Best Practices in Online Course Design

For Instructors

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When designing or going through redevelopment of your online course, there are several time and research based practices that contribute to course effectiveness and student success. Those practices outlined here, have been selected due to their relationship to teaching best practices and interface with our learning management system, Blackboard Learn.

Be Consistent in Course Structure

In Blackboard Learn, modules are the ideal containers for instructional content. Modules can be used to centralize the location of content constructed around ideas, concepts, theory, or by units and sections. The number of modules vary greatly between courses, varying from 4 to 30. They are normally sequential, meaning a student must complete one before advancing to the next.

The module should contain all of the material and resources necessary to complete the module, before advancing. This includes, at a minimum:

- Module learning outcomes
- Content (lecture and rich media)
- All assessment methods
- Associated learning materials and resources

The modular design makes student navigation easy, since it centrally locates all materials. Students no longer have to leave the learning module and search for assignments, assessments, discussions, and other materials.

The instructor should also make text fonts and sizes similar across the course, to include the use of color.

Images and graphics supporting content, not decorating it, should be included. Meaningful, explained visuals increase comprehension and long-term memory.

Design for the Internet User

Text should be 11or 12 font when using a web approved font. Content should be chunked, normally not exceeding a page in length. This may require more pages to present content, but it is far more desirable than having one page that is extremely long. Text-based content should also be error-free.

Rich media is critical in online courses and videos and audios selected or created should be short and concise. When selecting rich media, find those that meet your instructional needs, but include visual and sound clarity and make sure they have closed captions.

When feasible, offer multiple formats for content. Windows Media Player will not work on all Mac technologies, so consider mp4 and mp3 as alternatives. Avoid loading Microsoft Office Word documents, since not all students will be able to access these. Instructional pages must be built in html or loaded in readable PDF. Keep it simple for your students and give everyone the access they need.

Remember your audience is very diverse in the e-learning community. When available, include instructions for first-time tasks in the course. You can often find these in You Tube, on the Blackboard on Demand web site, or with the Office of Instructional Technology. Building these student "helps" initially requires work, but they will save many hours of work in the long run of the course.

Maximize the Use of LMS Tools

An excellent online instructor is familiar with the tools available in their LMS, and more importantly, they know how the tools work. Use the tools you have been trained on and incorporate them into the course design. If you need something different, meet and talk to the instructional designer and media specialist. They will let you know what is available and provide the necessary training.

New tools involving analytics are critical in understanding the distant learner and their progress and how it mixes with your instruction. Blackboard Learn has analytics for assessments, tracking for student access and viewing course materials, and detailed reports across the course. Most important, is the student retention center, which can provide minute-by-minute feedback on student access and performance across your class.

Using data at this level provides a view of the classroom and instructional materials never before possible, not without extensive labor and calculations. They provide a direct link to the students needing help and those that deserve praise.

Make Content for the 21st Century Student

Long pages of text or in contrast, page after page of bulleted text or PowerPoint presentations from the classroom or publisher is not considered the best andragogical path, especially in the undergraduate, e-learning environment. These students need more concrete, visual content. And the web is not designed for extensive reading. These type of items are meant to be downloaded and printed.

The web is designed for rich media materials. Rich media can best be described as audio, podcasts, and video. It also includes flash media and interactive media (hot spots, etc.). This type of content must be relevant, current, and meaningful to the course and the learning outcomes assigned.

The ideal online course should have text-based lecture, instructor produced video lecture, flash demonstrations, presentations, PowerPoint with

voiceover, flash presentations, and synchronous sessions, when feasible. And each component of lecture must tie to the module learning objective and course outcomes.

A diverse mixture of content addresses:

- different learning styles,
- different preferences,
- the need to have repetition, and
- the need for 24-7 access.

Use Rich Media (Multimedia) Smartly
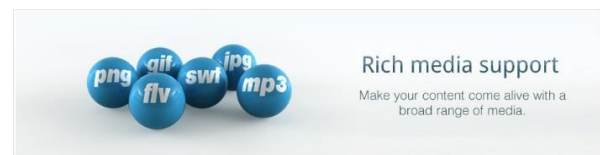
Multi-use platforms are critical in e-learning. Photo courtesy of Zembl.com

The instructor must think through the use and application of rich media in an online course carefully. The instructional designer and media specialist can help as well once you develop the storyboard. It is very important to keep several concepts in mind when selecting and placing rich media, to include:

- direct relationship to module LOs and content
- copyright,
- duration (length of presentation),
- play and pause options,
- visual clarity,
- audible clarity,
- American Disability Act compliance,
- type of file,
- linking the video in the course,
- location in the course, and
- sequence in the module.

Once rich-media (also referred to as multimedia) is selected, there are several research-based principles to keep in mind during the placement of the material in your course.

The *multimedia principle* states to use words and graphics together rather than just words. When combined with the *contiguity principle*, which states to keep related text and graphics in the same visual space … enhanced learning takes place. Do not make students go to a different page, location on the web, or even scroll to see an image being explained in text.

The *modality principle* suggests that it is more effective to use audio than only online text-based materials. Using this method takes incoming information and splits it across two separate cognitive channels, audible and visual. This is especially true when using text to explain complex visual or processes.
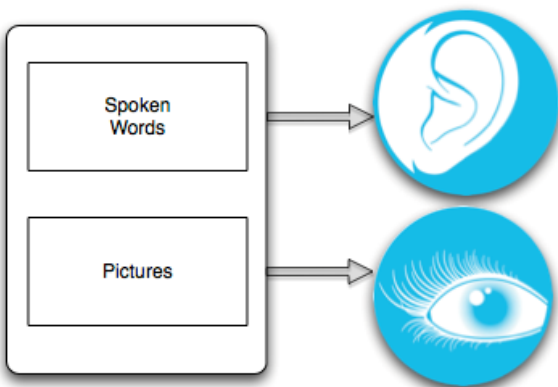
The use of two cognitive channels, enhances learning and the movement of information to the long-term memory. Image courtesy of openedweb.com

The *redundancy principle* states that you want to avoid using graphics, on screen text, and audio simultaneously. Simply put, do not add text to graphics already supplemented by audio. It overloads the learner.

But perhaps the most important recommendation is avoid making lessons cluttered. Studies reveal that faculty often overload online courses with information considered interesting or side tracks which negatively impact learning. Basically, they contribute to cognitive overload.

You want to avoid adding anything that does not directly contribute to the learning objectives desired in a specific module. Mayo and Moreno (2003) use

the term *weeding* to describe the process of removing unnecessary words, graphics, video, and audio that are not focused on the instructional goal of the module.

If cognitive overload is achieved and the material is considered critical to learning, it is time to create another module.

If you feel the need to add supplemental information as reinforcement or previously learned knowledge to support a segment of the student population, make sure you describe the material as such. Students not needing the support can press on without it and keep their pace.

Aligning Learning Objectives, Content, and Assessment

One of the first phases of course design following audience identification is the creation of course learning outcomes (LOs) for use in the syllabus, (broader goals of the course) and learning objectives (specific performance measures of each module). In e-learning, instructional designers use these measureable and observable descriptors to assess the structure and completion of each learning module.

When creating the LOs, you must selected the best verb use to describe what the student must be able to accomplish to achieve success. Terms such as discover, appreciate, comprehend, and know are extremely difficult, if not impossible to measure or observe, and should be avoided.

As you develop each learning objective, the verbs selected must also match your means of assessment. More importantly, the content (learning material, engagements, activities, and communications) provided must provide the student the means to accomplish the task at that level.

Reflect on the following LO:

> At the end of this module, you will be able to provide a detailed clinical expression for ordinary-confluent, malignant, and hemorrhagic smallpox.

As you review the course, you find the instructor has only provided instruction on Native American population epidemics with definitive examples of malignant and hemorrhagic smallpox. Later during the essay exam for the module, you encounter the following question.

> Provide a description of the clinical expression for the five types of Smallpox encountered by Native American populations during the early 1800s.

In short, after you design your learning objectives, you must build your assessments with those objectives in mind. Then, you must ensure you provide the appropriate learning materials to achieve student success at the level desired and matching the assessment.
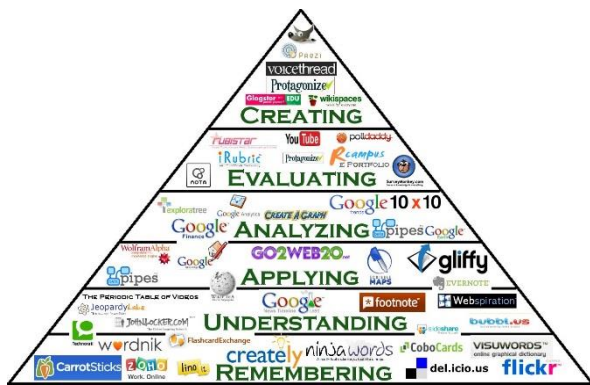
Bloom's Revised Taxonomy courtesy of
http://morethanenglish.edublogs.org

Finally, the verbs used in the LOs should match the level of learning demanded by the task. Are students tasked to simply remember or understand, or are they going to be required to apply, analyze, evaluate or create something based on your instruction? Consider using the Revised Bloom's Taxonomy when building your LOs, assessments, and content and develop strong relationships between them to promote student success.

Choosing the Right Mail Option: Internal or External

Choosing the right mail option for an online course is critical and is best determined by both instructor and students enrolled. Or … instructors may select to use a mixture of both will carefully controlled timing and methods.

Internal mail systems have the benefit of storing all interactions within the course and its archive. It also eliminates any problem with identifying the sender. It also removes the issue of spam. Only students enrolled in the course have access and can send messages.

But there are limitations. Foremost, you are forced to login to the LMS to access and check the mail, along with his/her regular e-mail account. Another drawback is when students don't interact with the LMS bound course mail. If they are not logging in, they aren't going to receive instructor messages of concern.

The solution may be controlled mixture of both systems. To the extent possible, we recommend keeping all course related communications between students and instructors inside the LMS. However, the instructor may want to use the external mail tool to convey a sense of instructor presence and participation that can enhance the learning process.

Examples of how external email can be used by the instructor include:

- assignment updates and clarifications
- asking content related questions for reflection
- notice of course changes
- introductions to new modules and learning objectives

When used in a one-way fashion to convey information, remember to hide external mail tool from student view and provide only the instructor access.