

Putting a Science Course



QLD193

Topics

- Things to Consider
- Lecture Notes
- Discussion Boards
- Progress Tests
- Interactive Content
- Tutorials
- Hands-on Activities
- Common Myths about Teaching Online
- Having Presence in the Online Classroom
- What do Students want to Learn and How
- In Summary

A detailed research document with things to consider when putting a science course online.

Funding Acknowledgment

This project was made possible through funding from the National Vocational Education and Training (VET) E-learning Strategy (the Strategy). The Strategy is a joint initiative of the Australian and state and territory governments, designed as a three year program of action with a series of ongoing business activities reflecting its strategic objectives. The Strategy will play a key role in enabling the Australian

training sector to take advantage of the roll out of the National Broadband Network (NBN) to make major advances in the achievement of government training objectives. Coordinated action to develop sector-wide capability in using the new technological environment will at the same time, stimulate innovative approaches to increasing participation in training and work and improving the skills levels of the Australian workforce (<http://flexiblelearning.net.au>).

NATIONAL VET
E-LEARNING STRATEGY



Australian Government

Department of Industry, Innovations, Science, Research and Tertiary Education

Edition May 2013

© Things to Consider when Putting a Science Course Online

Acknowledgement:

Things to Consider when Putting a Science Course Online © Commonwealth of Australia Learning Network Queensland 2013 with the exception of the Commonwealth Coat of Arms, the Department's logo, any material protected by a trademark and where otherwise noted, all materials presented in this document are provided under a Creative Commons Attribute 3.0 Australia (<http://creativecommons.org/licenses/by/3.0/au>) licence.

The principal author of this document is Dr Jenelle Benson, Project officer and Lead Vocational Teacher for Unilearn

Unilearn



Queensland
Government

TAFE
Queensland



Brisbane North
INSTITUTE OF TAFE ®



Learning Network
Queensland

Table of Contents

THINGS TO CONSIDER.....	3
LECTURE NOTES.....	3
<i>Figure 1. Example of grouping lecture notes by chapter</i>	4
DISCUSSION BOARDS.....	4
<i>Figure 2. Example of groupings for discussion forums</i>	5
PROGRESS TESTS	5
<i>Figure 3. Example of progress test area with labs and activities</i>	6
INTERACTIVE CONTENT	7
Figure 4. Example of pencast grouping.....	8
TUTORIALS	8
<i>Figure 5. Example of tutorials as either PDFs or pencasts</i>	8
HANDS-ON ACTIVITIES.....	9
<i>Figure 6. Example of interactive lab and answer sheet</i>	9
Figure 7. Example of online interactive microscope lab	10
Figure 8. Example of links and tutorials embedded into the interactive lab	11
COMMON MYTHS ABOUT TEACHING ONLINE.....	11
HAVING PRESENCE IN THE ONLINE CLASSROOM.....	12
<i>Figure 9. Example of homepage with instructions for students</i>	12
<i>Figure 10. Example of contact information</i>	13
<i>Figure 11. Example of discussion boards</i>	13
WHAT DO STUDENTS WANT TO LEARN AND HOW?	14
Areas of interest were divided into nine groupings	14
We asked students how they liked to study and how they liked to be contacted. This is what they had to say.	14
IN SUMMARY.....	15

Things to Consider when Putting a Science Course Online

THINGS TO CONSIDER

After spending the last three years putting math and science courses into the online environment and teaching these courses via the online classroom there really are things that work and things that don't work. Science and math courses have definite needs within an online environment; sometimes those needs can be very challenging. Science courses in a face-to-face environment have lots of hands-on activities and laboratory practicals, so how can you capture this experience in an online classroom. This is where it gets challenging. You need to have lab activities and experiences that mirror a face-to-face course so that the student still gets the same practical experience and comes away with the same skill set as students in the face-to-face environment. Saying it doesn't necessarily make it happen. To make an online course equivalent in content and rigour as a face-to-face course you will need to have at the very least the following components:

1. Interactive content
2. Lecture notes
3. Tutorials
4. Discussion boards
5. Hands-on activities
6. Progress tests

There is another list that is also important – this is the list of things you should not do:

1. Don't put the textbook into the online classroom. Students want hardcopy text to flip through and refer back and forth to drawings and diagrams etc... (at a recent expo we asked students what type of learning materials they preferred - an overwhelming 77% wanted their learning materials in hardcopy format.)
2. Don't put really long videos, movie clips or activities in the online classroom. They are large and difficult for students to download
3. Don't have a complex homepage where students can't find what they are looking for. Be clear and concise.

Now that we have our lists how do we go about implementing these concepts into an online classroom. Let's look at the even numbers from the list above. These are the easier areas to develop.

LECTURE NOTES

These can be PDF's, word documents, content typed directly into the online classroom, PowerPoint, hand drawn pictures, diagrams/charts and graphs. In a science class, graphs, charts, diagrams and pictures are very important tools for conveying information. We need to make sure that what we post has a reason and that the reason is clear to the student. Titles are very important. Here is an example of an okay title, "Cellular Respiration Diagram". The title is helpful but it could be better. Here is a better title, "Detailed explanation of Cellular Respiration as shown on page 245". This lets students know what they can expect and where in the book it refers to. Remember that you should not be reproducing the book in your lecture notes, but offering additional explanations or going beyond what the book provides for a more in-depth understanding.

Figure 1. Example of grouping lecture notes by chapter

The screenshot displays a Blackboard LMS interface. At the top, a navigation bar includes a logo, a user profile for 'Jonelle Benson (Instructor)' with a '38' notification badge, and a list of course sites: 'My CourseSites', 'UNL81IntroEcon', 'UNL44BIO2013' (selected), 'UNL44Bio2012', 'UNL311IM', and 'Resources'. Below this, a 'Lectures and Notes' section header is visible. The main content area is titled 'Lectures and Notes' and contains an 'Important Information' section with a paragraph about lecture notes. Below this, there are sections for 'Essential Chapters' and 'Suggested Chapters'. A list of chapters is displayed, each with a link: 'Chapter 1 - The Nature of Biology', 'Chapter 2 - Classifying Organisms', 'Chapter 3 - Overview of Living Organisms', 'Chapter 4 - Phylogenetic Relationships', 'Chapter 5 - The Effects of Organisms on Humans', 'Chapter 6 - Organisms and their Environment', 'Chapter 7 - Populations', and 'Chapter 8 - Ecosystem Dynamics'. On the left side, a sidebar menu for 'UNL44BIO2013' includes links for 'Home Page', 'Contact Information', 'Course Overview', 'General Announcements', 'Instructors Wiki', 'Lectures and Notes', 'Teacher Student Journal', 'Course Discussion Board', 'Progress Tests', 'Your Grades', 'Unlearn Calendar', 'CourseSites Help', and 'Unlearn Website'. Below this, a 'COURSE MANAGEMENT' section includes 'Control Panel', 'Content Collection', 'Course Tools', 'Evaluation', 'Grade Center', 'Users and Groups', 'Packages and Utilities', and 'Help'.

DISCUSSION BOARDS

Discussion boards can be good and bad. They should be designed in a way that would reflect a face-to-face classroom discussion. You usually don't have one straight discussion, you break it up into sections and topics during the lecture and during the week. You need to make sure that students understand how to use the discussion boards.

Here are some things to consider when designing your discussion forums.

- Are the forums for answering questions that you post and grade or for just discussion any topic or issue?
- Is there a specific format students need to use to answer the questions?
- What if a student has a question about something else?
- Where do they ask this question?

Make sure to break your discussion boards into threads or subjects so students clearly see where they need to discuss specific topics. I usually break it up by chapter and then I also have lab activities, general questions and our tech support officer also has a thread inside the classroom. Within each chapter I create threads for chapter questions, review questions, and progress test questions. This way the threads don't get too long and unmanageable. I also like to use hierarchy in the thread structure so you can see who is answering which questions. Discussion forums are great,

but make sure that students understand the classroom etiquette for posting in the discussion forums.

Figure 2. Example of groupings for discussion forums

The screenshot shows a Blackboard Discussion Board interface. At the top, there's a navigation bar with links to 'My CourseSites', 'UNL81IntroEcon', 'UNL44BIO2013', 'UNL44Bio2012', 'UNL31IIM', and 'Resources'. The user 'Jenelle Benson (Instructor)' is logged in. The left sidebar contains a 'Discussion Board' section with links like 'Home Page', 'Contact Information', 'Course Overview', 'General Announcements', 'Instructors Wiki', 'Lectures and Notes', 'Teacher Student Journal', 'Course Discussion Board', 'Progress Tests', 'Your Grades', 'Unlearn Calendar', 'CourseSites Help', and 'Unlearn Website'. Below this is a 'COURSE MANAGEMENT' section with a 'Control Panel' and various tools like 'Content Collection', 'Course Tools', 'Evaluation', 'Grade Center', 'Users and Groups', 'Packages and Utilities', and 'Help'.

The main content area is titled 'Discussion Board' and includes a search bar. Below the search bar is a table listing forums:

Forum	Description	Total Posts	Unread Posts	Total Participants
Technical Support	Post any problems with viewing/uploading or attaching course materials in this forum and the Student Support Officer will respond as soon as possible.	0	0	0
Unit 1 and Unit 2	Post questions for Progress Tests 1 through 5 as well as Activities 1 here for tutor support.	19	0	5
Unit 3	Post questions for Progress Tests 6 through 10 here for tutor support, as well as Activity 2.	8	0	2
Unit 4	Post questions for Progress Test 11 here for tutorial support.	3	0	2
Unit 5	Post questions for Progress Tests 12 through 14 here for tutorial support.	5	0	1
Unit 6	Post questions for Progress Tests 15 and 19 here for tutor support, as well as Activity 3.	7	0	2
Unit 7	Post questions for Progress tests 20 and 21 here for tutorial support, also for Activity 4.	4	0	1
Unit 8	Post questions here for Progress Tests 22 and 23 for tutor support	4	0	1
Unit 9	Post questions here for progress test 24 tutor support	3	0	1

At the bottom of the table, it says 'Displaying 1 to 9 of 9 items' with 'Show All' and 'Edit Paging...' links.

PROGRESS TESTS

It is always a good practice to develop practice tests with a variety of question styles so students have the opportunity to demonstrate course acquired knowledge. Just as if you were in a face-to-face classroom, students have to have the ability to demonstrate knowledge in a variety of ways. We do not ask students to take one multiple choice test and base their grade on that one test. We must provide them with the opportunity to demonstrate their knowledge in a variety of ways that does not exclude any specific learning style. This means that teachers have to grade online tests and provide feedback.

We cannot just make self-grading tests and expect students to “get it” from the generic feedback that is provided. Tests must have areas that students are able to submit workings, write essays, show their thought process so we can determine what they know and what they don’t know. Teachers need to reflect upon what they would expect a face-to-face student to demonstrate in order to show mastery of a subject. This is especially tricky in science courses where they need to demonstrate practical skills, along with theoretical knowledge.

Figure 3. Example of progress test area with labs and activities

The screenshot displays the Blackboard LMS interface for a course. At the top, there is a navigation bar with links to 'My Course Sites', 'UNL81IntroEcon', 'UNL44BIO2013' (the active course), 'UNL44Bio2012', 'UNL311M', and 'Resources'. Below this, a 'Progress Tests' section is visible, showing an 'Important Message to Students!' and a 'Grading Scheme for Biology is as follows:'. The message states that 15% of the total grade comes from the average score from Progress Tests, 15% from the average score from Lab Activities, and 70% from the final exam results. The grading scheme for Progress Tests is also detailed, showing that Multiple Choice, Completion, and True or False questions are worth 1 point each, Other questions (using Science Skills) are worth 2 points each, Short Answer questions are worth 3 points each, and Essay questions are worth 5 points each. A note indicates that students need to achieve a 60% or better on each required progress test to be eligible to sit for the final exam. An important message states that students need to complete the Specimen/Practice Exam and submit it to their tutor before applying to sit for their final exam. A contact information for Student Support Officer Carly Bryan is provided. The sidebar on the left includes links to 'Home Page', 'Contact Information', 'Course Overview', 'General Announcements', 'Instructors Wiki', 'Lectures and Notes', 'Teacher Student Journal', 'Course Discussion Board', 'Progress Tests', 'Your Grades', 'Unlearn Calendar', 'CourseSites Help', and 'Unlearn Website'. The main content area also includes a 'Suggested Progress Test 1' section and a 'Time to do your Lab!' section with a link to download the Microscope Lab to begin. A note mentions that the lab is graded out of 35 points and is 11MB in size, and a link to a survey is provided.

An easy way to do this is to separate the tests into sections, multiple choice, short answer, essay, activities, and labs. I usually put multiple choice, short answer and essay in one test and leave the lab and activities to be individually handed in and graded. You can also separate tests into multiple choice, short answer and essays to chunk up the test process for students. This helps students organize what they need to do and which parts they need to complete offline. Any assignments, tests, or activities that you require the student to complete you will need to provide a grading rubric so students understand what criteria they are being graded against.

We cannot expect students to succeed if we don't let them know what success looks like. I like to provide exemplars of what good work and poor work looks like. Remember, the students are not standing right in front of you so you need to consider all of the things you would normally do or say in a face-to-face classroom. Once you do this, you will need to create documents, blogs, MP4s or wikis with all of this information so students are able to access it and get the same information as if they were standing right in front of you. This is an asynchronous environment so we want the information available for students so they do not have to wait to learn.

Another thing to think about is making sure that an equation editor is built into the online classroom. This is important for creating progress tests, giving feedback on the progress test and assignments, or feedback within the discussion forums. Equation editors are handy and many times

are screen reader friendly. Equation editors are necessary for any type of course where equations and symbols will be used when creating a problem. You will need to have directions or a tutorial available for students so that they know how to use the equation editor. If you are not sure whether the online classroom has an equation editor you can ask the help desk for that online classroom.

You may also want to find out where else the equation editor can be used. Can you use the equation editor for the following?

- creating questions
- giving feedback
- in the wiki area; in the discussion forum area
- can students use the equation editor

All of these are important questions that you will want to get answers for so you know what tools are available for you and your students.

Don't worry if you don't get it right the first time. It can takes years of tinkering to get all the information just right, and you will still have students that go astray. This is what continuous improvement is all about.

Now let's look at 1, 3 and 5, the odd numbers. This includes interactive content, tutorials and interactive labs. For a science course this is the meat of the course. If you get this right, students will have a rich and fulfilling experience.

INTERACTIVE CONTENT

We will look at interactive content. So what is interactive content or interactive learning content? There are three commonly agreed upon definitions of what constitutes interactive learning content. These are learner-content, learner-teacher, and learner-learner. The first type of interaction happens between the learner and the content. The next type of interaction happens between the learner and the instructor. The last type of interaction happens between the student and another student. In our online classroom interactive content that occurs between the student and content can be videos, lecture MP4s, PowerPoint's, or interactive PDF's. Examples of student-teacher and student-students can be discussion forums, blogs, wikis, and journals.

What does this really mean? Students have links, audio, and video embedded into the document or within the classroom to help them better understand what is in the textbook. This is the stuff you would talk to students about and use the board in the front of the class to show examples and discuss. This is where the bulk of the teaching experience occurs. This can be done as a lecture video on YouTube, other interesting sites on the internet, podcasts or using Smart Pens to create interactive PDF's of difficult content that students can follow along with. This provides the personal touch for students.

Figure 4. Example of pencast grouping

The screenshot shows a course website interface. At the top, there's a navigation bar with 'My CourseSites' and several course codes: UNL311M-2013, UNL81IntroEcon, UNL44BIO2013, UNL44BIO2012, UNL311M, and Resources. Below this is a sidebar with a menu for 'UNL311Introductory Mathematics 2013' containing links like Home Page, Contact Information, Course Overview, General Announcements, Instructors Wiki, Tutorials and Links, Teacher Student Journal, Course Discussion Board, Progress Tests, Progress Test Feedback, Your Grades, Unlearn Calendar, CourseSites Help, and Unlearn Website. The main content area is titled 'Module 1' and lists four pencasts: 'Module 1 - LCM and LCD', 'Module 1 - Order of Operation', 'Module 1 - Rounding Numbers', and 'Module 1 - Simple and Compound Interest'. Each pencast entry includes a description of its content and a note that 'Statistics Tracking' is enabled.

TUTORIALS

Tutorials are a very important part of teaching students and your library of tutorials will continue to build as your course moves along. Areas that students keep asking the same questions for help should be made into tutorials.

Figure 5. Example of tutorials as either PDFs or pencasts


The screenshot shows a 'Create Wiki Page' interface on the same course website. The main content area is titled 'Module 1 examples and activities' and lists various resources: 'M1 - Activity 1-24 Q4.pdf', 'M1 - Barrel of Oil.pdf', 'M1 - Equation Sheet.pdf', 'M1 - Explanation page 1-145.pdf', 'M1 - Intro math 1-79.pdf', 'M1 - LCM explanation.pdf', 'M1 - Order of operation example.pdf', 'M1 - Order of Operations PEMDAS.pdf', 'M1 - page 1-95, Problems 1-118M.pdf', 'M1 decimal to fraction.pdf', and 'Module 1 - additional practice Intro algebra Vocabulary.pdf'. Below this list, there's a section titled 'In addition, you can view the pencasts found under tutorials and links. Here are the following pencasts that relate to module 1.' which lists the same four pencasts as in Figure 4: 'Module 1 - LCM and LCD', 'Module 1 - Order of Operation', 'Module 1 - Rounding Numbers', and 'Module 1 - Simple and Compound Interest'. A sidebar on the right shows 'About This Wiki' and 'Participation Summary'.

The easiest way to create a tutorial that allows the teacher to capture what they write and what they say is using Smart Pen technology. This should be used just as if the student is sitting in a desk in your classroom and asks you a question and you use the board to help explain. This is when the teacher uses class time to reviews homework or class work to find out where students lack knowledge. Teachers can still do this by looking at what questions the students have posted in the discussion forums or emailed to the teacher. This is where the student needs help and more individualized learning is required. Remember that tutorials are not the same as lectures. Tutorials should be used to walk a student through a problem or assignment that they are having problems with.

HANDS-ON ACTIVITIES

Finally, we have interactive labs or activities. This is the part that can be tricky. The need to provide science students with the ability to perform hands-on labs is essential and needs to be included in any online class to reinforce theoretical concepts introduced in science. There are many excellent free simulations along with other tools that can be licensed for use in an online classroom.

Figure 6. Example of interactive lab and answer sheet



THE MICROSCOPE LAB ANSWER SHEET PAGE 1

PRE-LAB QUESTIONS

Question 1 Total Magnification =

Question 2 Total Magnification =

Question 3 Total Magnification =

Question 4	1,500X Ocular = <input type="text"/>	1,500X Objective = <input type="text"/>
	400X Ocular = <input type="text"/>	400X Objective = <input type="text"/>
Question 5	600X Ocular = <input type="text"/>	600X Objective = <input type="text"/>
Question 6	500X Ocular = <input type="text"/>	500X Objective = <input type="text"/>
Question 7	200X Ocular = <input type="text"/>	200X Objective = <input type="text"/>
Question 8	10,000X Ocular = <input type="text"/>	10,000X Objective = <input type="text"/>

I like to stick with the free simulations as anyone can use these. Various Universities, many of which reside in the United States, have created most of the free simulations or interactive components.

This is handy, because in the United States they make all of this material available for students and teachers to use in order to enhance classroom learning. As long as you use these simulations for educational purposes and not to package and resale you are free to use them to your heart's content. In some instances, middle school and high school teachers may have already designed a lab around the simulation and many times this information is also available.

If the simulation does not come with any lab design then you will need to thoroughly investigate how the simulation works and create a tutorial for students. This included creating a lesson plan for how the simulation will be used and what the student must do in the simulation. This is a typical lesson plan that you would use in any face-to-face lab. In this instance, instead of face-to-face, the students will complete the simulation for the practical component of the lab in the online classroom.

You will have to decide what parts the students can write into an electronic document and what parts they may need to draw by hand or use a screen capture and then scan or take a picture of to support the hands-on activity. For instance, I require students to draw pictures of the slides they observe under the virtual microscope they use. Students need to scan or take a picture of these drawings and attach them to the lab form in the online classroom. You will need to discuss these last few options with whoever is designing or building your online classroom. Having someone who is handy with online classroom design is a necessary component for creating and maintaining your online classroom.

Figure 7. Example of online interactive microscope lab

ACTIVITY ONE

Answer the following questions on the Answer Sheet under Procedure Questions.

PROCEDURE QUESTIONS

1. What moves the stage up and down?

2. How can you tell low, medium and high power objectives apart? (there are three ways, please explain two)

3. Where do you set the slide?

4. Describe the fine adjustment?

5. Describe the coarse adjustment?

6. If you were not sure as to which is the coarse and which is the fine adjustment how would you determine this?

7. Which magnification would you use if you were using oil with the microscope?

8. How do you control the amount of light that enters a microscope?

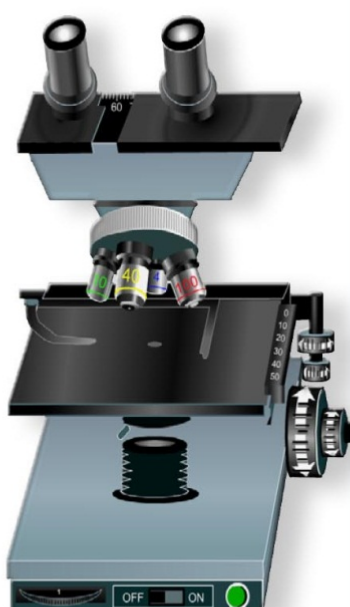



Refer to this image of the online microscope for the questions.

Figure 8. Example of links and tutorials embedded into the interactive lab

ACTIVITY ONE

Tour



Click the image below to view a tutorial on how to locate the letter 'e' and a brief tutorial on using the Online Virtual Microscope



THE MICROSCOPE LAB

Once you have completed the tour in the left hand column of this page please follow the instructions below:

The image to the right will take you to the Online Virtual Microscope Lab. If you feel you need a more in-depth tour of how to use this microscope then please complete the optional tour.



1. Draw the letter 'e' under all powers on a separate sheet of paper by using the Online Virtual Microscope. Don't forget to label your pictures for the magnification level of each image.

Click the Pencast image to the right to view an example of how to draw and label the images you view under the Online Virtual Microscope

2. Look at two other slides in the Online Virtual Microscope Lab.
(your choice)

3. Draw the slides under two different powers. Draw the pictures as viewed under each magnification in colour.

(Remember to label the pictures with the magnification in colour and the magnification level used.)

Save all of your drawings to your desktop and name them according to the question they pertain to (i.e. Q1 letter e under 10x, etc.)

You will attach these images to an email at the end of this lab.

Save all of your drawings to your desktop and name them according to the question they pertain to
(i.e. Q1 letter e under 10x, etc...)

You will attach these images to an email at the end of this lab.

COMMON MYTHS ABOUT TEACHING ONLINE

A common myth about teaching online is "I will spend less time teaching in an online classroom".

Many teachers think that if they move their course into the online classroom that they will have less work. Contrary to popular belief, you actually spend more time teaching and interacting than you do in a face-to-face classroom. You will need to type all of your responses in the discussion forums or in your response to emails, so if you are not a speedy typist this will take time. You will need to create tutorials and other support materials in a variety of versions to determine which format works best. You will need to think about your responses to ensure that they are clear and concise and don't create more confusion. Sometimes you can answer one question and end up getting ten more because you were not clear in your response.

It is always good to have someone else look over what you are creating. The more feedback you get the better the course will be. Remember to ask for student feedback. Sometimes you will get some really good suggestions that will make your life and the students better. Always remember to ask students for any simulation or helpful applications that they run or are using for their mobile media devices.

Think of teaching online similar to when you first started teaching and you needed to prepare constantly as you learned the content. You had to think of ways to teach the materials and using best practises to improve the delivery of the content. You will need to do the same within your online classroom. As you begin teaching your science courses online, you will begin to see what works and what doesn't and how best to deliver the material you are teaching.

HAVING PRESENCE IN THE ONLINE CLASSROOM

You need to make sure that you are visible in the online classroom so students know that you are

Figure 9. Example of homepage with instructions for students

The screenshot shows the Unilearn homepage for the course UNL44 Biology. The top navigation bar includes links to 'My CourseSites', 'UNL81IntroEcon', 'UNL44BIO2013', 'UNL44Bio2012', 'UNL311M', and 'Resources'. The main content area is titled 'Home Page' and includes a 'Welcome to' message, the 'Unilearn' logo, and the course title 'UNL44 Biology'. A 'Click to View' button is prominently displayed. Below this, a 'PLEASE READ' section provides instructions for students, including a 'PLEASE READ' section and a list of course descriptions. The sidebar on the left contains various navigation links such as 'Home Page', 'Contact Information', 'Course Overview', 'General Announcements', 'Instructors Wiki', 'Lectures and Notes', 'Teacher Student Journal', 'Course Discussion Board', 'Progress Tests', 'Your Grades', 'Unilearn Calendar', 'CourseSites Help', and 'Unilearn Website'. The footer includes a 'Learning Network Queensland' logo.

monitoring what they are doing. This doesn't mean that you need to have your picture posted throughout the entire site, but the students do need to see that you have been in the classroom.

Do you make yourself visible in and online classroom?

As a rule, I log in every other day at a minimum and see what is going on in the classroom. I look at discussion boards, add comments, and look at student progress. I also may post information to wikis and blogs in response to those students who have asked for help. I try and respond to students within a 48 hour period. It is important that students see that the teacher is interacting in the discussion boards and it is not just other students answering the questions. This gives students a sense of connection for the course and the teacher. Students who feel connected are more likely to succeed and complete the course.

Post at the beginning of the discussion boards information about response times for posts, emails and grades. I also put this information on the front page and in any page where posting is possible. I put information as a PDF attachment or directly onto the page about web etiquette for posting responses to student questions. You need to make it a safe environment so that students will actually ask the questions.

Figure 10. Example of contact information

Contacts

Dr Jenelle Benson
 Email: J.Benson@UNLQ.net.au
 Work Phone: 07 3307 4779
 Office Location: Brisbane North Institute of TAFE-Learning Network Queensland-UNlearn
 Office Hours: Monday through Friday 9am to 4pm (excluding public and bank holidays)
 Personal Link: <http://www.unlearn.net.au/faculty-staff/>
 Notes: Your tutor for UNlearn Biology is Dr. Jenelle Benson; BS Biology, MA Environmental Science, EdD Educational Strategies and Assessment. Dr. Benson is currently the Lead Vocational Teacher for UNlearn. She has worked with BQIT and UNlearn for the last four years. Jenelle taught high school Honours Biology, Honours Anatomy and Physiology, Chemistry and Mathematics courses for 16 years before moving to Australia. Additionally, she taught Biology Advanced Placement courses equivalent to undergraduate courses at University. She has taught Biology and Introductory Mathematics Courses for UNlearn for the last 2 years. She is an experienced educator and researcher and uses this expertise to help students be successful.
 Jenelle will be providing support for your studies in your UNlearn biology course. This support will be provided by means of a tutoring system, whereby you can discuss your difficulties with the course concepts by email (preferred), telephone, fax, letter, or through the online course support classroom.
 Please do not hesitate to contact her as you work through the course materials. One phone call, fax, or quick email can make a huge difference when you are stuck. Jenelle's role is to assist you in mastering these concepts so you can move on to University studies confident that you have the knowledge necessary to succeed.

Student Support Officer Carly Bryan
 Email: C.Bryan@UNLQ.net.au
 Work Phone: 07 3307 4779
 Office Location: Brisbane North Institute of TAFE-Learning Network Queensland-UNlearn
 Office Hours: Monday through Friday 9am to 4pm (excluding public and bank holidays)
 Personal Link: <http://www.unlearn.net.au/faculty-staff/>
 Notes: Your Student Support Officer is Carly Bryan. She is here to assist you in all of your UNlearn courses whether it is online or paper based. If you need to speak to someone or need information regarding your assignments or assessments just email or call her. She is here to make sure that you have a positive learning experience and meet your deadlines for University entrance.

Administrative Support Officer Lia Holm
 Email: Unlearn@UNLQ.net.au
 Work Phone: 07 3307 4768
 Office Location: Brisbane North Institute of TAFE-Learning Network Queensland-UNlearn
 Office Hours: Monday through Friday 9am to 4pm (excluding public and bank holidays)
 Personal Link: <http://www.unlearn.net.au/faculty-staff/>
 Notes: For all General Enquiries please contact the Admin Support Officer

Figure 11. Example of discussion boards

Discussion Board
 Forums are made up of individual discussion threads that can be organized around a particular subject. Create Forums to organize discussions. [More Help](#)

Forum	Description	Total Posts	Unread Posts	Total Participants
Technical Support	Post any problems with viewing/uploading or attaching course materials in this forum and the Student Support Officer will respond as soon as possible.	0	0	0
Unit 1 and Unit 2	Post questions for Progress Tests 1 through 5 as well as Activities 1 here for tutor support.	19	5	5
Unit 3	Post questions for Progress Tests 6 through 10 here for tutor support, as well as Activity 2.	8	2	2
Unit 4	Post questions for Progress Test 11 here for tutorial support.	3	2	2
Unit 5	Post questions for Progress Tests 12 through 14 here for tutorial support.	5	1	1
Unit 6	Post questions for Progress Tests 15 and 19 here for tutor support, as well as Activity 3.	7	2	2
Unit 7	Post questions for Progress tests 20 and 21 here for tutorial support, also for Activity 4.	4	1	1
Unit 8	Post questions here for Progress Tests 22 and 23 for tutor support	4	1	1
Unit 9	Post questions here for progress test 24 tutor support	3	1	1

Displaying 1 to 9 of 9 items | [Show All](#) | [Edit Paging](#)

If I have students email me questions instead of posting it in the discussion forum, I will email the response back to the students and I will post the body of the question and response in the classroom so other students can benefit from this information. All of this adds to the students feeling of being connected to the classroom and to the other students.

WHAT DO STUDENTS WANT TO LEARN AND HOW?

At a recent Tertiary Expo we conducted surveys to determine what areas students are interested in studying. We also asked how they liked to receive their materials, contact their teachers, be contacted by their teachers and what type of course format did they most prefer. Students were asked to check all boxes that applied as students may have more than one interest or like studying in more than one mode. Our findings indicated the following

Areas of interest were divided into nine groupings

Area of Interest	Percentage Interested
Science related studies	65%
Mathematics related studies	11%
Language and Business related studies	33%
Arts and Humanities related studies	25%
Social Sciences related studies	18%
IT related studies	9%
Health and Medicine related studies	31%
Education and Teaching related studies	9%
Trades	11%

We asked students how they liked to study and how they liked to be contacted. This is what they had to say.

Preferred Format of Course Materials	Percentage Response
EBook	32%
Hardcopy	77%
Online	8%
Video	<1%
Preferred way to Contact your Teacher	Percentage Response
Email	61%
F2F – in classroom	53%
Phone/Mobile	15%
Online (Skype, Facebook)	8%
Preferred way for Teacher to contact you	Percentage Response
Email	57%
F2F – in classroom	16%
Phone/Mobile	41%
Online (Skype, Facebook, forum)	4%
Text Message	3%
Preferred Course Format	Percentage Response
F2F – classroom	85%
Online Classroom	32%
Correspondence course	4%

IN SUMMARY

Remember to plan out your approach to teaching in an online classroom. Just throwing up a textbook into the online classroom is not teaching. This is no different from what you needed to do when you first started teaching in a regular classroom. Remember that this is asynchronous learning so you need to consider all the different learning styles and try to provide assignments and activities that take this into account. You also need to think about all of the common questions that face-to-face students ask and provide these in the classroom. As your course matures, the information that you provide will become more fine-tuned. No one likes to learn in isolation, but for many it is the only option they have to improve their education and improve their current life situation. It is our job to create an engaging flexible learning environment that allows these students to grow their knowledge.

For further information about this business activity, please contact the Business Manager
Name: Jenelle Benson
Phone: 07 3307 4775
Email: J.Benson@LNQ.net.au
Website: flexiblelearning.net.au