Unit 1 Introduction

Teaching and learning with technology? From the mechanical teaching machines of the 1950s to the computer-based instruction applications of the early 1980's, and more recently from the internet and world wide web to the currently emerging mobile technologies, the use of technology in teaching and learning has always been an area surrounded by genuine promise, over enthusiastic claims, natural scepticism, and mild to serious apprehension.

Separating the rhetoric from the reality of educational technology is difficult, especially for those who are new thinking about using technology in their teaching, and who may be wondering what this can offer, or what the implications are, for what they are already doing well in the classroom.

One important fact is that no new teaching medium has ever come close to completely replacing the one that preceded it, for the good reason that no one teaching medium is diverse enough to provide for everything that the tutor or the learner will require in every possible situation. A second important fact is that when it is used appropriately, educational technology can play an important role in supporting teaching and learning, often enhancing it in ways that would be difficult or impossible to achieve in the traditional classroom environment. This has been especially so since the emergence of the world wide web, which made single-point access to a rich range of information, resources, and communication tools possible, and with it allowed interactions between people, and with resources, to occur independently of time and geographic location.

1.0 So what can educational technology offer you?

It should never be forgotten that good teaching practice is good teaching practice, whether it occurs in the classroom or online. For most tutors then, educational technology provides a means to build upon their existing good practice by adding an extra dimension to what they are already doing well, and by providing additional opportunities for their students.

How might this work in practice? Consider briefly the following examples:

- A tutor has a particularly large class, and is repeatedly dealing with the same kinds of questions in tutorials and via e-mail. To help them make better use of their contact time with their students, they establish an online problems forum that students are required to post any general questions to. The tutor now only needs to respond on a particular issue once, and their feedback is there for all their students to benefit from.

- To help foster the development of peer-working and inquiry-based learning skills, weekly lectures are alternated with research and report exercises where students work in small groups to investigate an issue using appropriate web resources, and report back in tutorial sessions.

- Technology is used to more easily bring guest experts into the classroom for an online Q&A session, to enable collaboration with fellow learners at another institution, or to establish a support network for a group of students who are out on placement.

These examples are intended to give a feel for just some of the possibilities educational technology offers. There are many, many more, and it is hoped that this guide will help you identify ways in which educational technology could effectively support what you currently do in your teaching, and contribute to an even more active and engaging experience for your current and prospective students. By learning to teach with technology, not only are we able to exploit the rich possibilities that educational technology offers, we are also better equipped to support an increasingly diverse and technologically aware student population who are seeking more choice and flexibility in their course provision.

2.0   About this guide

This guide is an introductory guide, and the emphasis is very much on providing an overview of the topics covered, with practical tips and guidance for approaching the use of educational technology in teaching. You will not find much here that directly addresses the various theories that underpin current thinking about educational technology. However, the explanation and advice offered does have a sound basis in accepted concepts and principles, in addition to being informed by the practical experiences of the contributing authors, and research into technology-supported teaching and learning.

With the focus being on general awareness of relevant teaching and learning issues this guide is not a technical how-to manual, although with it being aimed predominantly at Edinburgh Napier staff you will find specific mention of WebCT at certain points. For technical guidance as well as helpful hints and tips on working with WebCT (and some other relevant technologies), please see the range of guides and the FAQ list at **http://www2.napier.ac.uk/webct/staff/**

2.1   What is the purpose of this guide?

This guide was originally distributed as a 'working document' in 2006 simply because it was the first time such a document had been made available within Edinburgh Napier, where the widespread use of technology in teaching and learning continues to be an area of rapid development. The main purpose of this first revision is to update links and reading lists while addressing the organisational changes within the institution-predominantly those related to the improved support of students and staff in technology enhanced teaching and

learning. Many important issues have not been appropriately addressed simply for lack of time, but the intention remains to continue to evaluate the guide's use and usefulness properly for a comprehensive revision in the near future.

2.2   What does this guide cover?

Reflecting current developments at Edinburgh Napier, the guide mainly covers various ways of using online technologies and resources to support teaching and learning in campus-based and online course contexts. However you will also find that classroom teaching tools, mobile devices and web 2.0 technologies are touched upon in certain sections. These areas are obvious ones to expand upon for future revision.

2.3   Who is this guide for?

This updated guide is aimed primarily at new members of Edinburgh Napier teaching staff who are thinking about using technology in their teaching, or who have some experience and are looking to take things further. Those tutors who have already made use of this guide have even found that it provides a useful introduction to some topics and issues that they had not been fully aware of despite their extensive use of educational technology in the past.

In addition to teaching staff, this guide is also used as a general reference by learning technologists and other staff members who are involved in supporting the development of blended and online modules or programmes. Last, but not least, this pedagogy and learning technology guide serves to support students as a core text on the Edinburgh Napier programme MSc Blended and Online Education run by Academic Practice.

2.4   How to use this guide

This guide should be seen as supplementary to the support and advice that is offered through the relevant events within the Professional Development programme, and available on a one-to-one basis from the Academic Development Advisers Online Learning (ADAs). It is not a replacement for these kinds of support, and instead should be used alongside the assistance that is readily available from the ADAs.

It is also not a document designed to be read in its entirety – unless you really want to of course! Instead the intention is for the reader to be able to dip into the section covering the topic or issue of interest, and receive a straightforward explanation with practical tips and advice, and also illustrative examples, resource links, and recommended further reading where these seemed useful.

3.0   Hit and myth! Some things to know right now…

If you're just starting to think about using technology in your teaching, or have had some limited experience but perhaps still feel slightly apprehensive, then there are a number of misconceptions and common fears that you need to be aware of. In no particular order then here are some popular myths to put to rest, either for peace of mind or to help outline particularly important points.

1.   **Technology means getting rid of tutors**. OK, this one was deliberately put first as it is undoubtedly the biggest myth of them all. The use of educational technology, and particularly communication tools, does tend to mean that the role of the tutor changes somewhat, as explained in Unit 4. This can be very advantageous though, and the effective use of educational technology, both in course development and support, is critically dependent upon the role played by the tutor. Many students now express a preference for courses that combine classroom and online support, with face-to-face contact with the tutor being a critical factor associated with the class-based element. In addition, fully online courses with poor levels of tutor support tend to be very poorly rated by students, and are often associated with low retention rates.

2.   **Tutors must be really skilled in IT to make good use of educational technology**. Not really. This depends upon what the tutor wants to do and the context they're working in, but there are many ways for the tutor to very effectively support learning that require only a basic familiarity with some common tools. Some options are detailed in Unit 2.

3.   **Students who are IT literate will be able to use educational technology effectively.** Not true. Students need to be able to operate the technology so this is not a barrier to their learning, but being IT literate is not enough by itself. Students need to know why the technology is there, and how to get the most out of it. For example, there is a world of difference between students being able to post to a discussion board, and then using a discussion board in such a way that they can benefit from the increased reflection time this offers them. Unit 8 Issues in student support provides more guidance in this area.

4.   **All students need to collaborate online is access to a discussion board.** Or 'build it and they will come'. It's a common mistake to think that providing the resources is enough, but students need a reason to use educational technology effectively, either through necessity (there's no other option), or because there is a clear purpose for them doing so (such as an obvious educational benefit, or an assessed task). The issue of providing a clear purpose is common to Units 3, 5, 6 and 8.

5.   **Designing a blended or online course takes a lot of time.** It's true that the amount of time required to develop any course that makes extensive use of educational technology is considerable, but it doesn't necessarily need to take longer than the total amount of time involved in developing any classroom-based course from scratch. There are also real benefits

beyond the first time the course has run, for example the first year's discussion board messages can easily become a very useful resource for the next intake of students, maybe as an FAQ feature.

6. **Putting lecture notes online means students won't come to class.** Not necessarily. If the lecture notes provided online in advance are almost verbatim what is covered in class, then some students may well attend less, while others will instead ignore what's online. It partly depends on what students are told about how they are expected to use online notes, and how not, and there are many ways of enhancing the lecture experience through providing 'skeleton' notes and other supplementary materials online. It can also often be the case that students who don't attend lectures where notes are provided online are just as poor at attending lectures for modules where there is no provision of online material.

7. **I'll be answering e-mails and discussion posts all the time.** You really don't have to be. In fact in campus-based courses there are ways of using online communication tools to actually reduce the amount of e-mail already received, and make better use of face-to-face contact time. Please see Unit 2 for some initial suggestions on this. In the case of a distance course that relies upon online communication, there will certainly be more online messages than would be the case with a campus-based course, but there are very good strategies for efficiently dealing with the volume of communications, as outlined in Unit 4 section 4.2

8. **I'm going to have to write all this material to put online.** Maybe not. There are so many good and reputable sources of subject material on the web that you may need to provide little more than topic overviews with links to relevant readings for students to explore when undertaking their assigned tasks. You may not need to do the interactive stuff either, as there is a wealth of good interactive multimedia covering most subjects out there, while many textbooks now come with supporting web resources including interactive self-tests. For more on not reinventing the wheel please see Unit 7 section 5, and Unit 10 section 2.

9. **Some subjects just can't be taught using technology.** Very, very few subjects can be taught entirely with or via educational technology, and technology should never be used for the sake of it. That said, there probably isn't any subject in which teaching and learning can't be aided or enhanced by using technology appropriately. That doesn't mean technology should necessarily be used, but by being open to possibilities in the first place interesting possibilities may well become apparent.

10. **It's just a fad.** It's not. There have been faddish technological trends in education (mechanical teaching machines anyone?), and there no doubt will continue to be, but the possibilities enabled by developments in recent years means that the momentum towards the widespread adoption of technology in education is well underway. Please see section 5.0 in this unit, and particularly section 5.5.

5

4.0   What is educational technology?

If you've read the above, it will be apparent that some assumptions about what educational technology is have already been made. Strictly speaking, the term 'educational technology' could be used to refer to any tools or equipment that are used in teaching and learning. This could include blackboards, overhead projectors, and calculators. However, the contemporary view on what educational technology encompasses is focused on computer-based communications and information technology in teaching and learning.

This is still a very broad definition, and would include the use of common software applications including word processing and spreadsheets, and presentational software such as PowerPoint®, in addition to the various other kinds of stand-alone, online and mobile tools and technologies we now have.

The focus of this guide is on the online dimension of educational technology, which includes virtual learning environments (VLEs), discussion boards, real-time communication tools, and online repositories, to name a few. However, as previously indicated there is some discussion of stand-alone classroom tools and new mobile technologies.

4.1   The technologies…and where to find the answers!

VLEs and MLEs, hypertext and multimedia, PDAs and iPods, discussions boards e-portfolios, and wikis, blogs, clogs and vlogs, and other bits and bobs!

The area of educational technology has more than its fair share of technical jargon, and unfortunately it is growing all the time as new technologies come into play. If you're new to educational technology, the important thing is not to be phased by the terminology. Instead, just focus on what you'd like to do or find out more about, and you'll pick up the jargon as you go along.

That's certainly what is intended to happen as you work with this guide, which is organised into a series of units that each address a particular topic area, and describe and discuss relevant technologies and resources in context.

So, if you're interested in the possibilities of using audio, visual material including graphics and animations, or interactive simulations then check out Unit 7 Educational multimedia. Want to know about the range of possibilities for getting students to talk and work together online, then that's Unit 5 Communication and collaboration. Maybe you'd like some advice on the kinds of coursework that are best suited to blended and online learning, then that's Unit 6. You no doubt get the general idea, and if the title of each unit doesn't quite make what it covers clear, the contents list for the guide will.

If you do want a quick definition of certain key technological or pedagogical terms, then you may well find the Glossary a very useful jargon buster.

4.2   Contexts for using technology

Although it is the potential of distance or non-attendance online learning that has generated perhaps the most enthusiasm within education, this is only one context for using technology to support teaching and learning. There are also the possibilities offered by the use of 'stand alone' educational technologies in the classroom, learning that blends class-based and online activity, and the emerging practice of using handheld technology to enable mobile learning.

4.2.1   Stand alone self-study and classroom tools

The term 'stand alone' basically refers to any educational technology resources that are not accessed online via the web, an intranet site, or some other form of computer network. Instead, materials and tools are usually stored within the computer itself, or on a CD-ROM that can be accessed through a computer.

For this reason, stand alone learning technologies tend not to support communication or collaboration, although information in stand alone resources, such as an interactive CD-ROM, could include web links to communication tools including discussion boards, in addition to other web-based resources.

However, stand alone learning technologies can include any combination of informational, multimedia, interactive, or self-assessment content. In this respect, stand alone resources can offer many of the same advantages as a rich online environment can. Their main disadvantage is that they can only be used by one or a small group of students at any one time, unless of course the same resources are available on several computers or CD-ROMs.

Stand-alone self study resources, like CD-ROMs, are increasingly being joined in the classroom environment by other tools to enrich the classroom learning experience. These include interactive whiteboards (such as ActivePanel) that allow the tutor, and the student, to present and manipulate content dynamically, and link to locally-stored applications and the web. Class-based voting systems (such as Turning Point®) are also introducing more dynamic possibilities within the lecture theatre.

4.2.2   Blended

Blended learning basically involves content, support and coursework activity that is taught, studied and undertaken across some combination of the face-to-face and technology-based (typically online) environments.

Here at Edinburgh Napier University, blended learning is officially defined as:

> The use of a combination of online, flexible, and face to face teaching methods to provide learning materials, student support and assessment.

Blended learning approaches can vary considerably, and the approach taken should ideally depend upon what is feasible and appropriate within a particular

course context. There is a growing consensus that well-implemented blended learning approaches are potentially the most effective at supporting student learning, and there is an increasing amount of evidence that students on campus-based courses prefer a combination of face-to-face and online support.

Although the learning technology element in blended learning is usually thought of as being online, stand alone learning technologies can also have their part to play (the use of interactive whiteboards in the lecture theatre is a good example of a blended classroom approach). Aspects of course delivery and support normally associated with traditional distance learning can also have a role.

4.2.3 Fully online

At Edinburgh Napier, we define online learning as 'The use of the Internet, particularly the world wide web, to support teaching, learning and assessment'.

In fully online learning, where materials and resources are accessed via a VLE or other form of web-based environment, educational technology is typically the sole means by which course content is accessed, communication between students and tutors is enabled, and the undertaking of coursework is facilitated. The following diagram illustrates where fully online learning sits in relation to the other forms of technology-supported learning described above.

| Supporting face to face | Blended | Fully online |
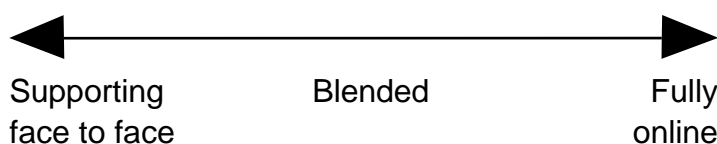
Online learning can have many advantages for both tutors and students. These include the possibility to study and communicate at virtually anytime and from anyplace, and the range of ways in which a rich online environment integrating, for example, multimedia, communication tools and self-test features can accommodate a range of different learning styles and preferences.

While many of the benefits can be experienced in a blended approach, fully online approaches are arguably the most challenging form of technology-supported learning. For tutors, the difficulties lie in the thought and work that is required in order to establish a good fully online course, and thereafter to teach on it. For students, the main challenges arise through the increased self-dependence and discipline that studying online requires. For tutors and students, the prospect can sometimes be made a little more daunting as fully online teaching and learning is something that is still new to many of them.

► **See Unit 3 section 1 for examples of blended and fully online modules.**

4.2.4 Mobile learning

Mobile learning, or m-learning as it is popularly known, essentially involves the use of wireless mobile technology devices including mobile phones, PDAs (personal digital assistants), digital audio players (MP3 players, iPods) and even

notebook computers to allow students to download and access educational content, and communicate with tutors and peers, regardless of their location. M-learning therefore enables truer anytime anyplace technology-supported learning than is possible through networked internet access.

M-learning is a recent development, but has thus far provided a promising additional dimension to class-based and online learning by allowing students to access pre-recorded lessons and other course content in manageable 'chunks' (eg short video narratives, animations, self-test quizzes etc). M-learning is not without problems, particularly in preparing course content to be delivered in small segments, or for legible viewing on small display screens, but it is an area of rapid development that is generating increasing interest in education.

► **See Unit 7 section 4 for more information on m-learning.**

5.0   Why is educational technology important?

There are a number of reasons why the use of educational technology has become, and looks set to remain, such an important issue within higher education. Chief amongst these are the external factors driving the momentum towards the widespread use of technology in teaching and learning, in addition to the growing recognition of the advantages offered to students and tutors.

5.1   The big picture

Amongst the range of factors driving the move towards increasing use of technology-supported teaching and learning, three of the most important are government directives, changes in the student population, and the established consensus on what constitutes effective teaching practice.

In the UK, the Government and the HE sector is focused on increasing and widening access to education for students who may have previously found that their educational experience, location, work or life commitments were barriers to their participation. Alongside a student population that is growing at a faster rate than universities can physically expand, and a recognised need for non-traditional courses that can support continuing professional development and progression to degree-level programmes, learning technology is seen as a partial solution to enabling more flexible modes of studying and attendance.

Recent estimates based on population growth indicate that the UK can expect undergraduate places to rise by up to 270,000 by 2028. Much of this growth will come from mature students over 25 seeking to study part-time, and increases in international student numbers (HEPI, 2008). This will see a student body that is more varied in entrance qualifications, professional experience, ethnicity, geography and support needs than it has ever been previously. This general trend is also being experienced out with the UK, and beyond flexible attendance, educators are looking towards technology to help support students with different

methods of learning, disability requirements, or knowledge gaps to bridge, and to offer this support inside and outside of the classroom.

Of course, in addition to their changing demographic profile, the expectations of current and prospective students are also driving the move towards technology-supported learning. This is borne out by much of the research in this area, while in 2003 the HEFCE/Universities UK/Standing Conference of Principles Joint Teaching and Quality Enhancement Committee (TQEC) published their 'Final Report on the Future Needs and Support for Quality Enhancement and Teaching in Higher Education'. This report found that good on-campus computing facilities, independent studying opportunities, and VLEs were amongst the most valued aspects of the learning experience for UK students. Desired enhancements included good online learning resources, better information dissemination, 24/7 accessibility to resources, and a greater use of technology by teachers (HEFCE/UUK/SCOP, 2003). For those students who enter HE from school, but also for those who are used to technology at home and in the workplace, a common expectation is that computer-based information and resources will be provided as standard.

Finally, the increasing role that learning technology is playing within teaching and learning reflects, and can also be seen as a result of, current thinking on how best to facilitate learning within educational contexts. Often discussed in terms of active or student-centred learning, the ideas of relevance here include those that address student collaboration, problem and case-based learning, fostering critical thinking, learning by doing, self reflection on understanding, learning through examples rather than description, and the role of the tutor as a guide or mentor rather than as a teacher or, in common parlance, as a 'sage on the stage'. The common rationale linking all these ideas is that deeper, more effective learning is enabled when students have more control over how, when and what they learn, and where they are able to learn in more meaningful ways.

5.2   Advantages for students

Whether used in stand alone, blended or online modes, educational technology has the potential to effectively support and enhance student learning in a diverse range of ways, from opening up studying opportunities for the geographically dispersed, to extending what is possible in the classroom. Some of the main benefits of educational technology for students include:

Improved access to materials
- students can study at a time most conducive to learning
- learning can be self-paced, and within reasonable limits students can spend as much time as is necessary to understand particular topics
- learning can be needs-based, as students have more flexibility to focus on those topics and issues that they most need to attend to
- basic course materials can be supplemented with external links to relevant online resources to encourage further reading as required.

Access to multimedia and interactive content

- relevant visual, audio and other multimedia information can be provided to allow students to see real world examples, or depictions of processes in a format that is easier to understand than text alone
- simulations and other interactive tools can allow students to easily apply their knowledge and see the effects of their experimentation in ways that might not be possible or practical in the classroom
- self-test quizzes can allow students to assess for themselves their progress on a periodic basis, which for some may motivate further progress, and for others signal possible areas for improvement.

Peer and tutor support and collaboration

- In campus-based contexts, increased access to students and tutors for subject-related discussion out with the limits of traditional seminars
- Through synchronous communication facilities, the opportunity to communicate in real time across geographic boundaries
- Through asynchronous communication facilities, more reflective discussion than might be possible face-to-face, and increased opportunities to participate for those that are normally less vocal
- Through group-working tools, the opportunity to work collaboratively without being present collectively, and to establish shared workspaces that might be unavailable or of limited availability on-campus
- Being able to collaborate with global peers, and benefit from a culturally rich exchange of ideas, and discussions of diverse beliefs and practices.

Central resource for each course

- In blended and online contexts, a central point of access to a range of resources within a VLE can allow students to more immediately engage in learning, and use their time more effectively than when lectures, seminars, and materials are dispersed over time and location
- VLEs allow studying any time from any place with an online computer.

5.3   Advantages for tutors

Although educational technology has many potential advantages for students, and this fact alone may provide enough rationale for taking a technology-supported teaching approach, there are also specific benefits for the tutor.

Across various levels of technology use, just some of the advantages include:

- Increased choice and flexibility in when and from where to teach
- Encouraging students to become more self-directing, and less dependent on the tutor to provide explicit instruction
- Knowing that students are being exposed to appropriate resources that should further aid what the tutor is able to do in the classroom
- Being able to get information and announcements to students quickly
- Encouraging students to be better prepared for lectures and seminars
- Knowing students have no excuse for not having basic course material

- In VLEs, the ability to see which students are not 'attending' online
- Saving time on administrative functions (eg module questionnaires, marking multiple choice tests, uploading coursework).
- Being able to support a broader range of students (eg CPD, part-time, and distance learners including online international cohorts)
- Providing increasing flexibility for, and possibly improving retention rates among, students who may be finding it difficult to balance studying and work or domestic commitments (eg mature, part-time, and also full-time students who just as likely may have work and family commitments)
- Easing the transition for direct entrants by providing access to relevant resources and online discussions from courses prior to their entry.

Many educational technology specialists, and tutors who have been through the process, also believe that re-thinking existing courses in order to enhance them through an element of technology-based learning can result in courses that are better organised, more up to date, and more motivating for students.

5.4   Advantages for institutions

At an institutional level, the good use of educational technology in teaching can contribute towards the institution being more equipped to cater for a diverse range of students both on and off campus. It may also contribute to logistical problems that universities are experiencing with the need to expand their student numbers, and expand their course provision into new geographical territories, possibly in partnerships with overseas institutions.

In addition, it looks like a good level of flexibility and additional support through online and other technology-based provision will increasingly affect enrolment rates when students are faced with a choice between otherwise comparable institutions, and can also contribute to increased retention as indicated above.

5.5   It's not going to go away!

Although the range of technologies we have now available is no justification by itself to make use of them in teaching and learning, it is fair to say that due to the external factors and obvious advantages that have just been outlined, there is now no prospect of educational technology not being an important part of teaching and learning practice. The likelihood is that its use will eventually become such an integral and natural part of what tutors and students do and expect, that at some point in the future it will cease to be an issue worth addressing as a separate aspect of teaching and learning practice.

6.0   The key challenges…and making them smaller!

The use of the kind of educational technology being addressed in this guide is still very much a new area of teaching practice for many tutors. New areas of practice

naturally bring challenges with them and this one is no exception, but the challenges don't need to be big…and there's ways to make them smaller!

6.1   Shifts in teaching practice and responsibilities

The use of educational technology in blended and online contexts usually results in a more student-centred approach, due in no small part to the increased choice and flexibility for the student that is offered. However, this can be an empowering experience for the student, not to mention liberating and rewarding for the tutor who may be able to find better ways to support students in having a more active, engaging learning experience that may ultimately result in improved achievement and retention.

The extent to which this shift towards a more learner-centred approach occurs really depends on the tutor in question, the characteristics of the student group, any practical or logistical constraints on where, when and how the learning can occur, the kind of the coursework and assessment that is to be undertaken, and the nature and range of the technologies and resources that are available for the student to use. Of course in many cases the tutor is already going to be taking a learner-centred approach in teaching, in which case introducing appropriate uses of educational technology is simply introducing more flexibility and variety to an already engaging course.

So what are the main challenges this entails for the tutor? Playing more of a guiding role than might be the case when a course is delivered mainly through lectures and seminars is one, especially where there is an increased emphasis on students collaborating online. Gaining ease at providing this guidance as a participant in online discussion is a related issue, while ensuring that the students themselves understand and feel comfortable with what they are expected to do when working in blended and online contexts is another.

► **See Unit 4 for further guidance on the role of the tutor supporting blended and online learning.**

6.2   Making the transition

Understanding what is involved in terms of shifting roles and responsibilities is one thing, but for the tutor facing the prospect of teaching in a blended or online context for the first time, actually making the move towards doing so is another matter. However, there are some really good ways to better prepare yourself for teaching using technology. Here are a few suggestions to think about:

- **Think about your teaching**. Consider the courses(s) you teach and how you currently teach them. What works well and what could perhaps work better? Would increased collaboration between students be desirable, or having more students participate in subject-related discussion? Would your students benefit from more self-testing and reflection opportunities, or through interacting with relevant multimedia? Thinking pedagogy first, are

there any ways in which technology could perhaps play a role, or is this at least worth exploring further?

- **Consider your students**. Who are they? If they are new to HE will they have the skills to work largely independently online? What will they need or expect if they are Masters or distance learning students. What IT skills will they have or need for what you have in mind for your course?

- **Shadow a colleague who is already doing well using technology in their own course(s)**. Go along and see what they do in the classroom, or ask to be enrolled as a guest in the online environment for their course and get a feel for what's happening. Ask them questions about their approach.

- **Seek relevant staff development guidance**. Sign up for relevant workshops and events, and arrange to meet with specialist advisers to talk through your questions, ideas and concerns. At Edinburgh Napier, this is enabled through the Professional Development programme and the Academic Development Advisers (Online Learning) that are attached to each Faculty.

- **Become an online student**. What better way to get a real insight into the nature of blended and online teaching and learning than for the tutor to experience this as a student. At Edinburgh Napier, we're fortunate enough to have Online Taster Courses offered through Professional Development and that are designed for this very purpose.

► **See Unit 3 and Unit 4 section 2 for further guidance on making the transition.**

6.3   Developing expertise

Given the range of ways in which technology can be used in teaching and learning, you may find it useful to keep the following general advice in mind whether you are completely new to using educational technology, or are taking the first steps towards trying a different approach to those you've used before:

- **Don't feel under any pressure to become an expert overnight**. It takes time to get to grips with trying anything new in teaching, and this applies equally to trying something new with educational technology.

- **Start small**. If you think there's a way in which technology can be used to better support some aspect of your teaching and your students learning, try it out on a small scale first. For example, perhaps introduce the use of online discussion within one aspect of one of your courses (having an online guest seminar in a particular week, or asking students to collaborate on one element of their coursework).

© Edinburgh Napier University

- **Don't expect everything to go to plan**. If you're trying something out for the first time it very probably won't, which is fine and provides a basis to build upon for next time. This is also why it's important to start small.

- **Talk to your students**. Ask them what they felt about the use of a particular technology-supported approach. What worked for them, what could have worked better? What else would they like next time?

6.4   Finding the time!

This is often a problem, depending upon what the tutor would like to do in terms of using educational technology, or what is being expected of them. It's certainly tempting to view the introduction of educational technology as just something else to be tackled in addition to a full range of other commitments, but introducing a technology-supported approach doesn't have to be that time consuming. Start small as described above, and introduce new things incrementally either throughout the course, across courses, or from one trimester to another. Be aware also of the manner in which using educational technology in certain ways can actually save time (as described previously in section 5.0 and in Unit 2).

Of course, if you are to develop a predominantly or fully online course that's a different matter altogether. The hope is that an appropriate amount of time will have been scheduled in to allow this work to be undertaken. If not, please see Unit 3 section 5 for useful information that may help make the case for this.

6.5   Knowing where to find help and resources at Edinburgh Napier

It is important to establish what guidance and advice is available to you from colleagues, other departments, and also from the online learning team in Professional Development here at Edinburgh Napier where each faculty has a designated Academic Development Adviser (ADA). The ADA's role is to provide pedagogical and technical support for online teaching and learning activities. One of the first things to do when considering the use of technology in your teaching is to contact your ADA who can point you to valuable resources and reading material, help you decide whether to choose a blended or fully online approach and can assist you at all stages of design, development and implementation.

Please find the contact details for the **online learning team** below:

- **Stephen Bruce** (MLE developments)
  s.bruce@napier.ac.uk
  tel: 455 6116
- **Julia Fotheringham** (Faculty of Engineering, Computing and Creative Industries)
  j.fotheringham@napier.ac.uk
  tel: 455 6468

- **Colin Gray** (Faculty of Health, Life and Social Sciences)
  c.gray@napier.ac.uk
  tel: 455 6437
- **Elaine Mowat** (Napier Business School NUBS)
  e.mowat@napier.ac.uk
  tel: 455 6446

There are also other contacts and helpful resources to be aware of for getting assistance on a range of technical, administrative and specialist matters that are relevant to the success of blended and online learning approaches here at Edinburgh Napier which are compiled below for your convenience and may be referred to again in later sections of this guide:

Edinburgh Napier services

- **C&IT services** for (not just) technical problems in using WebCT. Consult the C&IT website for new staff at **http://staff.napier.ac.uk/services/cit/IntroductionNewStaff/Pages/IntroductionNewStaff.aspx** or send an email to **c&itsupport@napier.ac.uk**. You'd be surprised what C&IT has on offer such as their TINY URL service at **https://staffworkplace.napier.ac.uk/OnLineServices/Pages/SmallURL.aspx**
- **Library** for advice on digitisation of text for use in your online module, copyright issues, access to e-books and further e-resources. Get in touch with your school librarian for individualised support at **http://staff.napier.ac.uk/services/library/helpcentre/Pages/MyLibrarian.aspx** or browse the library's one stop e-resources shop at **http://staff.napier.ac.uk/services/library/electronicresources/Pages/NUINlink.aspx**
- **Professional Development** technology-enhanced learning website for a list of technologies Edinburgh Napier subscribes to for your use in your teaching. See **http://staff.napier.ac.uk/services/academicdevelopment/professionaldevelopment/TEL/Pages/welcome.aspx**
- **Professional Development** programme for a range of general and customised training sessions related to the use of technology**.** Have a look at **http://www2.napier.ac.uk/ed/profdev/**
- **School office** for ensuring module presence and online module student enrolment in the VLE. See **http://www2.napier.ac.uk/webct/staff/contact.html** for your school contact details.

Edinburgh Napier resources and materials

- Accessibility Matters website at
  http://www2.napier.ac.uk/ed/accessibility-matters/

  This site provides a guide to creating online learning materials which are accessible to all regardless of disadvantage or impairment and covers a wide variety of file formats.

- Be wise, don't plagiarise! website at
  http://www2.napier.ac.uk/ed/plagiarism/

  Developed in 2006 to address the need for a "one stop shop" for materials and resources related to good referencing practice including guidance and tutorials for staff and students. The site also hosts the Turnitin®UK text matching software user guidelines.

- Distance learning website (for students) at
  http://www.napier.ac.uk/napierlife/firstday/distancelearners/Pages/DistanceLearners.aspx

  This site provides a comprehensive overview of what Edinburgh Napier offers its distance learners. Be sure to point it out!

- Get ready for University website at
  http://www2.napier.ac.uk/getready/

  This site is a resource haven for students struggling with academic writing. Originally designed to ease the transition for FE students into HE this site has evolved into an interactive writing skills resource for all.

- Edinburgh Napier podcast project at
  http://edinburghnapier.podbean.com

  Launched in 2009 this project aims to improve retention by providing additional support to first year students. In 2009 each week a podcast was released to students with relevant and timely advice-have a listen for yourself and point out relevant clips to your students.

- Institutional web 2.0 guidelines for staff and students at
  http://staff.napier.ac.uk/services/CorporateAffairs/governance/DataProtection/Pages/InternetServices.aspx

- Use of wikis, blogs and social networking sites has real educational value, but there are risks involved which this relevant and current document makes you aware of and which includes helpful advice on how to avoid the most common pitfalls.

6.6   Consult the Quality Framework

If you get no further in this guide, but are thinking about using educational technology in your teaching, make sure you consult the Edinburgh Napier University Quality Framework section A.9: Assuring quality and standards in online learning currently being updated and soon to be made available on the Quality Framework website at **http://staff.napier.ac.uk/services/academicdevelopment/QualityEnhancement/QualityFramework/Pages/QualityFramework.aspx**

Until the update has been completed find the original guidance on the Academic Development website at **http://staff.napier.ac.uk/services/academicdevelopment/LTAresources/Pages/onlinelearning.aspx** for a brief but relevant set of guidelines to help get you started with technology-enhanced approaches to your teaching.

6.7   Consider the PGCert/PGDip/MSc Blended and Online Education Programme (MSc BOE)

If you start using this guide or have had an opportunity to incorporate technology into your teaching and discover that you would like to gain further insight into the practice and theory behind it all, then you may not find adequate coverage of these themes here. What you will find at Edinburgh Napier University, however, is the fully online PGCert/PGDip/MSc Blended and Online Education programme aimed at teaching and training professionals in the HE, FE and commercial education sector. If you are keen to gain the practical skill and pedagogical understanding to allow you to become an expert in the field in order to make more informed choices in the design and development of your teaching with the increasing range of technologies then do have a look at the MSc BOE website at **http://www2.napier.ac.uk/ed/boe**. There you will find an overview of the programme structure, topic coverage, study support features and student testimonials. The MSc BOE takes a hands-on, practice-orientated and highly interactive approach where students apply their learning in individual and collaborative projects directly to their own teaching or training environment.

In other words, if this guide does not fulfil your needs there certainly is opportunity for more in-depth exploration of technology enhanced teaching and learning in the company of others on the MSc BOE!

7.0   So where do you go from here?

That really depends where you are starting from. Perhaps you've already had some ideas for using technology in your teaching from good practice you've seen elsewhere, from browsing through parts of this guide, or from talking to your colleagues or Academic Development Adviser.

Whether you're doing something now or simply contemplating it, take some time to look through this guide if you've not already done so. If you're completely new to using educational technology, the unit that follows now (Unit 2 Starting to use technology in teaching) might provide you with some simple ideas to try out.

8.0   Further reading

Ashwin, P. (Ed) (2006) *Changing Higher Education. The development of learning and teaching.* Ch. 6 Elearning in Higher Education by D. Laurillard. London: Routledge. Available at Edinburgh Napier library in print and as an e-book (2008) via MyiLibrary.

Butcher, C., Davies, C. & Highton, M. (2006) *Designing learning: From module outline to effective teaching*. Ch. 1 The higher education context; Ch. 2 How your teaching fits into the bigger picture. London: Routledge. E-book access only at Edinburgh Napier library via MyiLibrary.

HEFCE/UUK/SCOP (2003) Final report of the TQEC on the future needs and support for quality enhancement of learning and teaching in higher education. Available online at **http://www.hefce.ac.uk/learning/heacademy/tqec/final.pdf**

Higher Education Policy Institute (HEPI) (2008) Higher Education supply and demand to 2029. Available online at **http://www.hepi.ac.uk/466-1366/Demand-for-Higher-Education-to-2029.html**

Howard, C., Schenk, K. Discenza, R. (Eds) (2004) *Distance learning and university effectiveness: changing education paradigms for online learning* Hershey, Pa.; London: Information Science Pub. Also available at Edinburgh Napier library as an e-book (2004) through Netlibrary.

Inglis, A., Ling, P. & Joosten, V. (2002) *Delivering digitally: managing the transition to the knowledge media*. Open and distance learning series. London: Kogan Page. Also available at Edinburgh Napier library as an e-book (2003) through Netlibrary.

Laurillard, D. (2002) *Rethinking university teaching: a conversational framework for the effective use of learning technologies* (2nd edition). London, New York: RoutledgeFalmer. Available in print and as an e-book (2003) at Edinburgh Napier library through Netlibrary.

Weller, M. (2002) *Delivering learning on the net: The why, what and how of online education*. Ch. 1 Why the net is important; Ch. 2 Exploring some of the e-learning myths. Available in print and as an e-book (2003) at Edinburgh Napier library through Netlibrary.