

Integrating online learning into your course

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Introduction

This document aims to give an overview of the elements involved in integrating online learning into your course. This document begins with a synopsis of the instructional design process, followed in more detail with a discussion of some crucial areas, mostly within the development phase. The areas outlined are: determining technology for your institution, reviewing existing curriculum, preparing the facilitator, and creating online materials.

The Instructional Design Process A brief overview In any developments of new curriculum or the delivery of new methods, an instructional design process ought to be adopted. Most models of the instructional design process (Flagg 1990; Dick and Carey 1990; Gagne, Briggs, & Wager 1992; Heinich, Molenda, Russell, & Smaldino 1999; Leshin, Reigeluth, & Pollock 1992) include design and development stages similar to the following:

- **Design** (assessing needs for institution, assessing needs of audience, setting goals and objectives for integrating curriculum)
- **Development** (selecting teaching strategies, outlining media, developing course content, designing student interaction)
- **Implementation** (developing evaluation strategy, testing user experience, revision)
- **Evaluation** (formative, summative)

Focusing on Development Although the entire instructional design process determines the success or failure of integrating online learning into your course, it is the development phase that often receives the most time and resources. Here we examine some crucial factors that will ensure the most effective use of that investment.

Determining technology for your institution

Your institution will need to provide extensive IT resources to integrate your course online. A web server configured with effective firewall and security software is the minimum. Discussions with your IT Services Department about the capabilities of your institution are essential.

- Image editing software such as JASC Paint Shop Pro, Adobe Photoshop, Macromedia Fireworks etc.
- Web authoring software similar to Macromedia Dreamweaver.
- If multimedia is required then sound and video editing software is needed.

Establish system environment standards

As appealing as an online learning programme may be to an institution, constraints of the Internet and computer systems need to be identified. Bandwidth is important if you plan to deliver video or audio content. Determine a minimum standard of system requirements. This will both aid in the design of online activities, and will provide information to students of what is needed to access the course materials.

Who will provide technical support?

Technical support is essential to the success of an online course. The facilitator can be well trained, the curriculum in place, and learners enrolled on the course, but when the system malfunctions, both the learner and facilitator need to know where to turn for immediate and accurate help. This may or may not be a function of IT Services. Students will need online support for details within the content of the course as well as technical support. Determine where this ongoing support will come from early in your integration.

What software will developers require?

You may choose to use one of the many virtual learning environments (VLEs) available, e.g. LearnWise, Blackboard or WebCT, to house your course content. You may choose to build your own learning portal via web materials created in-house. In most situations you will need

Other technical considerations

Does your curriculum need to provide for formal assessment? Online exams will require secure connections and will demand considerable technical specifications. Will your learners need

basic IT support, e.g. help with logging into the institution's network, assistance with accessing

Review existing curriculumE-Learning can permit a full range of interactive teaching methodologies as outlined by Salmon (2002), from lecture to case study to group work. Your challenge, in reviewing your existing curriculum, is to determine what classroom delivery methods can be used online and what will have to be converted into a more Internet friendly learning strategy.

The lecture

Schneiderman (1992) has illustrated that online lectures need to be shorter and more to the point than traditional face-to-face lectures.

Online lectures can be presented in the form of lecture notes in word processed format, PowerPoint presentations illustrating key points, streamed audio or video, or as scheduled conferences (web or video) or web chats.

Discussions

Online discussions can be an effective teaching strategy—the difficulty is to motivate the discussion from a distance.

- ✓ *Start a general discussion immediately.* Establish an atmosphere of online participation by encouraging individuals.
- ✓ *Require learners to introduce themselves* in a separate more informal area of discussion.
- ✓ *Provide learners with a private, secure discussion area* for them to use. Online learning is very isolated and many avenues to peer communication should be provided.
- ✓ *Consider a marking scheme for participation* in formal discussions. This enticement might motivate participation.
- ✓ *Small group discussions* can be implemented assigning one member of each to summarise the discussion and present to the wider group.

Group activities

E-Learning can offer several distinct benefits for small group work. Factors such as geography, gender, or disabilities do not disadvantage group

the website, accessing other internet resources, saving files from the internet, etc?

members. The instructor is able to respond to questions from particular groups, and peer tutoring is beneficial helping both the learner and facilitator.

In small groups learners can participate in:

- ✓ *Collaborative learning*—getting learners to work together towards one goal e.g. literature review, case studies, etc.
- ✓ *Discussions*—focussing on researched topic, requiring all members to contribute.
- ✓ *Guided work*—following lecture notes, the process and investigations, together.
- ✓ *Role-playing*—to promote a better understanding of different points of view, as well as assigning roles for procedures and solving problems.

Project work

Online projects give learners an opportunity to pursue their own special interests and can be achieved individually, or as part of a group activity. Project work also provides learners with practical experience. Projects can be posted for others to review, analyse, or discuss, providing needed feedback for learners.

Case study

The case study requires learners to use past experience and link to future prediction. Like projects, a case study can be independent or part of group activity. Online students are well suited to gather information, conduct research, and reference academic materials from the Internet.

Other

Consider literature reviews, critical analysis of an article or report, essays, portfolios, presentations, or interviews. A learning contract or self directed learning can be supported by online learning. Students can work within groups to develop contracts, or individually for self-directed learning.

Online assessment

Sophisticated tools now exist that facilitate different forms of exercises and tasks, including matching different elements, typing short answers, or working with numbers and calculations.

Prepare the facilitatorsThe facilitator plays the vital role in maintaining an online program. Some instructors from a classroom environment may easily adapt to the online model, while others will find it a challenge.

The University of Illinois Online Network has outlined a unique set of skills held by facilitators (modified with permission):

- ✓ Online facilitators have strong real world experience and a solid grasp of all the issues of their topic.
- ✓ Facilitators demonstrate characteristics of openness and flexibility.
- ✓ Successful online facilitators feel comfortable communicating in writing. Failure to have this attribute would alienate the learners from the instructor as well as from one another and make a very weak learning environment.
- ✓ Facilitators of online courses accept the online learning model as equal to that of the traditional model.
- ✓ Facilitators have appropriate credentials to teach the subject matter. Online learning cannot be modified by administrative or graduate assistants, a qualified academic must lead.
- ✓ Facilitators are generally experienced with IT and comfortable with either trying new

Create online materials Now it is time to develop new learning materials and to incorporate those learning strategies from your review of existing curriculum.

Think small—rewrite the curriculum to make it as compact as possible. Online learners are already challenged to be motivated and need you to get to the point quickly.

Use consistent HCI (human computer interaction) design principles for your online course content Shneiderman (1992), Nielsen (1993), Norman (1998) or Constantine and Lockwood (2002):

- ✓ *State clear objectives—always.* For the course, for expectations, for activities. Learners should—at all times—know what they are trying to learn, what is expected of them to achieve the learning, and when they have arrived at the learning objective.
- ✓ *Chunk*—use plenty of subheadings and chunk your content into smaller pieces. Do all you can to make scanning (reading) the screen easier.
- ✓ *Provide alternatives*—provide a print version (pdf, rtf) of the web page, provide PowerPoint presentations for students to download.
- ✓ *Optimise graphics* so they load as quickly as possible. Avoid using media like sound or video unless absolutely essential to the learning objectives.
- ✓ *Good structure and navigation*--design a

technologies or with being creative in utilising familiar technologies.

Not only do facilitators need the right profile when taking on the task of moderating an online environment, they must also be prepared to meet the learner's unique needs.

- ✓ The facilitator should be online regularly and should inform students of their online schedule.
- ✓ The learner should be treated politely and with respect.
- ✓ The facilitator should give the student timely and quality feedback on student contributions to discussions, assignments, assessments, etc.
- ✓ The students should be advised of the tools required successfully complete the course.
- ✓ The facilitator should be concerned about the students' access as well as success.
- ✓ Reasonable accommodations for the students' needs and desires should be made.

simple, clear and intuitive navigation system. Minimise the number of clicks to any page.

- ✓ *Feedback*—commit to a system of feedback for learner work learners **need** to receive regular feedback on their assessments and progress in the course.
- ✓ *Planned participation.* Opportunities for interaction through learner activities and exercises should be embedded throughout the course.
- ✓ *Repetition.* Important ideas should be repeated periodically (especially in summary) to provide reinforcement.
- ✓ *Synthesis.* Important ideas expressed in the online material should be purposefully woven together with the learning objectives.
- ✓ *Stimulation.* Through the use of interesting formats, interesting content, games, questions, or guests, materials should capture and hold learner attention.
- ✓ *Variety.* Information can be presented in a number of different formats and media to appeal to varying interests and backgrounds.
- ✓ *Open-ended.* Assignments, examples, and problems should be open-ended so learners can adapt the content to their own situation.
- ✓ *Continuous evaluation.* The effectiveness of the materials, media and instructional methods are routinely assessed.

By designing clear and creative materials using the outlined design principles, the learner can then focus on the content of your course, rather than the

delivery methods.

Initial contact: the course home page
The home page should provide learners with all of the necessary information they will need to access their learning materials. According to Williams (2001) your course homepage should include:

Welcome Letter

Welcome the learners officially. A welcome by the Chancellor or other high profile figure often encourages the learners and makes them feel more included in the institution.

Frequently Asked Questions (FAQs)

Develop a list of equipment information; Internet issue information; course information; support

Login To Online Course

Information on how to access the course material should be provided in a step by step tutorial. A step by step tutorial on how to access the environment should also be provided if a VLE is being used, including how to use the facility, where to gain rights for access (a password and username) and what to expect once the learner has logged in correctly.

Summary
Integrating online learning into your course will involve determining which technology your institution will need. It will require that the existing curriculum be reviewed in detail and Internet friendly teaching strategies identified. The facilitator should be prepared for the delivery of online learning early in the development of course content. When developing your online course materials, be sure to use consistent HCI (human computer interaction) design principles ranging from creating clear objectives to designing clear navigation and structure to your online materials.

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information, etc.

Learning Environment Information

Be sure to give information on any learning environment you may be using, or an overview of how your website is set up. This may include how contact the facilitator, access important online conference information, and engage in online discussions with fellow classmates.

Browser Tutorial

This tutorial should instruct learners on the basics of moving and navigating within your chosen browser.

Helpdesk Information

Students should have a Helpdesk available to them to help them work through some of the technological barriers that will come across during their online experience.