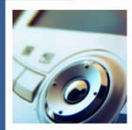
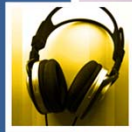


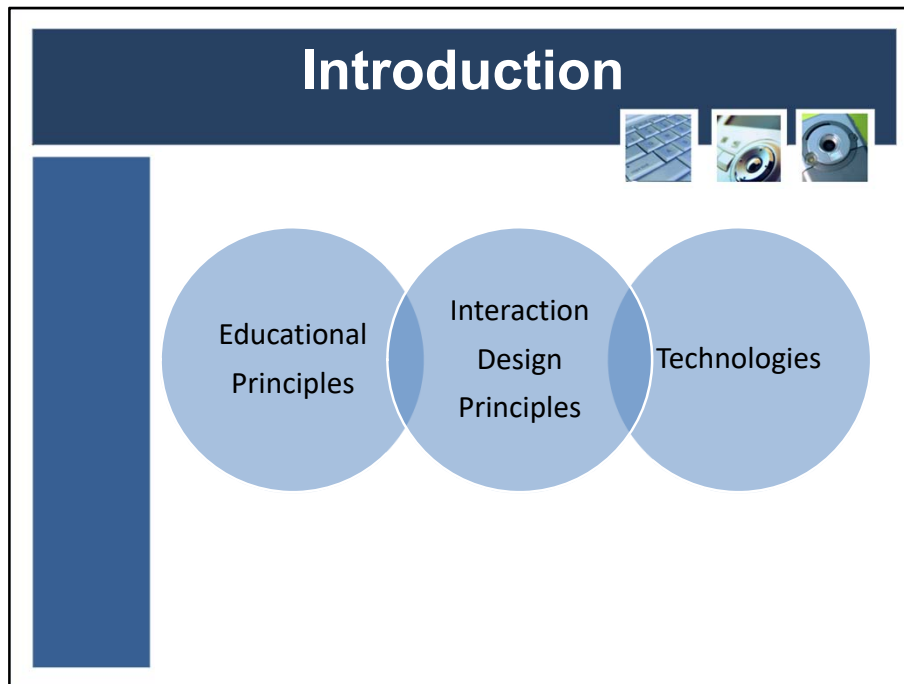
It Does Make A Difference! Applying Interaction Design Principles to the Online Learning Experience

Presented by
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SIDLIT
2017



Hello, my name is Linda Merillat and my presentation today is It Does Make a Difference! Applying Interaction Design Principles to the Online Learning Experience. I currently hold a faculty position with the School of Nursing at Washburn University in Topeka. My role with the School of Nursing is Instructional Designer. I primarily help the faculty with the design of their online courses. I also work with the faculty on implementing teaching and learning best practices and the effective use of technology. I do teach the online section of WU-101 The Washburn Experience – the class for incoming freshman on how to be successful college students.



When we consider developing an online course, we need to consider different domains. First, there are educational principles. How do students learn, and what are effective strategies for teaching.

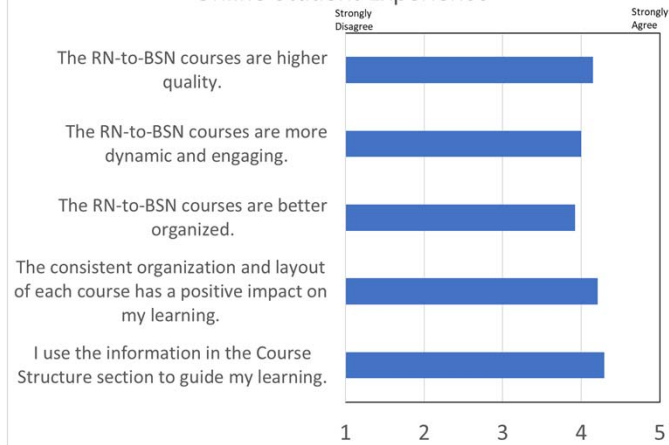
Next, we need to consider the technology we are using. It begins with the LMS, but developing a rich, engaging interactive experience goes beyond just the LMS. There are often tools embedded within the LMS. There are media tools such as audio and video to incorporate. Students use technology such as Office 365 to develop and build projects. So, it not which technology is being used – it's what technologies are being used.

Applying Interaction Design principles is a way to effectively bridge the gap between these two domains. Interaction Design is all about designing things in a way that makes it easier for people to use. The web is an interactive medium. Like any medium, different tools and strategies have been developed to allow designers to effectively use those mediums.

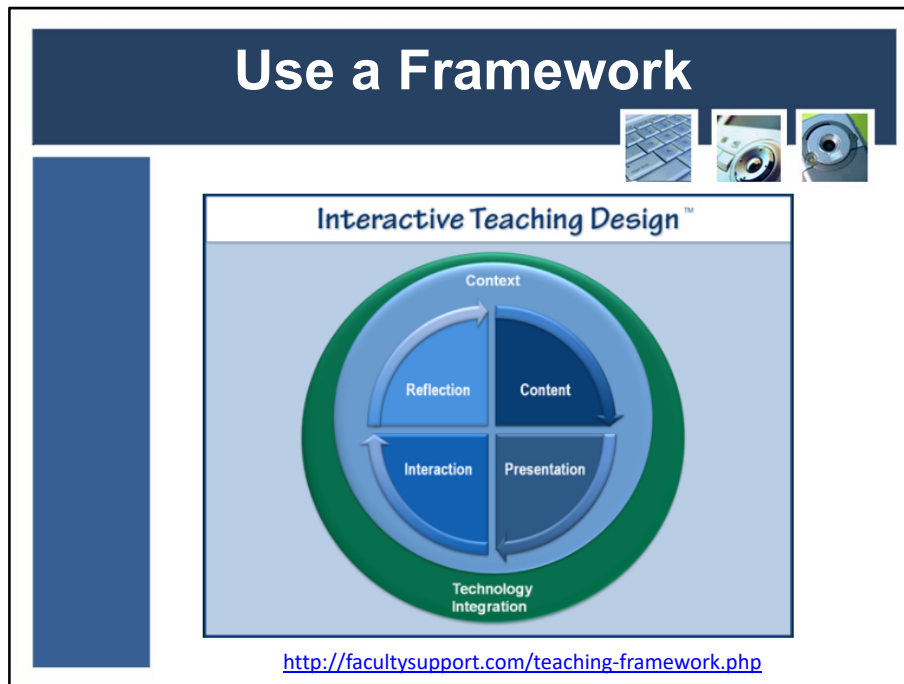
Online Student Experience



Online Student Experience



Does it make a difference? At Washburn University, we've spent the last 3 years developing a new fully online RN-to-BSN program. We'll be covering today many of the principles we've incorporated into our courses. From the student's perspective, yes, it does make a difference. In these key areas, they generally agree to strongly agree that the courses are higher quality, more dynamic and engaging, and better organized. They agree to strongly agree that these organizational features have a positive impact on their learning.




The first recommendation is to use an instructional design framework that mirrors an interaction design framework. I've developed one titled Interactive Teaching Design. It includes these components:

- Understanding the Context
- Planning the Content
- Preparing the Presentation
- Facilitating the Interaction
- Reflecting on the Results
- Empowering through Technology Integration

We'll use this framework as an organizing structure as we discuss the application of different interaction design principles to online course design.

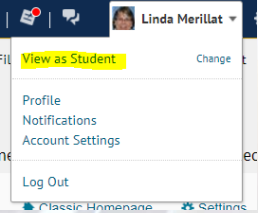
More information about the framework is available at my website:
<http://facultysupport.com/teaching-framework.php>

Student-Centered Perspective



CONTEXT

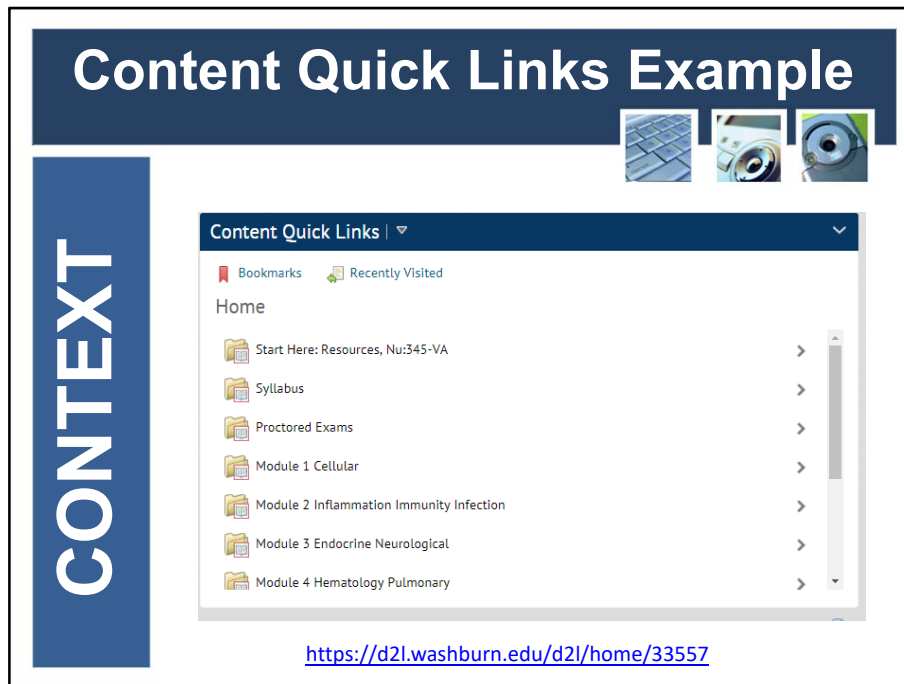
- It's critical to consider your course as students see it
 - View the course as student
 - Enroll a test student



Following our framework, the first aspect to consider is Understanding the Context.

The number one thing you can do to improve an online course is to consider the course from the student's perspective. It's amazing the number of faculty members who have been asked to develop an online course without ever having taken or even seen an online course before.

Most LMSs have an option to view the course as a student. Take advantage of it! You may be surprised at the subtle differences between the student view and the instructor view of the course. In some cases, the student view doesn't display everything. An alternative is to enroll a test student in the course. The LMS support group often has a set of test students available for use.



This is an example of how student perception can vary greatly from instructor perception. In our implementation of D2L, there is a widget for Content Quick Links on the default Home Page for each courses. Students can use this hierarchy to drill down to linked content within the course. Unfortunately, it only provides the links without any of the accompanying descriptions. For this course, considerable instruction was provided in the regular Content area. When this instructor removed this widget from his home page, he found that some students had only been using the links and had never seen the rest of the course.

Respect Affordances



CONTEXT

- Affordances simply means objects should give clues about their use
 - A handle for pull
 - A push bar for push
- In nearly all cases, on the web an underline is perceived to be a link
 - Use an alternative means of emphasis

Important information

Important information

When developing an online course, it is important to respect the affordances associated with a web environment. Affordances simply means objects should give clues about their use. For example, a handle is pulled while a push-bar is pushed.

In nearly all cases, on the web an underline is perceived as a link. If you need emphasize something, use an alternative strategy. I will often bold and italicize important information. I will also make the text bold and change the color. When I change the color, I use blue rather than red. Seven percent of the male US population is red/green color blind. They perceive red as brown. Blue is the color that is most universally seen.

Provide Context for Students



CONTEXT

- Many courses develop to become lists of links.
- What's missing is the context
 - Why is it important
 - How does it relate to other content
- Use the description feature to talk to students
- Add introductions
- Add a summary

By default, many LMS systems, make it easy to add links. As a result, many courses develop to become lists of links. What's missing is the context. Why is the content important? How does it relate to other content? It takes extra effort, but adding the context to the course is what separates an average course from a great course. Use the description feature to talk to students. Add introductions. Add a summary.

List of Links Example


CONTEXT

Week 2 ▾

The Science of Performance Improvement

Improving Patient Safety : Error Identification and Reduction

16.67 % 2 of 12 topics complete




- W NUR 812 INNOVATIONS IN QUALITY WEEK 2 ▾
- S The Science of Performance Improvement ▾
- P Patient Safety: Improving Incident Reporting ▾
- G Global Trigger Tool Shows that Adverse Events in Hospitals May Be Ten Times Greater ▾
- I IMI Research: Management of Serious Clinical Adverse

Before - <https://d2l.washburn.edu/d2l/home/53643>

After - <https://d2l.washburn.edu/d2l/home/70090>

In this example, we look at a course that started out as a list of links. All the content is there, but the context is missing. At a glance, the students don't know what the elements represent, what they are supposed to do with them, and how they fit together. In the redesigned course, descriptions are provided that give the students "context" that address these questions.

Storyboard/Prototyping



PLANNING




- Interaction design is an iterative process.
- Making models or prototypes is integral to the process.
- The Learning Experience Designer tool can be used to prototype a course. The online tool is available in My Faculty Center.

<http://facultysupport.com/my-faculty-center.php>
http://www.facultysupport.com/resources/Learning_Experience_Designer_Outline.xlsx

The next aspect of the framework to consider is Planning the Content.

Interaction design is an iterative process. So is course design. Making models or prototypes is integral to the process. At Washburn we use a tool I developed called the Learning Experience Designer tool. The outline spreadsheet we use is based on the Learning Experience Designer tool available online in My Faculty Center at the Faculty Support Center (<http://facultysupport.com/my-faculty-center.php>).

Learning Experience Designer Tool Example

PLANNING


1 Component	7 Informatics
4 Engagement	Photo
5 Introduction	Wachter, Ch. 13, 20
Knowledge	Articles: https:
6 Web Resources	http://www.cdc.gov/nchs/icd/icd10cm.htm http://www.qualitycheck.org/consumer/searchQCR.aspx http://www.qualitycheck.org/consumer/searchQCR.aspx https://www.qualitynet.org http://www.medicare.gov/hospitalcompare/search.html
7 Understand	Electronic health records (EHRs) can save lives: Regina Holliday's story – UPDATED http://www.youtube.com/watch?feature=iv&vmsBtOYYeHPw&annotation_id=annotation_4299&src_vid=kMuB6nWzY5U Health information exchange: Making a difference http://www.healthit.gov/providers-professionals/video/health-information-exchange-making-difference

https://washburnmail-my.sharepoint.com/personal/linda_merillat_washburn_edu/_layouts/15/guestaccess.aspx?docid=15f5c332409064f23ad89d25089ab19c2&authkey=AddBUw169YE4Gn-ZxYUbtLA

Down the left side of the spreadsheet are components you could use as you develop a lesson from top to bottom. Across the top are the different units and modules. The outline spreadsheet allows you to look at the entirety of the course and how the different elements work together.

https://washburnmail-my.sharepoint.com/personal/linda_merillat_washburn_edu/_layouts/15/guestaccess.aspx?docid=15f5c332409064f23ad89d25089ab19c2&authkey=AddBUw169YE4Gn-ZxYUbtLA

Consistency



PRESENTATION

- Consistency, consistency, consistency
- Templates can help
 - Course
 - Syllabus
 - Online Student Resource Center
- Be fanatical
 - fonts, colors, headings, due dates, order of items, file names, link names

As we move into the Presentation aspect of the framework, we can't repeat it enough – consistency, consistency, consistency!! Many students complain about courses being disorganized. What they really mean is that they are not consistent.

Templates can help. At Washburn, we developed three templates to support Quality Matters: a D2L course template, a syllabus template, and a separate Online Student Resource Center. Use of these templates provides for consistency across courses. The templates are not restrictive. For example, all the 15 courses in the RN-to-BSN program were developed using these templates, but each course varies significantly.

To be effective, one needs to be fanatical in all aspects of the course design. These includes consistent use of fonts, colors, headings, due dates, order of items, file names, and link names.

Templates Example

PRESENTATION

<<School >>
 <<Program>>
 AA-XXX – <<Course Name>>
 Course Syllabus - Online
 <<Term>> <<Year>>

The course syllabus is considered a *learning agreement* between the student and the course instructor(s). Students will be held accountable for the contents outlined in this document. It is considered important and is your guide to succeeding in this course.


Faculty

Name, Credentials
 Office: xxx
 Voice: xxx
 Cell: xxx
 Email: xxx
 Office Hours: By appointment
 The best way to reach me is...

Course Description
 Place course description from catalog.
 X Credit Hours

Course Prerequisite(s) and Competencies:
 Place course prerequisite(s) and previous competencies.

Course Outcomes:
 Upon completion of the course AA-XXX, the learner will be able to:




http://www.facultysupport.com/resources/Quality_Matters_Online_Syllabus_Template.docx

In this example, we look at the Online syllabus template that is available at the Faculty Support Center. Use color – it’s online – it’s free!!

http://www.facultysupport.com/resources/Quality_Matters_Online_Syllabus_Template.docx

Provide Visual Cues



PRESENTATION


- Use images
 - Banner, module, external tools
- Use descriptive/meaningful names
 - Module names, chapter assignments
- Distinguish additional recommended resources from required readings & materials

Example Course: <https://d2l.washburn.edu/d2l/home/70090>

One strategy to employ is to provide visual cues to students.

- It easy to use images as guideposts:
 - Banner images are used to visually inform the students about the content of each class. It helps them to visually recognize they are in the correct course.
 - Images are used at the beginning of each module to engage students in the specific topic.
 - Images are used to add interest and clarity when external tools are used.
- Use descriptive/meaningful names
 - Course module names are meaningful, rather than just Week 1, Week 2, etc.
 - Rather just saying 'Read Chapter 1', the chapter name is given to provide students with another frame of reference to mentally organize materials.
- Distinguish additional recommended resources from required readings & materials

Consider Readability



PRESENTATION

- **Learn the features of your HTML Editor!!**
- Use bullets
- Use built-in headings
- Use white space
(Use <SHIFT>+<ENTER> to force line feed)
- Use Paste Word feature or copy into HTML source to avoid font problems

My doctoral research showed that even though someone may use a technology tool for years, they may never explore or use many of the tool's features. Take time to learn the features of your HTML Editor! All LMS tools these days offer this feature. They allow you a What-You-See-Is-What-You-Get (WYSIWYG) interface for adding content to a course.

- Use bullets. Bullets help organize long lists are easier to read at a glance.
- Use the built-in headings. It's an easy way to format text – and to format it consistently.
- Use white space. White space can be tricky on the web. By default, white space is compressed when the web page is rendered or displayed. But adding white space is a great way to organize groups of items and to add emphasis. Use <SHIFT>+<ENTER> to force a line feed.
- It's easy to copy and paste text from a Word document, but it often comes with mixed results. You may find the text appears in a different font, and you can't seem to change it. That's because with some editors, when you paste Word text, you are also pasting the Word format. If your LMS has a paste Word feature, use it. Alternatively, you can switch the HTML editor to HTML source mode and paste the text directly. Switch back and format the text as needed.

HTML Editor Example



PRESENTATION

Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Quisque lectus ligula, sodales at ultricies id, pellentesque nec est. Duis bibendum, dui eu pretium viverra, tellus velit inoribus arcu, quis auctor lacus ipsum vel est. Mauris ullamcorper sapien erat, vehicula ullamcorper lacus interdum sed. Ut aliquet ipsum id orci commodo, nec rutrum est fringilla. Vestibulum sed odio pharetra, luctus nulla non, dignissim dui. Integer non neque id augue dignissim rhoncus in ac purus. Sed lacinia condimentum elit sed vehicula. Praesent semper dui eu volutpat vehicula. Praesent suscipit ex ut quam varius, in sollicitudin lorem suscipit. Praesent porta commodo arcu a trincidunt. Sed viverra rhoncus diam a facilisis. Duis varius semper mollis. Mauris semper pretium laudibus.

- Donec semper nisi non arcu egestas mollis.
- Mauris id commodo ipsum.
- Morbi ornare interdum elementum.
- Integer blandit non turpis eu semper.


Aenean sollicitudin neque ut erat mattis laoreet. Phasellus euismod id metus sed scelerisque. Integer non nisi a massa ornare vestibulum. Morbi tempus trincidunt tellus, et laoreet est auctor quis. Fusce venenatis orci tristique, aliquet erat id, consectetur odio. In imperdiet dui metus, ut sagittis risus dignissim in. Vestibulum ut ipsum at erat pretium maximus. Phasellus semper, arcu non hendrerit placerat, lacus sem iaculis nibh, sed vestibulum arcu orci eu sem.

In molestie id massa eget consequat. Suspendisse potenti. Fusce imperdiet justo vitae dolor elementum. In imperdiet arcu accumsan. Suspendisse id congue magna. Aliquam suscipit mauris id viverra aliquet. Orci varius natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Duis a mollis sapien. Nullam accumsan vel magna in rutrum.

Update Cancel

<https://d2l.washburn.edu/d2l/home/70090>

Provide Ease of Access



PRESENTATION

- Organize content into modules
 - Fully complete
- Reference external tools inline
- Post documents as .pdf
- Present key points both in the syllabus and in the course
 - Be consistent

Making things easy for students to access goes back to thinking or looking at the course from the perspective of the student. It's important to consider what's easiest for the students. This may mean taking extra time to set up things in the beginning to save students time and effort at the backend.

- One approach is to organize content into modules. Course modules are laid out so students can see with one click the scope and breadth of what is needed for each module. Student should have everything they need in one place without having to refer back to the syllabus, schedule or other documents.
- Some classes use external tools to supplement the online classroom. For ease of access, the link to the external tool should be provided in the context of each module.
- In general, all documents posted to the course should be converted to a .pdf. Unless the student needs to use the document in its native format, posting as a .pdf allows for the most universal access including mobile devices.
- Syllabi can be complex documents. It's easy for important points to get lost. One approach is to present key points in both the syllabus and in the course for easy access for students.

Course Structure Example



PRESENTATION

Table of Contents 165

- Course Overview (START HERE) 4
- Course Structure 2
- Course Outcomes
- Course Expectations 1**
- Student Participation
- Discussion Forums 1
- Written Assignments
- Course Rubrics
- For Communication and Feedback
- Course Grading Policy 1
- Finding Your Feedback
- Copyright Notice & Disclaimer

Student Participation

In addition to reviewing all content in the course and completing all the assignments, students participate in the course via Zoom:

- Module 1 - Virtual Class Discussion
- Module 2 - Meet with Instructor 1-1
- Module 7 - Virtual Class Discussion
- Module 8 - Paper presentation

Upload / Create Existing Activities

Drag and drop files here to create and update topics

Discussion Forums

In addition to the guidelines outlined in the syllabus, student participation in discussion forums will be evaluated using the rubric below.

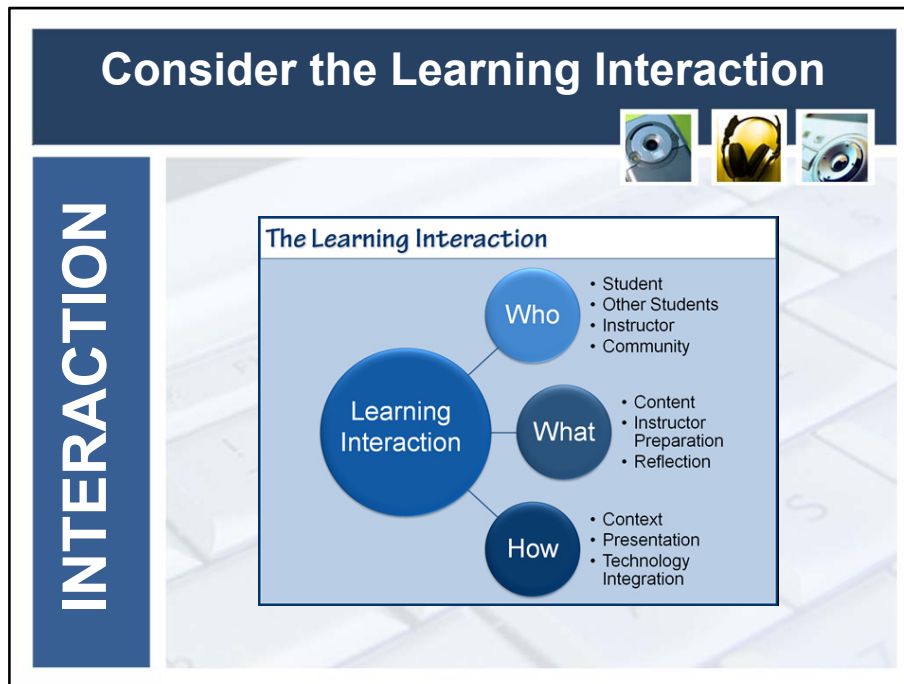
Initial posts to discussion forums on due Thursdays, 11:59 pm.

Replies to posts are due Sundays, 6:00 pm.

Upload / Create Existing Activities

NU 812 Discussion Forum Rubric

<https://d2l.washburn.edu/d2l/home/70090>



The next aspect of the framework to explore is Facilitating the Interaction.

Consider the elements of the Learning Interaction: Who, What , How.

- Who will be engaged? Students, Other Students, the Instructor, the Community
- What will be taught? The Content provided, the Instructor Preparation, Reflection
- How will it be taught? What is the Context, How will it be Presented? How will Technology be used?

Promote Instructor Presence

INTERACTION

- Post a photo
- Provide direct instruction
 - Course & module introductions
 - 2-3 written paragraphs
 - Podcast
 - PPT
 - Narrated PPT
 - Video
 - Articulate Lecture/Office Mix
- Post Announcements/Send e-mails



Course Faculty | ▾



Lori Cue, MA, BSN, RN, CPHQ


A simple way to promote instructor presence in a course is to post a photo. When provided on the course home page, it immediately connects the instructor with the course.

It's also important for instructors to provide direct instruction in the course. Sometimes, this aspect of the course can be overlooked. It takes effort and lots of prep time, but it is one component of the course that only the instructor can provide. Direct instruction can be provided in different ways:

- 2-3 written paragraphs
- Podcast
- PPT
- Narrated PPT
- Video
- Articulate Lecture/Office Mix

Post announcements or send e-mails. It's best practice to communicate at least weekly with students.

Provide Opportunities for Interaction



INTERACTION

- Provide a variety of opportunities for interaction
 - Discussion Forums
 - Break large classes into smaller discussion groups of 4-8 students
 - Virtual Classroom Sessions
 - Pair & Share/Discussion Buddy
 - Small Group discussion
 - Peer Evaluation
 - Student Cases
 - Team Assignments
 - Community Engagement
 - Email
 - Wikis

Provide a variety of opportunities for interaction

Discussion Forums

Break large classes into smaller discussion groups of 4-8 students

Virtual Classroom Sessions

Pair & Share/Discussion Buddy

Small Group discussion

Peer Evaluation

Student Cases


Team Assignments

Community Engagement

Email

Wikis

Provide Feedback



REFLECTION

- Provide answers to quizzes along with feedback for each answer
- Provide answers to homework upon submission of assignment
- Implement mid-term anonymous evaluation surveys
- Provide personalized comments for each assignment
- Use rubrics as basis for assessment
- Print certificates/awards online

Feedback is essential. From an interaction design perspective, immediate feedback is the ideal.

One way to provide immediate feedback is to provide the answers to quizzes upon submission. It is even more advantageous to provide the rationale for wrong answers as well.

Another strategy is provide the answers to homework assignments upon submission of the assignment. This allows students to grade their own work immediately.

It's also important for students be able to supply instructors with feedback on their instruction. This can be implemented through mid-term anonymous surveys. It doesn't have to be complicated. Our mid-term evaluations ask two questions: What is working well? What is not working well?


Students hunger for feedback. One of the benefits of using a LMS is the ability to provide detailed feedback to students on their assignments. This feedback is even more effective when it is personalized.

Rubrics can be used to provide detailed feedback to students on specific parts of the

assignment .

Another feature available in some LMS is the ability print certificates or awards with the system based on completing certain criteria.

Ease the Use of Technology



TECHNOLOGY

- Embed rather than link videos
- Illustrate a podcast with a photo
- Provide a transcript
 - Add script to notes of PPT, and print as Notes Page to PDF
- For all technology tools, provide
 - How to use
 - Technical Support

The final aspect of the Interactive Teaching Design framework is Empowering Through the Use of Technology.

Here are few useful tips to make it easier for students to use technology:

- Embed rather than link videos
- Illustrate a podcast with a photo
- Provide a transcript
 - An easy way to create a transcript is to add your script to the notes section of the PPT, and then print the Notes page to a PDF printer.
- For all technology tools, provide information on:
 - How to use
 - Technical Support

Questions



- Any questions?