

Learning Circuits	"ASTD launched *Learning Circuits* in January 2000. Its goal was to promote and aid the use of e-learning, creating a body of knowledge about how to use technology efficiently and effectively for learning. It delivers a fully interactive Website with discussions, demos and resources, and articles on a weekly basis. A bi-weekly opt-in email newsletter, *LC Express*, sends news, teasers, and links to subscribers. There are nearly 500 articles currently on the Website."
elearn Magazine	"eLearn Magazine is published by ACM, a not-for-profit educational association serving those who work, teach, and learn in the various computing-related fields. Content is culled from two distinct sources: News and features written by professional journalists with expertise in education and technology, and columns and tutorials by industry leaders and stars of academia."
Campus Technology magazine	"*Campus Technology* is the only monthly publication focusing exclusively on the use of technology across all areas of higher education. *Campus Technology* provides in-depth, aggressive coverage of specific technologies, their uses and implementations, including enterprise resource planning; eLearning and course management systems; presentation technologies; communication, portal, and security solutions - all the important issues and trends for campus IT decision makers."
e-learning age	e.learning age is published monthly in the UK. It is not available online

Here is a page at the e-Learning Centre where you can find more magazines as well as academic journals.

e-Learning magazines and journals	Links to journals and magazines in the area of e-learning and the use of technology in teaching and learning - for both academic and workplace e-learning

e-Learning Centre's
Guide to e-Learning in Further and Higher Education
www.e-learningcentre.co.uk