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 is 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.
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 a 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
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.
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 to be a link. If you need to 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.
By default, may 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 it 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.
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.
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).
Down the left side of the spreadsheet are components you could use as you develop a lesson from top to bottom. Across is 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
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 courses 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.
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
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
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.
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https://d2l.washburn.edu/d2l/home/70090
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.
The next aspect of the framework to explore is Facilitating the Interaction.


- 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?
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 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
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 to 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 to 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
Another feature available in some LMS is the ability print certificates or awards with the system based on completing certain criteria.
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
  – Add script to notes of PPT, and print as Notes Page to PDF
• For all technology tools, provide
  – How to use
  – Technical Support
• Any questions?