Teaching with Technology

Teaching with Technology

L&S LEARNING SUPPORT SERVICES

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Contents

Introduction

Welcome to Teaching with Technology

Welcome! This text originated as an online workshop series for instructors at the University of Wisconsin-Madison in 2012. Though that workshop has been completed, and the opportunities for interaction we built into that course are no longer active, we hope that this text will still be of interest and of use to you. For each workshop topic, we hope to:

- Provide a wide range of information and resources,
- Cultivate a community for instructor development and an exchange of best practices,
- Design activities that allow you to explore and share your pedagogical interests and particular areas of expertise,
- Connect you with the UW Madison consultation and support network

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Overview of this Text

Pathways of Learning

Observe & Consider   Share & Connect   Practice & Apply

As each of the workshop topics unfold, we'll categorize content to help you navigate through the course and manage your participation in a way that meets both your interests and schedule. Below is an explanation of the heading structure we'll use to help keep everything organized.

Observe & Consider

Observe & Consider content encompasses information we want to share with you. This might take the form of articles, links, videos and the audio podcasts we've created. This is your chance to choose and absorb information that is relevant to your teaching and learning challenges. The stakes are low and the potential pay-off is high!

Share & Connect

When you see the Share & Connect heading, think interaction. As we've mentioned, one of our main goals is to foster a community that helps one another broaden their perspective on teaching and learning. The Share and Connect activities are what we use to bring the participants together in a virtual space. For example, share and connect could be a really quick collaborative word association exercise or in-depth participation in an online discussion forum (less applicable to this online text, but great for when this was an actual course).

Practice & Apply

With Practice & Apply, we aim to dig a bit deeper and explore the practical application for the concepts we'll be sharing. Practice & Apply is 100% activity-based and hopefully help situate you in realistic context to promote creativity and begin adapting the material to your course.

Meet Your Workshop Facilitators

Theresa Pesavento

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Theresa is an Instructional Technology Consultant for L&S Learning Support Services. Her areas of interest and expertise include classroom technology, learning spaces and classroom environments, language learning, instructional design, and pedagogy. With a Masters in French Literature (currently working on her Ph.D) and over a decade of teaching background, Theresa has significant teaching experience as language instructor. Before coming to Madison, Theresa also worked for a handful of years in marketing and advertising.

Hailing from Minnesota, Theresa is a rabid but realistic Minnesota sports fan (she could probably referee a hockey game), despite living in Wisconsin for the past 8 years. Theresa enjoys a warm cup of coffee (dark roast), perfectly ripe bananas (no brown spots, please), and running at very early hours in the morning (best time of the day, according to her).

Chad Shorter

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Chad is a consultant for DoIT Academic Technology. As a Learning Technology Consultant, Chad likes to help instructors make a thoughtful use of technology to help improve the teaching and learning experience for them and for their students. He came to his position as a teacher, not a techie, after teaching Italian at large universities for 8 years (including 4 years at UW-Madison).

In addition to his full-time role as a learning technology consultant, Chad is working on his dissertation in Italian literature. He loves spending time with his family and following Braves baseball and BYU & Packers football. He likes biking around Madison (by bicycle and by motorcycle) and would always like to spend more time on the water. Originally from Virginia, he has enjoyed making Wisconsin home for the past seven years (in no small part because most of the population agrees with him that brats are quite possibly the world's most perfect food).

Jonathan Klein

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Jonathan works for L&S Learning Support Services as an Instructional Technology Consultant. His current areas of professional interest involve educational multimedia, instructional design, and online and blended learning. He recently completed a Masters degree (completed entirely online) in learning technology and instructional design from the University of Wisconsin-Stout, which provided valuable insight into challenges and opportunities for online learning and virtual collaboration. Before joining LSS, Jonathan spent nearly 10 years various roles state legislative politics, primarily outreach and policy.

Jonathan shows his pride in his Southwest Wisconsin roots by throwing out tree (and other agricultural) trivia. He also claims to make a mean peanut butter rice krispy bar (though we've never had the chance to confirm this is true). If you see him in the halls of Van Hise, he'll probably show you a photo of his kids on his new Android phone (which is very rebellious of him in a very Apple-y workplace).

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David is a Senior Instructional Technology Consultant for L&S Learning Support Services, where he works with all things video and assists faculty and instructional staff with integrating audio and video into their coursework. His primary interests range from documentary video production, to illustration and graphic design, to conducting workshops and trainings. David has an MFA in media arts from the University of Montana-Missoula. Prior to joining LSS, he worked as an independent cameraman and editor in the rocky mountain west working for film festivals, PBS affiliates, regional ad firms, universities and non-profit organizations.

In his spare time, David enjoys carving spoons and random tools (Greenland kayak paddles) from Wisconsin hardwoods. His artistic obsession list is long but currently includes: podcasting about anything and everything and crafting the ideally comfy wool sleeping pad for car camping (he's working on rounding up the sheep). If you see David in the hallways of Van Hise, ask him about bison sustainability (you might want to sit down for this).

Steel Wagstaff

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Steel is the newest member of the consulting team at L&S Learning Support Services (he joined them in January 2013). Prior to joining LSS, he worked as a consultant for [DesignLab](#), served two years as Assistant Director of English 100, taught writing and literature, and worked briefly as a land surveyor in Boise, Idaho. He has graduate degrees in English and Library and Information Studies and is currently writing a dissertation in the English department on the Objectivist poets.

L&S Learning Support Services

L&S Learning Support Services at the University of Wisconsin-Madison supports learning technology in the College of Letters & Science and collaborates with other UW campus learning technology departments and staff. LSS staff members are available to consult on projects using instructional technology. You can request a consultation through [our consulting website](#). Please come and discuss your teaching plans and goals with us!

LSS Services

LSS offers a variety of instructional technology services, including: media production, online learning tools and environments, language and L&S subject library, equipment rental, computer labs and study spaces, and classroom computer & presentation rooms.

- LSS consults and collaborates with L&S faculty and staff on multimedia & e-learning content creation, blended learning strategies, online course development, and instructional technology planning & implementation.
- LSS creates workshops & professional development opportunities around topical learning subjects.
- LSS provides technical support for UW online course management tools, classroom technologies, UW's vast technology toolbox, and various web 2.0 tools.

Media Attributions

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- 3-modesB
- 3-modesC
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- bio-images2
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PART I
ONLINE DISCUSSIONS

1. Online Discussions Introduction

Thank you for participating in this session of L&S Learning Support Services' online workshop series, "Teaching With Technology." In the following short opening, you'll meet one of your facilitators, Theresa Pesavento, and get acquainted with the outline of the upcoming module on the exciting topic of online discussions.

Before we dive in, take a moment to consider the uniqueness of online learning. For instance, while we believe most of you will be joining us from here in Madison, Wisconsin, we also know that you may be participating from places near and far, using the power of the internet. In this light, we hope that by providing a brief look at our 'place' in and around Van Hise Hall, we are offering a useful context for our culture and geography. And we hope to hear from you as we move through the course–about the topic at hand, of course, and also a little bit about your own place on campus or on your side of the world.
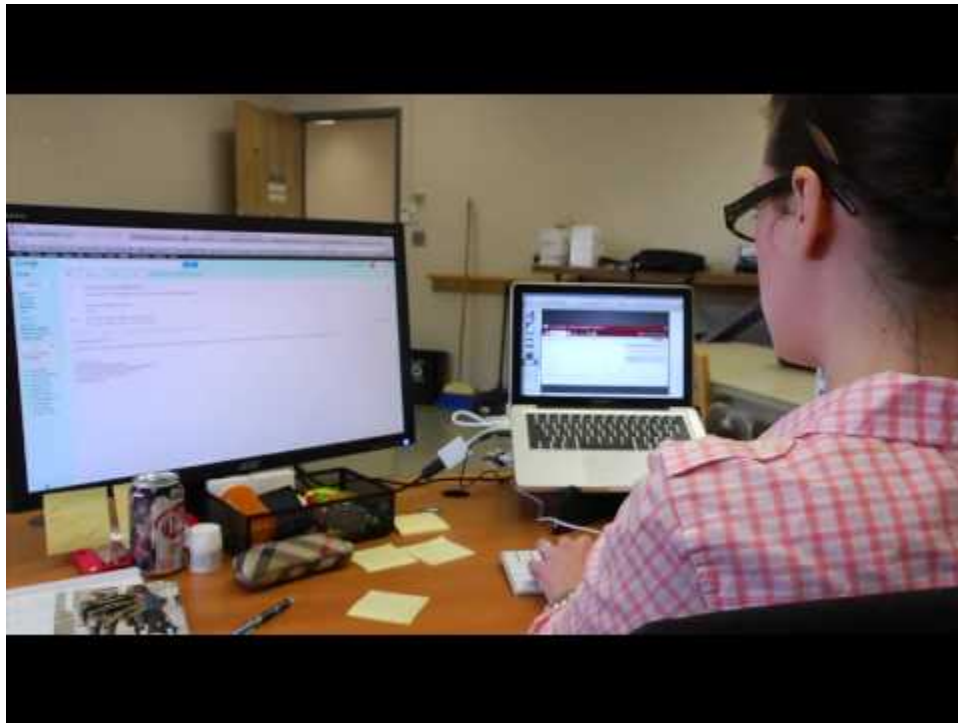
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Overview

Why did we chose online discussions as a topic? Online discussions certainly aren't cutting edge, but they are often a very useful way to meet our learning goals, and are therefore an important tool for us to use effectively. Online discussions are

not only a good entry point for someone who would like to try a mini version of a "blended" classroom environment, but they are also a good way to promote student collaboration and knowledge building, to build writing skills, to create a positive classroom environment, and to ask students to engage with various media and instructional materials and resources outside of the dedicated in-class time.

Throughout the workshop, we hope to illustrate the many dynamics at play in an online discussion activity by sharing resources and experiences. Let's start now by getting to know a bit more about each other. Please complete the poll below to so we have a snapshot of our collective experience with online discussions. After submitting your response, click "See previous responses" to see the results.

Connect & Share

Loading…

Media Attributions

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2. The Four Roles of an Online Instructor

Observe & Consider

To get us all on the same page, below is an article that outlines a framework will use to consider the various aspects of implementing an online discussion in your course. In the article, the author outlines four roles that help categorize most of the work performed by an online instructor: Pedagogical, Social, Managerial & Technical. It's often the case that instructors implement an online discussion for reasons encompassed by the pedagogical and/or social role. However, it's important to consider that all four dynamics are at play.

The Role of the Online Instructor/Facilitator, Zane L. Berge, Ph.D.

Let's now look at the four roles in a bit more detail and discuss some of the main instructional objectives and/or considerations that fall under each role:

Pedagogical Role – Create discussions that focus energy on critical concepts, principles, and skills.

Key considerations:

- Develop questions that suit your course goals and help students think critically.
- Develop questions that provide room for students to personalize their post in a way that encourages responses from peers.
- Explore the various ways in which instructor participation can help or hinder a discussion.
- Be attentive to assessment and targeted assessment strategies that best parallel the design of your online discussion.

There are a number of ways to address these key considerations. First, you can make efforts to integrate the online discussion and the in-class time as much as possible so that students understand and benefit from both environments. You might also use the discussion board as a source for in-class lecture/discussion topics, and mine the discussion for concepts that aren't clear and need to be rediscussed in class. Also consider replacing some existing assignments in your syllabus in order to account for the time spent in online discussions. Finally, assessment is one aspect of online discussions that spans the pedagogical and managerial roles. On the front end, developing an assessment strategy forces thorough consideration of pedagogical goals. Then, as implementation begins, assessments rubrics become an important managerial tool for both students and instructors (see managerial role for more details).

These articles and resources explore more pedagogical elements of online discussions:

- Discussion Prompts – This article comes from a repository of blended learning resources by the University of Central Florida. It provides useful guidelines for constructing good discussion prompts. Notice the many helpful examples.

- [Cognitive Question Prompts](#) – Use this chart to help develop discussion question that align with your instructional goals. The chart also provides useful prompts for facilitators to use in keeping discussion going.
- [Questioning Styles for More Effective Discussion Roles](#) – This short article offers ideas for aligning pedagogical goals with various types of discussion prompts.

Social Role – Foster a friendly, social environment to promote learning and sharing

Key considerations:

- Focus on cultivating student participation in this online environment; be precise and clear with your students about what type and level of participation this should be.
- Integrate online and in-class discussions, topics, and responses as much as possible to streamline course content.
- Promote community building, with you and your students and amongst your students.
- Define and enforce expectations for language, interactions, and online interpersonal communication.

How can we address these considerations? First, we can encourage students to reply to each others' questions, to work in teams, and to report back to class with information from the online discussion. We can also post rules and model behavior for the type of interactions that you expect (how formal, informal, etc.) and what type of etiquette accompanies these. Allow students enough time to digest, reflect, and produce their own analytical responses and thoughts. As mentioned above, grade for participation, and encourage those who don't talk as much in class to participate more online.

Review these articles to dig deeper into the social dimension of online discussions:

- [Building An Online Learning Community](#) – In this article, the author presents two learning community cases studies and offers a roadmap for how to enhance the social dimension of an online community.
- [Online Learning Communities Revisited](#) – This article was developed for the UW Annual Conference on Distance Teaching and Learning. It briefly examines learner satisfaction and learning outcomes in relation online learning communities. It also outlines several elements of community and how they work together to sustain a cooperative environment.

Managerial Role – Clarify discussion objectives, timelines, and procedural rules

Key considerations:

- Ensure students have the right skills and information to participate fully.
- Establish a rhythm for your discussion by thoughtfully timing deadlines for initial posts and responses.
- Communicate clear and consistent expectations to the students.
- Define ground rules for respectful interactions.

To do this, establish an FAQ section about course procedures, expectations, discussion rules, and other likely administrative questions. By doing this in the course site itself and in a discussion forum, you can respond to questions that might

come up over and over again in a space that is visible to the whole class, avoiding the need to address each similar question on an individual basis. This will also be a way to provide examples of good posts, model expectations for language and style of posts. We can include detailed guidelines and rubrics on how the posts will be assessed and make these accessible on the course site. To manage your time as an instructor (and therefore to manage the discussion more easily), set up online office hours or a time block during which you'll be active in the discussion forums when you can facilitate the threads and respond to student questions. In line with replacing other assignments in your syllabus to allow for more student focus on the online discussions (as mentioned under the pedagogical role), consider requiring a "discussion portfolio" semester-long assignment that students would be required to curate and submit. This puts many of the discussion responsibilities and management on the students and requires them to be acutely aware of the expectations of the discussion threads/posts in order to hand in a "good" portfolio.

Review these articles to further investigate the managerial role of online discussions:

- Assessment Rubrics: As mentioned above, assessment is an element that spans the managerial and pedagogical role. Rubrics are the manifestation of pedagogical planning, but in practice they help clearly communicate expectations to students and allow the instructor to assess in a consistent way and direct feedback to learners. Take a look at these examples:
  - Discussion Rubric Sample 1
  - Discussion Rubric Sample 2
  - More examples from UCF
- Modeling expectations – This page provides a useful example of how one professor thoroughly models posting expectations.

Technical Role – Make students comfortable with the learning management system, tools, and software

Key considerations:

- Review key features of UW supported online discussion tools, including the Learning Management System [LMS].
- Consider various options for student training and support, like campus-supported student training sessions, Lynda.com, or other distributed training resources.
- Equip students with a detailed guide of how to access the online discussion tool and a backup plan for what to do in case of an outage.
- Briefly explain the function and purpose of the online discussion space/tool and its role in the course (either in person in your first class or on the syllabus) so that you get buy-in from the students.

The technological role can be especially tricky both because we often assume (wrongly!) that this generation of students is well informed and equipped enough to work with any online learning tool, and because it is impossible to plan for every possible technical glitch that might pop up. In order to help navigate this role, we offer as much support in advance of the first post/discussion as we can. Provide instructions online or as a handout that explain how to access the course discussion site. Keep these instructions simple, and to the extent possible, link all navigation through one main course site to streamline any navigation for your students; if you use multiple learning management tools or systems in your course (for the discussions or for the course as a whole), funnel these links and access points through one main course portal.

Walk through the process of how to access the online discussions and post to them during class, on your own with your student or with the help of STT (Student Technology Training) or another UW campus resource. Lastly, create a training resource page on the course site that lists ways for students to find support and referrals to on-campus support services.

How-to Videos:

Supplementary Readings and Resources

- [Continuing the Classroom Community](#)
- [Critical Thought in Online Discussions](#)
- [Designing and Orchestrating Online Discussions](#)
- [Development, implementation, and Evaluation of a Grading Rubric](#)
- [Guidelines for Effective Online Discussions](#)
- [Interpersonal and Affective Communication in Synchronous Online Discourse](#)
- [Learning Curriculum and Technology's Role](#)
- [Online Discussion Tips for Instructors](#)
- [Student Attitudes Toward Information Literacy](#)
- [Social Conversation and Effective Discussion in Online Learning](#)

Connect & Share

Word Association Activity

What comes to mind when you think of online discussions? Our past experiences and ideas will no doubt inform the a variety of feelings and opinions (good or bad) we hold on the topic. To help capture our collective thoughts, let's play word association!

The following link will take you to our WikiSpaces site. Take just a few moments to type the words that you associate with online discussions (remember, good and bad). The process will be cathartic and help us key in on important dynamics as we move through this topic. Go to the Wiki!

Media Attributions

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3. A Conversation about Online Discussions

Observe and Consider

Now that we've all had an opportunity to consider some of the fundamentals of quality online discussions, we want to share with you one experienced UW-Madison faculty member's take on online discussions.

We spoke with Professor Julie Allen from the UW-Madison Department of Scandinavian Studies about her experiences using online discussions in her courses. Listen as Julie highlights her goals, strategies, challenges, and instructional approach to using online discussions in her undergraduate and graduate Scandinavian literature courses. While you're listening, consider what your instructional approach is (or might be) to online discussions and how it is different or similar to Julie's.

Your browser does not support HTML5 audio. If you'd like to listen to the file, use the download link below.

Download the .mp3 (right-click and 'save link as')

Observe & Consider

Julie shared many pertinent elements that are involved in creating and managing a good online discussion for a course, as well as some challenges that she faced and strategies for how she modified her approach in light of these challenges. Jonathan, David, Theresa, and Chad share their reactions to the discussion with Julie and their related thoughts on online discussions:

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Download the .mp3 (right-click and 'save link as')

Now share any ideas, experiences, revelations, or resources that come to mind after listening to Julie's interview and the post-interview podcast. Choose one or both of the activities below to begin processing and reflecting on your own experiences and resources for online discussions.

Connect and Share

Activity 1: Resource sharing

Share an article, link, video, or other online resource that speaks to a pedagogical issue relevant to online discussions in your context. Explain this resource's relevance to your approach to online discussions (or inversely, how it differs from your approach). When finished we'll have an archive of resources that is customized for us!
Activity 1 (on WikiSpaces)

Activity 2: Write down your online discussion experiences

Record an experience you've had with online discussions in which you participated as a student or facilitated as an instructor. How did it support your pedagogy or directly support the learning goals for your class? If you haven't participated in an online discussion, list a few pedagogical challenges of your own that could be addressed with an online discussion. Finally, if you listened to the podcast with Julie Allen, write down your reactions, comments or thoughts as they relate to your own teaching.

Media Attributions

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- 3-modesC

4. Online Discussions Activities

Observe & Consider

UW-Madison provides awesome support and consultations for learning technologies. Units like [L&S LSS](#), [DoIT Academic Technology](#), [MERIT (School of Ed)](#), [Wendt Commons (Engineering)](#), and more combine to help meet many of the learning technology needs across campus. While UW-Madison supports a number of technology tools for teaching and learning, it is also helpful to be aware of the changing technology landscape as tools evolve and new features become available.

The two activities below are designed to help us investigate technology tools that could be used to facilitate an online discussion!

Connect & Share

Activity 1: Discussion Tool Wiki

Let's create a list of technology tools that enable online discussion. Our emphasis for this exercise: Quantity!

- Do a web search
- Draw on your past experience at other institutions
- Survey UW-Madison supported technology tools, or
- Talk to friends and colleagues

When you find a your tool, visit [the wikispace page](#) and write the name of the tool and provide a link (if available).

Activity 2: Discussion Tool Insights

Now that we have a list of discussion tools in our wikispace, choose a technology tool from the wikispaces list (one you found, one that looks interesting, or one you've used before). After performing some light research and initial testing, briefly describe the tool and note a useful feature or two along with some pedagogical applications you see for the tool.

Media Attributions

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5. Real World Applications

Throughout this section, we've talked a lot about the four roles of the online instructor and have heard about common instructional challenges with online discussions. As we have seen, there is quite a bit of overlap with certain components of the four roles when facilitating an actual online discussion in a course. Likewise, not all of the four roles address all of the potential instructional challenges with online discussions; some respond better to certain challenges than others. Let's put all of these elements together and brainstorm some real-world solutions for how to manage and apply them in a course.

    We've built these activities to get you started on working online discussions into your own course plan and to reimagine syllabi for future semesters that might now incorporate online discussions.

Practice & Apply

Option 1: Less time investment

We've listed four different general instructional scenarios below. Based on the scenarios listed and the two instructional challenges (primary and secondary) indicated for each, decide how each of the four roles can help you meet those challenges and how you might implement elements of these four roles in order to resolve or address these challenges. This can mean brainstorming activities, tech solutions, communications, or pedagogical approaches that fall under those roles and help to meet those challenges.

Scenarios:

1. A course in which the students are not engaging with the lecture or the course materials. Mid-sized lecture (60 students), meets 2x/week, entirely face-to-face course.
   Challenges: Community Building (primary) and Critical Thinking (secondary)
2. A small language or other intensive course (upper-level seminar?) where students are immersed in and/or very familiar with course material. 20 students, meets 4x/week, entirely face-t0-face with hybrid elements (online homework, online office hours, etc.).
   Challenges: Critical Thinking (primary) and Discourse (secondary)
3. An 8-week-long distance education course with synchronous pacing but asynchronous discussion activities. Approx. 30 students of varying levels, regular instructor online check-ins with students (weekly?), entirely online.
   Challenges: Participation (primary) and Community Building (secondary)
4. A college/department prereq course that repeats each semester and that you teach often. Large lecture (100+ students), meets 1x/week, lecture + weekly discussion format, face-to-face with hybrid elements (online office hours, flipped lectures, student project creation in a LMS, etc.).

Challenges: Discourse (primary) and Participation (secondary)

Challenges:

1. **Participation:** Generating enough participation
2. **Discourse:** Too informal (or too formal) level of discourse
3. **Critical Thinking:** Encouraging critical thinking: synthesizing information and creating connections to other students' comments
4. **Community Building:** Building community and an online "comfort" level

Option 2: More time investment

- Take one of the 4 instructional scenarios listed above and imagine what a typical class discussion might entail. How might you integrate online discussions into a course like this? Use your chosen instructional scenario as a template, and redesign one class period in order to accommodate an online discussion component.
- Create a lesson plan of your own for your specific course that integrates online discussions. This can be a lesson plan for one day, for one week, or (if you have time and a vision for how this might work) for an entire online discussion semester-long component.

MEDIA ARTS PRODUCTION

mediaarts-bookcover-BLACKlg

6. Overview of Media Arts Production

Thank you for reading the second section of the Teaching with Technology eText. If you're not exactly sure what to expect from an online production course–or moreover, you're not sure about the term *media arts*–then you're in exactly the right place at precisely the right time.

Why Media Arts?

Media Arts is a broad & integrated creative discipline under which there are many modes of expression, all unified by the digital revolution. In some ways, *computer arts* provides a description which feels more concrete, one which my mother-in-law would find more helpful. I imagine she'd ultimately refine it to "*something to do with the computer.*"

In higher education, *multimedia* or *digital media* are fairly common terms but are oddly disconnected from human mediated processes, as if to suggest that they are products that are born inside the computer without any intervention from human hands. At the end of the day, I think it's fair to say that these terms are evolving with the technology. And even though *media arts production* still feels a little vague, I rather prefer it to *multimedia production*. However, you'll see and hear both terms used interchangeably. Other terms that we'll use to describe the end product will include *designed video* and *multimedia asset*.

Another way to put it:

Section Goals

One of the goals of this section of the text is to elevate media arts production in the practice and discourse of instruction. After all, the world of instruction as it is now (and as it will be) is inextricably fused with multimedia. At the same time, I get the impression that instructors perceive instructional multimedia as either outdated, embodied by memories of instructional films playing in dark classrooms, or on the other end of the spectrum as relevant, but not part of the real content. Both of these viewpoints are out of touch with reality. Gone are the days when a team of assistants allowed faculty to focus exclusively on research and teaching. And gone are the days when the only avenue to create or to distribute content was in the hands of producers, directors, and broadcasters. Like it or not, all of those roles are now "you."

Course Design

Where to begin? Certainly we expect that there should be an inherent realism, simplicity, and directness to learning about media arts production. After all, despite the impression that we can do it all, it's ridiculous to believe that we can master every new fancy technology. Sometimes, however, it's enough to know how to talk shop with a musician, illustrator, photographer, animator, 3D designer, printmaker, videographer, director, sound engineer, etc., etc. The best way to feel the discipline is to work within it. We've designed tutorials and projects that touch upon fundamentals, are inherently useful, and hopefully add an enjoyable pursuit to your semester.

Overview of Projects

This section presents two larger projects as well as several hands-on tutorials. You may choose to do any or all of the projects. You should feel free to begin any or all of the projects and complete as much or as little as you have time for. While you will see the greatest benefit from completing all of the work, there's certainly a benefit from observing the process as it unfolds.

The first is a photography assignment. The second project, called "the short mundane presentation," covers the workflow needed to record and edit a traditional PowerPoint Presentation. The tutorials provide enough depth for you to modify as you see fit.

The tutorials are termed *design guides* that walk through fundamental concepts in use, and cover the workflow with given sets of software. The second and final project has exercise files that can be downloaded so that you can work through a tutorial within a specific set of software. For the most part the tutorials use Apple hardware and software on both the desktop and mobile platforms.

Materials

Nearly all of the multimedia materials used in the workshop series were created specifically for the workshop. We approached production so that resources we used exemplify what's available in and around campus. In this way of working, each *thing* is a discussion about the process of making instructional multimedia. At several places in this section we've included production notes about the design and creation workflow.

Tips

One challenge of any creative endeavor is persevering through the difficulties long enough to realize a breakthrough. Sometimes using technology can help us get to where we want to go, but at other times it can be an obstacle. The tutorials and projects in this module are designed for beginners, but they do require general proficiency using a computer, including the ability to navigate the web, and locate files within the folders of your individual machine. More than anything, when working with technology, it's helpful to adopt a flexible and resourceful mindset and then jump right in! So let's go!!

7. The Nature of Multimedia

Designing Multimedia for Instruction

The following diagram by Daniel L. Schwartz & Kevin Hartman at Stanford's School of Education maps learning outcomes to the most effective designed video genres. By working in this way you can see that the use of video in instruction can be targeted and quite specific.

Take a moment to map one of your own teaching needs to this model. Does this reframe how you have been using designed video? Does it simply reflect what you are already doing?

Figure 1. **A space of learning for the use of designed video**. The circular design of the figure pays homage to the instructional technologist, A. J. Romiszowski (1981).

Key
1. Classes of outcomes
2. Learning target
3. Assessments
4. Genres
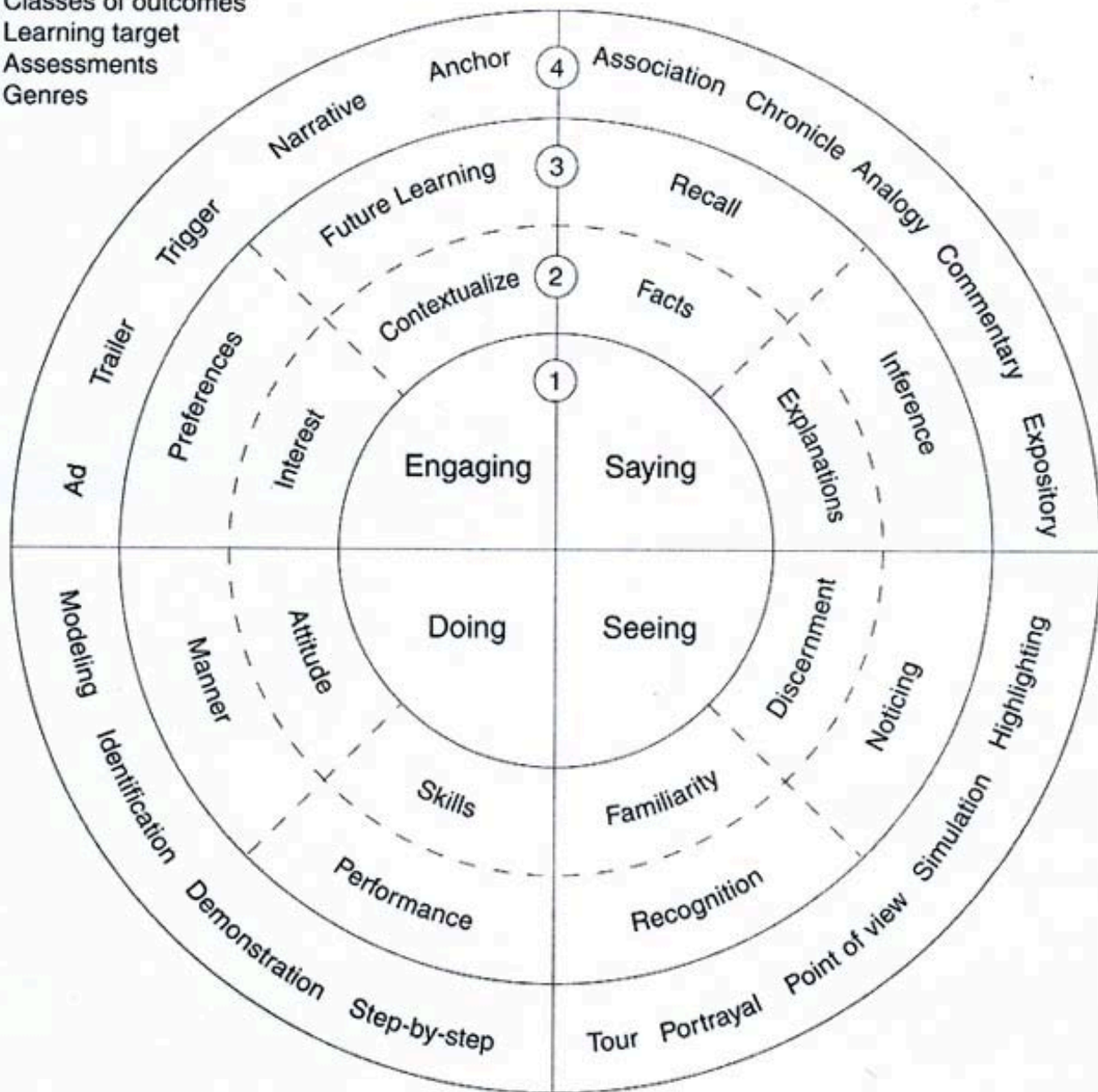
Schwartz, D. L., & Hartman, K. (2007). It is not television anymore: Designing digital video for learning and assessment. VIDEO RESEARCH IN THE LEARNING SCIENCES, 335–348.

Week 1 Activities

Observe & Consider

Observe and consider the following short video. Think about how the video relates to the *designed video diagram* above.

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=39

Production Notes from David

Media *arts is like...* had a non-traditional workflow. I had the idea churning around for awhile, then took advantage of being at Barnes and Noble to take 3-4 minutes of video using the video camera on my iPhone 4. I edited the video down, eliminating the video that was shaky or that had magazine titles that didn't fit into the overall idea. To get the video off of my phone I sent it first to my camera roll and then uploaded it to my Dropbox.com account. From my laptop I imported the footage into iMovie 09. I recorded the audio using an H2 Handy Recorder and edited the audio in Soundtrack Pro. I created a new multitrack project in Soundtrack and used the built in audio loops to design the soundtrack. I did two

supplemental recordings to build out the sections of audio that used the walkie talkie effect, needing to do two separate imports from the H2 Recorder. I exported the audio from Soundtrack and imported the audio into iMovie. I started bringing clips into iMovie only to find out that the duration of the clips was not going to fill out the video, so I culled still images from the source video (from within iMovie) and layed down a sequence of images, adjusting the duration of the images so that they cut in a logical relationship to the audio. All audio from any of the barnes and noble or driving footage was muted. I exported the video in medium resolution. The film filter is "1960s" in the iOS app "16mm". Rather than import the video back onto my phone, I played the footage on my laptop at the brightest settings and all other lights in the room off and recorded using the "16mm" app. The happy side effect is that it allowed me to do small pans and "pushes" on the video.

The video at the top of the page was self-recorded in the video recording studio in 368 Van Hise Hall. Total time from recording until the video was embedded in the course estimated at approximately 2.5 hours. The initial recording was about 20 minutes and included about a dozen incomprehensible statements, which I attribute mostly to the odd dynamic of speaking to a lens, but also because I wanted to speak somewhat off the cuff. While there are many avenues for self-recording using a laptop, the combination of a private room, help with setup and teardown, and high quality cameras and mics, may be something that you'd like to try.

Media Attributions

- 3-modesB

8. Design Guide

Introduction

In their essay ["It is not television anymore: Designing digital video for learning and assessment,"](#) Daniel Schwartz & Kevin Hartman provide a way to map learning outcomes directly to distinct video genres. The following design guide serves as a way to continue to the next steps of creating a designed multimedia object. We begin by taking pictures. Why pictures? The fundamentals of photography are the fundamentals of video. A single picture allows us to slow down the stream of many pictures per second that occurs in video and slow it down to its essence-a single image.

Process

The design-development process usually begins with a set of requirements. As preparation for watching the tutorial, assume that the learning outcome and multimedia genre have been selected. The artifact being photographed needs to be seen well enough to perform a live annotation of it's text and design during a front of the class presentation.

Review

Take note that the video moves through a sequence of actions that are informed by techniques, design principles and one law of the physical universe. Consider that the steps could be seen as purely technical. Then again, consider whether or not the starting design requirement, that of a clearly rendered image suitable for presentation, could be reached as well without the application of theories inherent within the media arts discipline.

Recall the sequence of tips:

1. Assess the quantity of light
2. Isolate or contextualize the image
3. Use available resources (i.e. make use of what you have as opposed to wishing for what you don't have)
4. Optimize exposure with AE lock if needed
5. Don't rely on exclusively the first shot composition
6. Understand light, intensity, and distance vis a vis the inverse square law
7. Shape and modify light to refine image

Camera Notes

Chances are you'll be using a point-and-shoot camera or the camera on your phone to complete the following project. Naturally, it's impossible to account for every type of camera, but the techniques covered here will apply to almost all situations with a few slight variations.

Canon cameras use a *function* button along with the shutter. For example, Canon cameras found on campus all share the same procedures, but have slightly different function buttons. The best advice is to check the manual before starting the assignment.

Canon G11

Shooting with the AE Lock

When you wish to take several shots with the same exposure, you can set the exposure and focus separately using the AE lock. AE stands for "Auto Exposure".

1 Lock the exposure.
- Point the camera toward the subject and press the ✳ button while pressing the shutter button halfway.
- ▶ When ✳ appears, the exposure will be set.
- If you release your finger from the shutter button and press another button, ✳ will disappear and the AE will unlock.

2 Compose the scene and shoot.

Canon SD1000

UW-Madison Location: College Library

Locking the Exposure Setting (AE Lock) 📷

You can set the exposure and focus separately. This is effective when the contrast is too strong between the subject and background or when a subject is backlit.

⚠ You must set the flash to 🚫.
The AE lock cannot be used when the flash is set to fire.

1 Turn on the LCD monitor.

2 Focus on the part of the subject on which you wish to lock the exposure setting.

3 Press the shutter button halfway and press the ISO button.
- The icon will display.

4 Re-aim the camera to compose the shot as desired and press the shutter button fully.

To Release the AE Lock
Press the ISO button.

9. Project #1: A Single Image

Practice and Apply

Introduction

Your first project will be a photography assignment. You must identify a relevant person, place, or thing and then photograph it. You should have an idea of how you can integrate the final picture into your work. You should strive to create an effective instructional object AND to elevate your creative skill.

Use the the production guide included in this module as a starting point. You should feel free to use outside resources as much or a little as you desire.

The final product will be an image. It may be any subject or style, but it should be a new image. You may, however, take a picture of a picture, in the context of photographing archival material or artwork. If you desire you may produce a connected group of pictures to show how your shots changed over time, but for the purposes of this exercise, we recommend limiting the number of images to no more than five.

If you can't think of something and want more guidance, here are a few ideas sorted by discipline:

Language

Photograph target language currency as the first in a set for use in a language lesson about money. Accompany the photo with text that conveys cultural or historical relevance. It's also an opportunity to include personal narrative. For example, "I found this coin on a dusty road on the way to…"

Legal Studies

Photograph a symbol for a book chapter or PowerPoint presentation. Architecture and architectural motifs contain signs and symbols that can be helpful when trying to communicate abstract concepts, like justice. A trip to the capitol square (for those of you in Madison) may yield several interesting pictures.

Cross-discipline/Professional

Use this project as a way to develop a bio-pic/profile picture to use for conference proposals, course page profiles, or social networking sites like LinkedIn, Google+, etc. Work in a self-portrait context or work with a partner in a traditional portraiture context.

Project 1 Shot Progression

Step 1: Select

Select a work of art, artifact, or object, person, place, or thing that you want to photograph. Choose something that supports your work in a real way. Challenge yourself to improve, wherever your starting point happens to be.

Step 1.1: Commit

Levels of participation

- Low time-commitment: Watch the video and participate in discussion
- Medium time-commitment: Follow the production guide point-for-point

- High time-commitment: Go rogue

Tip: Most photo assignments present hidden requirements and potential pitfalls depending on a combination of industry conventions, technical requirements and delivery platform. The most flexible way to navigate the maze is to simply acquire the best quality image you can manage from the very start. The most direct approach is to find out the specifications for final dimensions, the delivery platform (web, print, video), and required file type.

   Hence: be prepared to produce a final image as a .jpg with a maximum width of 500 pixels in sRGB color at maximum quality (If you are not familiar with this terminology, ignore it for now).

Step 2: Watch

Watch the Design Guide Video and consider the object you have in mind for your assignment. Think about how it is similar to or different than the small container used in the video. If it's dramatically different (like in size for instance) you'll need to pick and choose the tips that make the most sense to try out.

Step 2.1: Review the Tips

- Assess quantity of light
- Assess available materials
- Isolate or contextualize
- Alter from first perspective
- Use exposure lock if needed
- Use inverse square law to hone light

Step 3: Checklist

Complete a written or mental checklist of essential pre-production concerns.

- Identify camera. Reserve beforehand if needed
- Check batteries.
- Check camera storage (e.g. SD card)
- Review the basic camera functions
- Consider date, time, and place logistics
- ID additional equipment like lights, background, light modifiers
- Note if any special permissions are needed

Step 4: Take Pictures

Take some pictures! Try some of the techniques outlined in Movie 1.1 plus any and all other ideas to capture an image

that you would use professionally. Keep a log of the techniques you used to capture each image. Use simple language to describe the process and the result of each image.

    Tip: Prepare for the unexpected. Notice opportunities that occur in the every day that can often exceed the potential of what you have pre-planned.

    Tip: Prepare a mobile photography kit.

    Tip: Put yourself in the shoes of your students. Walk through a photo assignment for the purpose of uncovering elements that need further explanation.

Step 5: Narrow

Narrow your photographs to a single image. You may simply select by reviewing 'in camera' or you may want to import your pictures into a computer for review and editing. If you desire you may produce a 'diptic' or a group of pictures contained within a single frame, but try to reduce your work to a single image.

Step 5.1: Edit

There are several photo editing options widely available that are either bundled with your computer (like iPhoto), or available for free download (like Google's Picasa). If you've never worked with photo editing, the bigger challenge is choosing the right tool for your own tastes and sensibilities. There are also excellent basic editing functions included in most new smart phones, so follow the path of least resistance if you plan on using your phone as your camera and use the included editing functions. Lynda.com is a comprehensive online training library that's supported at no cost to UW-Madison faculty, staff, and students. If you need software training in order to edit your image, take advantage of Lynda.com.

Free/bundled software

- Mac–iPhoto
- iOS–Photo
- Windows 7–Photo Editor
- Android–Gallery app
- Mac/Windows–Picasa

Paid software

- Mac/Windows – Photoshop [thanks to a site-license agreement with Adobe, UW affiliates can download Adobe Creative Cloud for free on UW-owned computers, or purchase it for home use for just $19.99]
- iOS – Snapseed
- Android – Photoshop Touch

Media Attributions

- Alexander_Astin

10. Media Arts and the University Lecture

![Observe & Consider icon]**Observe & Consider**

Introduction

It seems paradoxical that the idea of the lecture is 1) still central to teaching and 2) a topic of interest in a session about Media Arts Production, but it's not, especially if we think differently about what a lecture is and focus on what the possibilities are with a lecture, as David previously mentioned. Even with all of the teaching innovations and move toward student-centered and engaged learning environments, many students still want (and express the need for) a lecture. The lecture is an opportunity for the instructor to set the tone for the course and the classroom community. It makes the students feel comfortable, guided, like there is an "expert" helping them with their learning. It is a point of connection between the instructor and the students. It helps to structure the class for the instructor, too, and is conduit for the instructor to develop her own teaching style and approach. The effective lecture is a medium of communication that can better help to impart key details, concepts, content to the students. The good lecture often defines–and shapes–what is a good teacher and a good teaching practice.

Dr. John Francis is a UW-Madison alumnus and visiting associate professor of environmental studies at the UW-Madison Nelson Institute. His [TED Talk](#) tells a fascinating story about teaching and learning, and sets a high water mark for compelling media arts production.

Now, this isn't necessarily the traditional lecture, and we should move outside of thinking of the lecture in only a very traditional, 50+ minute-long, instructor-centered format. In fact, unless you want to put your students to sleep, the Media Arts version of a lecture shouldn't seek to approximate or reproduce the traditional in-class lecture at all. In class, the concept is the same–students won't learn as well if you don't engage them with the material and make them active participants in their own learning. The exceptional lecture–and the exceptional lecturer–constantly reflects on, retools, and then reformats the lecture and his concept of it. He recognizes it to be ever changing and ever evolving with the needs of the students, like blended and online classroom environments are now asking of us. The Media Arts version of a lecture gets at the possibilities of the blended and/or flipped lecture and its place in a more active classroom environment or online learning space. Because it is a creative venue, it offers a space to engage the students with the content material in an interesting, refined, and targeted way. Because it needs to be deployed in a concise and pre-planned format, it requires the instructor to attend to and then precisely implement the most crucial and applicable concepts for the course. Because it requires a certain amount of production input, it asks the instructor to consider the audience, to construct a narrative, and to deploy a finished "product."

Students would remember parts of my lessons that weren't particularly memorable to me or essential to the topic at hand. Sometimes, these were the parts that I liked least about that day in class. What they responded to, I think, much more than the content, was a meaningful connection with the material that my lesson somehow managed to create for them. Like in other areas of media consumption, we are critical consumers who have time-deficient days; we want a good story and will respond to these points of connection. The Media Arts lecture offers us a way to tell a really good story.

Two Short Talks

Observe & Consider

Consider the distinct ways that we consume content online. We have endless choices and constant distractions. No matter how we characterize the attention span of our audience, it's wise to carefully consider the duration of designed video. In addition, the following two topics should be noted carefully.

Crowd-sourcing

Professor Phil Kim from the Wisconsin School of Business first introduced me to the notion of crowdsourcing as it applies to multimedia assignments. While I doubt we'll see a surge of lectures delivered from the driver's seat, I wonder whether or not crowdsourcing can play a role in the creation of designed video for instruction. What do you think?

Quality vs Immediacy

Consider all of the short videos delivered in this module as a demonstration project about the question of immediacy vs quality. Can you determine if there are quality standards employed on a consistent basis? Does the visual clarity change how you perceive the content? Is audio or video more important to your learning experience? Try toggling the quality setting in YouTube between 720p and 360p. Which do you prefer

  https://www.youtube.com/watch?v=RowAi4MY528

Media Attributions

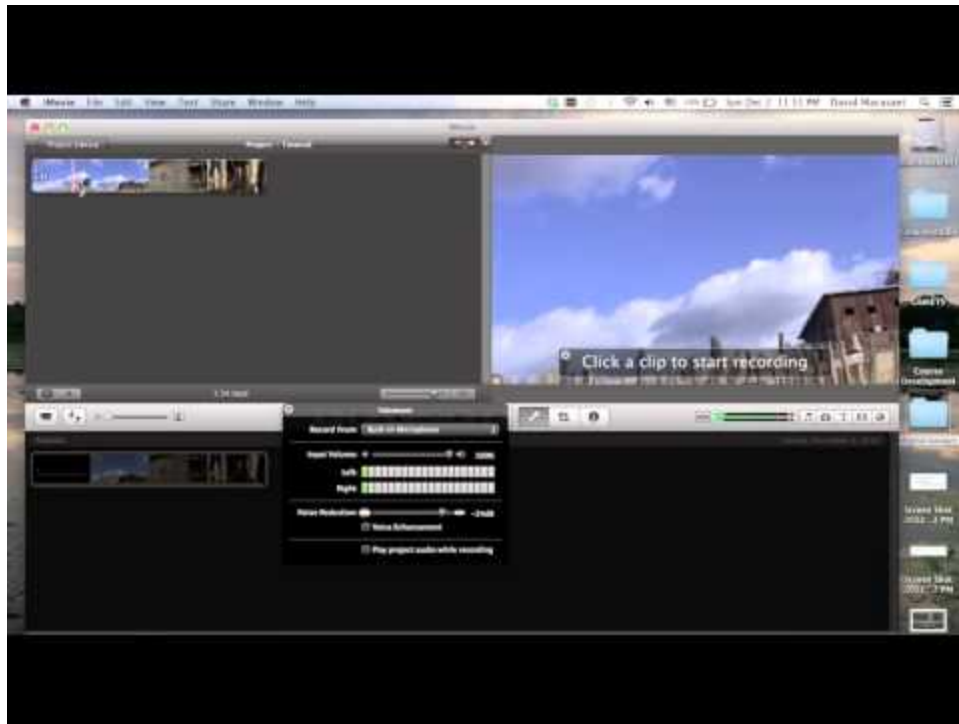- 3-modesB

11. Video Editing Activities

Observe & Consider

Introduction to Video Editing

The medium of film and video is fundamentally *linear*. Certainly there are stories that are told in non-linear ways, but every video starts at a point in time and moves forward, very much like a train heading toward it's destination. It's no wonder that the term "tracks" describes the metaphorical space within which video and audio are arranged in a video editing program.

In order to fully understand video editing, the idea of *choosing distinct points in time* is extremely important. You may have heard of *three-point editing*, which is a technique of editing, but also reflects *how video editing works*. Put another way, the process of video editing is essentially *taking something long and making it shorter*. But In order to make that happen, the editor must identify the point in time to start a selection. Let's say it's right at the beginning (POINT 1). The next thing she needs to do is determine the end of the selection, let's say twenty minutes later (POINT 2). Where's the third point? Recall the train track. Right now that track is empty and is waiting to be loaded with cargo. The point at which you place your selection (your cargo) is the third point in three-point editing.

The following activity serves as a way to apply editing functions to a bridge between introductory training provided by STT and full courses at Lynda.com. The objective of the tutorial is focused on basic technique in an applied context. If you can do this tutorial, the requirements of the upcoming projects will be a natural progression. If you find that you are running into multiple obstacles, you should take advantage of the Lynda.com iMovie '09 introduction course.

Practice & Apply

Record a voice-over narration

Scenario: You've been asked to contribute to an academic journal as part of a conference. The conference committee has asked for short digital media submissions and you have been selected to record the voice-over. Use iMovie to open a new project, import the video file, and then use the voiceover tool to record the text (provided below).

   Objective: Position the audio recording so that it compliments the existing audio and video.

Instructions:

1. [Download the exercise video](#)

   - When you click on the link, a new window will appear. Press the "Download" button at the top right of your browser.
   - Print the text snippet below (or just jot it down).

2. Record the following voiceover text:

   > The day turns bright and brisk in a Montana gulch, just at the boundary of urban and wilderness. In this Digital Media Assignment, Caitlin DeSilvey, Senior Lecturer in Cultural Geography at the University of Exeter, relays her early interest in old decaying places, which very much describes the subject of her research–a 100-year-old homestead in Missoula's north hills.

3. Reflect on the following questions:

   - What issues arose in terms of rhythm and pace, volume, and tone?
   - What was the biggest technical issue?
   - How long did it take you to complete the tutorial?

Design Guide Part 2

Observe & Consider

Overview of the Final Project

The two videos that follow will overview the process of adapting a slide presentation to an online video presentation. The length of both videos is on the longer side at ~20 minutes. The topic is actually very much relevant to the workshop series, but also emulates a highly likely scenario–that of translating an existing presentation for online delivery.

Example of the finished video: *Understanding Digital Essays*

- **Original format and duration:** Face-to-face conference presentation to a group of about forty people. 75 minutes.
- **Translated format**: YouTube Video with voiceover. 20 minutes.

Watch the making of *Understanding Digital Essays*:

Practice & Apply

Activity: Practice capturing your screen with Quicktime

1. Open Quicktime Player.
2. Start a new screen recording from the *File* menu then *New Screen Recording.*
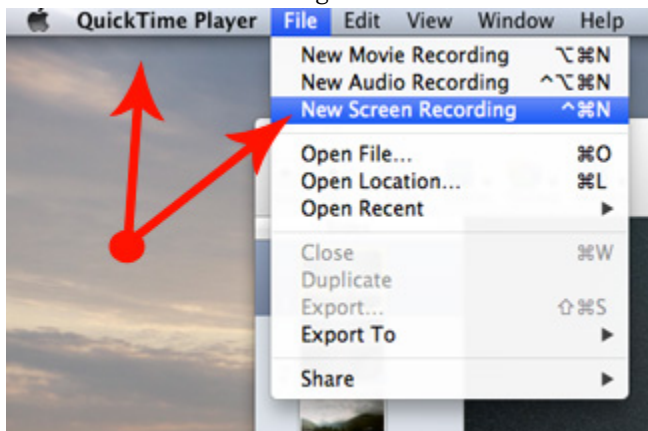
3. Check audio recording input settings and quality settings before continuing. Click the arrow to reveal the dropdown
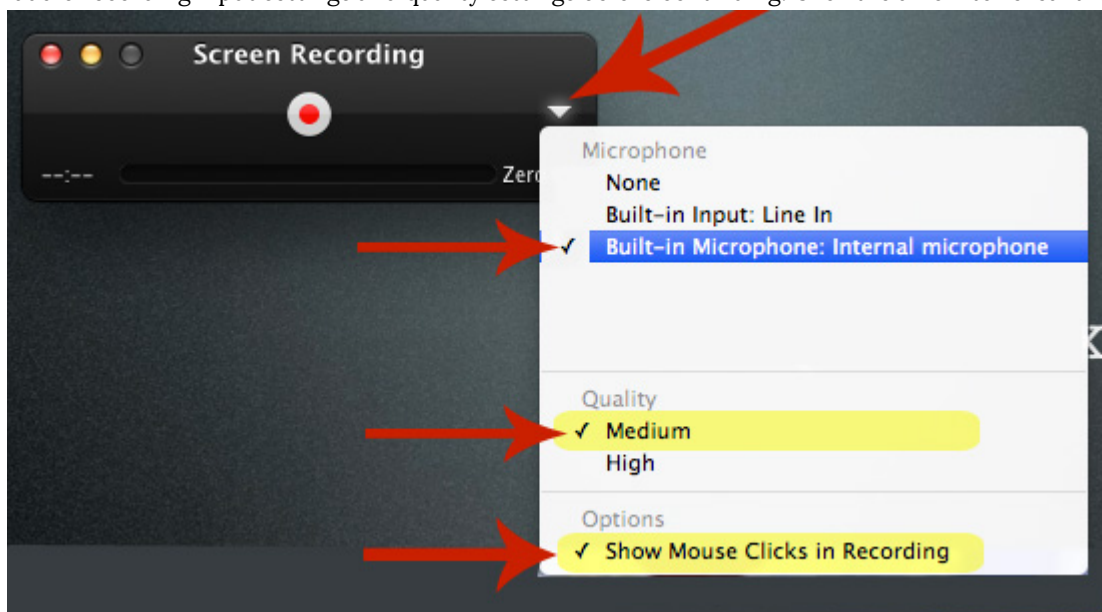
   menu.
4. Click the red button to begin. Quicktime will prompt to drag an area of the screen or click the red button again to record the whole screen.

5. Click the stop recording button or use the key combination command + control + escape to end the screen capture.
6. Save and close your recording. If prompted to save a format, 720p is a good middle path.

Media Attributions

- 3-modesB
- MSA_1
- SoN-photo-copy

12. Mobile Media Production

![Observe & Consider icon] **Observe & Consider**

Introduction

The heart of any media arts production is the collection of materials that are designed around a central idea. Materials might include audio, video, graphics, animation, photography–virtually anything that can been seen or heard. Yet before any materials can be edited they have to be created, often in the real world. Production can be both messy and a lot of hard work, but also exihilarating.

   An area that's developing quickly is that of mobile multimedia production. Mobile hardware and software are coming together such that production and post-production can happen on the same device, like the iPad. The following short videos guide you through an example workflow.

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=49

Example 1: Language Production Activity

Consider the following use of mobile media production. The production is fairly traditional (video shots, voiceover audio) but the total production time was about two hours. The activity emulates a traditional in-class language performance (skit), where the spoken production of language within a cultural framework is the goal.

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=49

Workflow using iMovie for iOS

Editing can happen on-the-spot and influences the creative process. The following how-to guide describes the use of iMovie for iOS.

Apps in Use:

- iMovie for iOS
- Luma with iPad camera/videocamera

Media Attributions

- 3-modesB

13. Mobile Production and the Step-by-Step Video

Recall the article from the first chapter of this section about designing video for instruction. That article illustrates how to match a desired outcome to a video genre. For example, instructors wanting students to perform a specific set of tasks can use a *step-by-step* video.

Considering the article, I used the following video called ALONE IN THE WILDERNESS as an example of a step-by-step video. While it didn't give every step and I had to consult a number of other sources, it did get me started. I used an iPad to document the process. There are many lessons I took away from the experience, including the realization that accompanying the video with a voice-over would improve the video's effectiveness as a teaching tool.

 Observe & Consider

Alone in the Wilderness

Watch until 2:44 (the end of the spoon segment).

Adaptation: Making a Redwood Spoon

Apps in use:

- iPad2 Camera/Videocamera
- Stopmotion App
- iMovie for iOS

Media Attributions

- 3-modesB

14. Intermediate Editing

![Observe & Consider icon] **Observe & Consider**

Introduction

Editing is often described as an *invisible art* because when well done, the craft is not seen by the viewer. And while there is no single recipe for achieving seamlessness, there are countless techniques that editors draw upon. Yet one roadblock to clearly understanding the choices editors make is being able to see the editing process unfold. The following presentation (8 minutes in length) uses short film excerpts to analyze various kinds of edits, followed by activities that allow you to manipulate raw footage.

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=51

Practice & Apply

Activity 1: Three part motion in iMovie '09

Begin Activity 1 by watching the video tutorial above. Download the picture from the link immediately following the video. By the end of the activity you should be able to create a true Ken Burns-style photo animation. If you are having trouble seeing the screencast in enough detail, click the *watch on youtube* button located at the bottom right of the video player. In addition, if the video is too slow or too fast, try using the variable speed controls located on the video player.

    Download [this image](#) to use in iMovie. When you click on the link, a new window will appear. Click the large "download" button in the top right of your browser to download the file.

Activity 2: Documentary style

Begin by watching the completed video (1 min.). What do you notice if anything about the edits? Remember that the goal is for the edits to disappear. Next, use iMovie to recreate the sequence in the tutorial. There are several different kinds of techniques used in the short video, so focus on one or two that you find most interesting. By the end of the activity you should have a general awareness that various techniques exist to create seamless edits. You should have a general idea of how to recreate the technique with your own material. Watch the completed video below, paying special attention to the edits:.
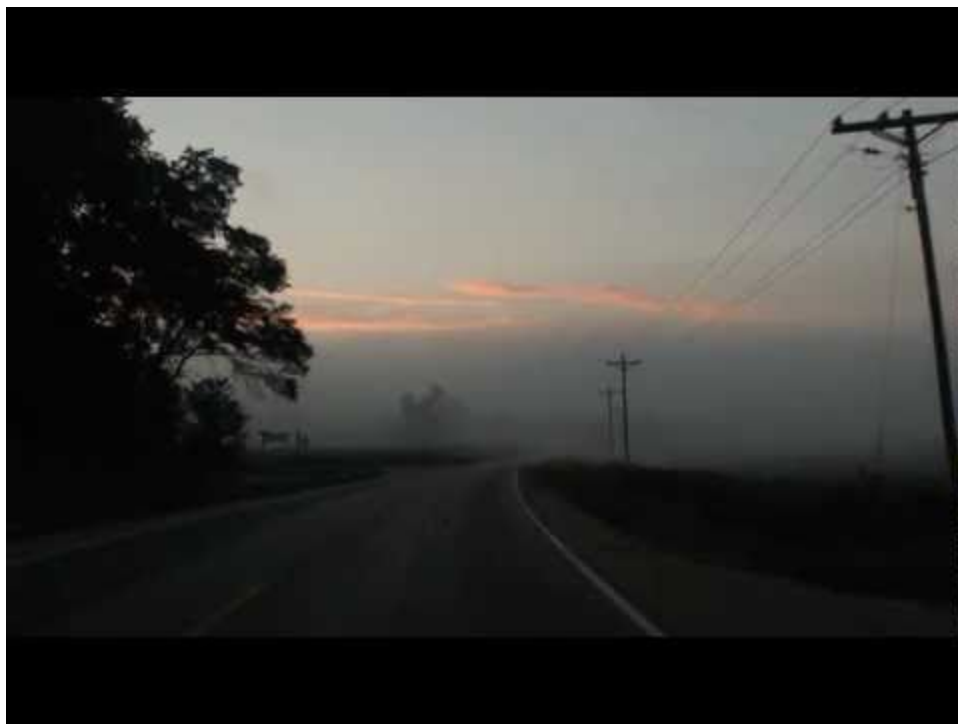
A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=51

Download these exercise files to use in iMovie. When you click on the link, a new window will appear. Select "edit the file" then click "ok". A new window will appear. Click "Save a copy of the file to your computer."

Use the following screencast tutorial to learn about a variety of editing techniques that help create seamless edits:

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=51

Media Attributions

- 3-modesB

15. Final Project: The Small Mundane Presentation

Introduction

Movie-making is often described as a linear process, ending broadly with *post-production*. The reality is much more cyclical, where the results of production are tested in the editing suite and then re-imagined and refigured back on location where once again the results may send the maker back to the beginning. The cyclical revisions seen in digital filmmaking are yet further examples of what happens in drafting, prototyping, modeling, and storyboarding (to name a few). Furthermore, one unique aspect of modern digital filmmaking is that it's now technically possible to experiment while editing. Prior to digital editing the expense and labor of analog editing made the prospect of *playing around* with the raw material quite impossible.

Practice & Apply

Instructions:

The final project: *The Small Mundane Presentation* is designed to be several degrees removed from the subjects you normally teach. You should feel free to experiment and revise as you wish, provided you stay within the constraints of the following instructions:

- Identify a topic that you pretty much know by heart
- Restrict the topic to a mundane subject
- Restrict the final duration to no more than 30 seconds
- If using still images, use no more than 10 distinct images
- Write a script of each of the steps as you'd like them to be heard by your viewer.
- Record narration as needed to produce the clearest description possible.

Share & Connect

- Export/Share the presentation to Youtube

Media Attributions

- 3-modesC

PART III
BLENDED LEARNING

16. Introduction to Blended Learning

Welcome to Blended Learning!

Why Blended Learning?

Because it's the hot topic, right? It's true. There have been many recent conversations in higher education and on our UW-Madison campus about blended learning, and this section of the text dedicated to blended learning is meant to help foster this campus conversation and provide another framework for some pedagogical best practices for blended learning.

While it has recently come to much greater prominence, blended learning itself (or the concept of blended learning) isn't brand new. Blended learning pedagogy and course design borrow keys ideas from good general teaching pedagogy: engage students with the course materials, make good use of the in-class and out-of-class time for both instructors and students, design courses and syllabi based on learning goals and outcomes that you hope the students will achieve, and provide outlets for doing and sharing that help students reach these learning goals. In a face-to-face setting as well as in a blended environment, students won't learn as well if you don't engage them with the material and make them active participants in their own learning.

Blended learning also considers the "geography" of learning (where learning happens) and asks us as instructors to reconsider the traditional instructor-centered classroom. Blended learning initiatives ask us to reflect on, retool, and then reformat our classrooms. Instead of the limited traditional classroom space, the blended learning environment leverages online and out-of-class spaces that respond better to the ever-changing and ever-evolving needs of the students. Blended learning models also help us to move outside of thinking of the lecture in only a very traditional, hour-long lecture format. The possibilities of the blended learning environment point to a more active classroom environment or online learning space that engage the students with the content material in an interesting, refined, and targeted way.

Section Goals

This section of the text is intended to be an entry point for how to become more familiar with blended learning and how to get started with developing blending learning concepts that you can integrate into your own course design. We hope that most the materials here will be useful to instructors of all levels of familiarity with blended learning. You will find fundamental resources and materials (if you are just getting your sea legs with the topic), as well as supplementary and more advanced optional materials if you are looking to enhance your understanding of blended learning.

Our broad goals for this section on blended learning are:

- Identify blended learning definitions that are relevant to the broader campus community
- Consider blended learning models and case studies
- Review common misconceptions about blended learning
- Discuss challenges with blended learning course design and implementation, such as time constraints, cost, etc.

- Survey the campus framework and resources for blended learning support and hear from campus faculty and staff who are involved in blended learning initiatives
- Help you to develop actionable ways to implement in class or activities/modifications for your personal course design

Materials

The readings for this session are ones that we have collected and curated over time, based on our past experiences with blended learning. The podcasts and intro video were developed and produced exclusively for this session by L&S Learning Support Services Media Production. The campus speakers videos were produced by L&S Learning Support Services Media Production in Summer 2012 for the UW-Madison Educational Innovation campus initiative.

Projects & Activities

The activities are designed to gradually help you become more familiar with blended learning concepts and design as the session progresses, moving toward helping you to develop actual course activities and blended learning mini modules that you can implement in your own course in later chapters. As we move through this section, these activities will also become more complex; we will start with some word association and other discussion activities in early chapters and move toward course design and activity creation projects in later chapters. That said, these activities are blueprints and suggestions–you are welcome to do part, most, or all of each activity or to modify as you see fit or helpful to your instructional situation. You are also welcome to develop each activity further than the "assignment" suggests, either for your own personal benefit or to share with others.

17. What is Blended Learning?

Chapter Objectives

- Define blended learning
- Survey various models of blended learning
- Identify opportunities and benefits to a blended learning approach
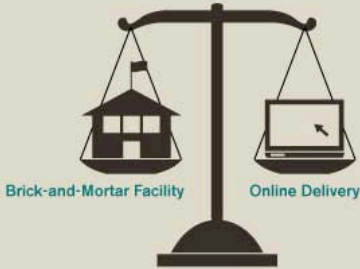- Start to consider feasible pedagogical approaches for blended learning

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Observe & Consider

What is Blended Learning?
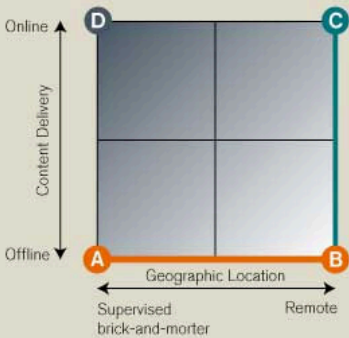

Defining Blended Learning

Blended learning refers to any time a student learns, at least in part, at a brick-and-mortar facility and through online delivery with student control over time, place, path, or pace.

Brick-and-Mortar Facility   Online Delivery

For example, a student experiencing blended learning takes classes in a traditional school building with a designated instructor and also takes some courses online remotely.

The Blended Learning Matrix

A matrix of learning models can help understand what constitutes blended learning and what doesn't.

Point	Blended?	Example of Program
A	No	Traditional brick-and-mortar school
B	No	Home school without online delivery
C	Maybe	Purely virtual school (also called cyber school and e-school). It only figures into blended learning if a student uses it to self-blend with a traditional campus
D	Yes	Theoretical pure-play for blended learning (100% online and 100% supervised brick-and-morter)
	Yes	Student learns through a mix of online/offline and super-vised brick-and-mortar/remote

Rise of the K-12 Blended Learning: Profiles of Emerging Models by Innosight Institute and Charter School Growth Fund

Blended learning is a course design approach that fundamentally restructures class hours and the course environment by integrating face-to-face and online interaction. Blended learning leverages the strengths of online and face-to-face interactions to promote student engagement and help achieve the learning goals of the course. The blended learning course design process focuses on:

- Developing a conscious, pre-planned, and streamlined blended course plan unique for your course
- Questioning what is necessary to do in the classroom and how face-to-face hours are best used

- Thinking outside the box of both the traditional in-class lecture and only online-based learning
- Redesigning based on learning goals and expected student outcomes, rather than content
- Focusing on active student learning and collaboration
- Sustaining an engaged classroom community beyond the confines of a traditional classroom

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Share & Connect

Word Association Activity

What words come to mind when you hear "blended learning"? List any and all below, and we will collect these into a word cloud to show our collective word associations with blended learning!

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18. Blended Learning Definitions

Observe & Consider

Defining Blended Learning

As we've seen in the previous section, blended learning can be defined in many ways. While a precise definition can be helpful, it is also helpful to simply consider the numerous interpretations of what blended learning can be and then work to define it for ourselves with our own context in mind.

Proportion of Content Delivered Online	Type of Course	Typical Description
0%	Traditional	Course where no online technology used — content is delivered in writing or orally.
1 to 29%	Web Facilitated	Course that uses web-based technology to facilitate what is essentially a face-to-face course. May use a course management system (CMS) or web pages to post the syllabus and assignments.
30 to 79%	Blended/Hybrid	Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has a reduced number of face-to-face meetings.
80+%	Online	A course where most or all of the content is delivered online. Typically have no face-to-face meetings.

BLENDING IN: THE EXTENT AND PROMISE OF BLENDED EDUCATION IN THE UNITED STATES, Sloan-C report

Foundations

Erin McCloskey, Director of Curriculum, Distance Education Professional Development at the UW Division of Continuing Studies, describes key concepts and provides fundamental background information regarding distinctions between online and blended learning.

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=58

Readings

Let's take a look at a few readings that help to define further what blending learning is and some key blended learning principles. Many of these readings also touch on strategies, challenges, and instructional design for blended learning, all topics that we will be discussing in the upcoming Weeks 2-4 of this session. (If you can only read one or two of these, we'd suggest the first two; they provide a short but comprehensive overview of blended learning fundamentals.)

- BLENDED LEARNING IN HIGHER EDUCATION – Introduction of book – D. Randy Garrison & Norman D. Vaughn
- Hybrid Classrooms – The Chronicle of Higher Education
- Blended Learning: Uncovering its transformation potential in higher education – D. Randy Garrison & Heather Kannuka
- Blended Learning Systems: Definition, Current Trends, and Future Directions – Charles Graham

Share & Connect

Blended Learning Definitions

As we mentioned in the introduction to blended learning, there are many definitions of blended learning. In this activity we're going to explore variations blended learning by seeking out unique definitions. Here's how we'll do it:

1. Search the web for resources that define or characterize blended learning in whole OR in part.
2. Choose a few definitions or characteristics that resonate with you. Variety is key to the success of this exercise.
3. Post the definition(s) or characteristic(s) to the wiki page here: [Blended Learning Definitions Wiki](#).
4. Read and consider the definitions posted by other participants.

In the following chapter, we'll take this exercise one step further!

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19. Blended Learning Models & Examples

 Observe & Consider

In the following podcast, Ron Cramer from DoIT Academic Technology leads a discussion about blended learning on campus. Listen as Ron talks with Jonathan, Chad, and Theresa about blended learning definitions and models:

Your browser does not support HTML5 audio. If you'd like to listen to the file, use the download link below.

[Download the .mp3](#) (right-click and 'save link as')

 Observe & Consider

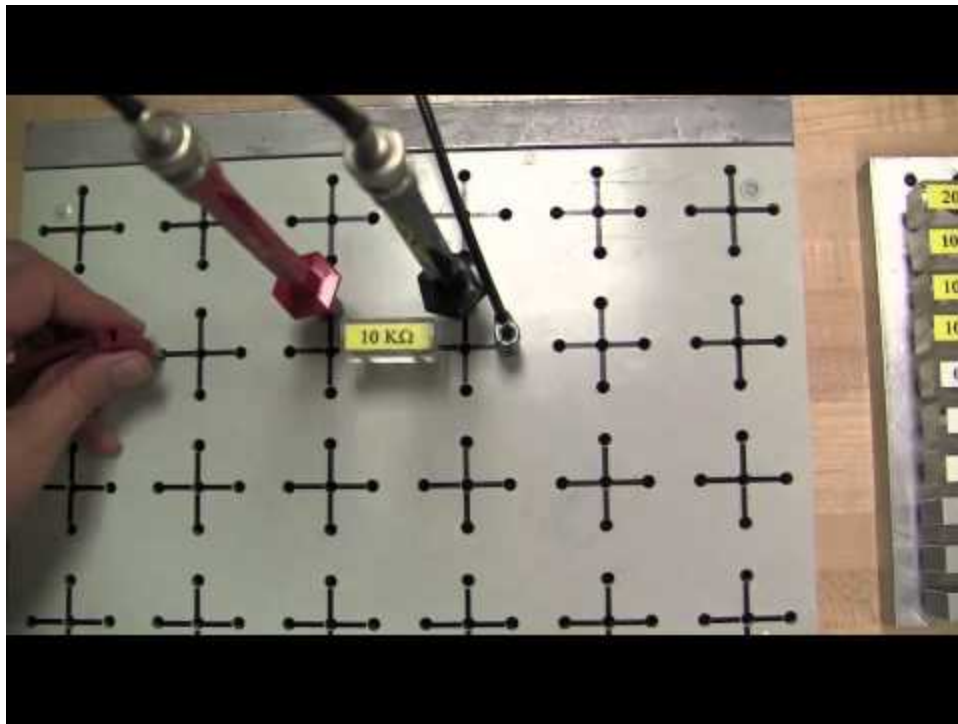## The Three Primary Models of Blended Learning

Supplemental

The supplemental model of blended learning leverages online course components to help enrich the face-to-face classroom. In the supplemental model, there is typically no real reduction in classroom meeting time. However, the online course components are thoughtfully planned to compliment classroom activities and extend learning beyond the classroom. The supplemental approach can take many forms and serve many different instructional goals. Here are just a few:

- Deepen interaction: Enable online collaboration to deepen classroom interactions.
- Increase time efficiency: Demonstrate key concepts or foundational material online to make better use of class time.
- Offer flexibility: On-demand review learning when they enter the classroom.
- Enable review and repetition: Use online modules to cover complex topics for students to access on demand.

One common challenge associated with this model of blended learning is avoiding the "course and a half" dilemma. Because seat time is not reduced and online components are added, the amount of additional material can significantly add to the overall workload for students.

Consider the UW-Madison "Flexible Physics in the Google World" project as an example of a supplemental approach. The project involved developing short and informative videos to help orient students to lab scenarios and more quickly get them started exploring concepts. View the sample video below and find more information at the [flexible physics at UW-Madison website](#).

Emporium

The emporium model of blended learning replaces all or some traditional face-to-face class meetings with collaborative, activity-based work done in a learning resource center or a shared student learning space where students access the online course materials. A space like this typically offers lots of connectivity–computers, wireless connections, easy access to all online course materials, flexible furniture, etc.–and fosters collaborative learning in its space design. In transplanting the class meetings to this type of space, the emporium model's learning goals can include:

- Encouraging independent student work (often with either instructor or other in-person support is available in the emporium learning space)
- Allowing flexibility of class time: The learning process can be more fluid and allow for multiple "classes" to be held at the same time in one space
- Fostering collaboration and activity-based learning amongst students
- Making better use of shared spaces to enhance student learning and to rethink the efficacy of the traditional lecture-style course

WisCEL College Library space

We have many examples of emporium spaces at UW-Madison, such as various active learning classrooms around campus and especially the WisCEL spaces in College Library and Wendt Commons.

Read about some of the details of various UW-Madison emporium-style spaces and the blended learning initiatives that are happening in these spaces:

- From L&S News and Notes: Doing the math: Department uses blended teaching approach
- The Wisconsin Collaboratory for Enhanced Learning (WisCEL)
- Wendt Commons & Engineering: Learning in libraries: New center marries instructional and study space

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Replacement

The replacement model of blended learning substitutes online content and activities for portions of in-class class time and reduce face-to-face class time. The replacement model also changes the way that the face-to-face class time is structured: class time is dedicated more to interactive activities and peer-to-peer or student-to-instructor collaboration that cannot be conducted as easily online. The replacement model of blended learning is perhaps one of the more widely used and promoted models for blended learning course design, partly because it:

- Helps to mediate the "course and a half" syndrome of some of the other models by focusing on the reduction of in-class/seat time
- Often leverages an online micro-lecture style that makes efficient use of lecture materials and online lecture delivery
- Promotes efficiency of both in-class and online time
- Engages students with the course content in both the face-to-face and the online environments

Screenshot from Social Work 644 course

At L&S Learning Support Services, we've had the opportunity to support a blended learning course that employs the replacement mode. Social Work 644, taught by professor Don Anderson, originated as a "tele-course" that featured video recorded lectures were recorded and broadcast via Wisconsin Public Television. As the course evolved, the video lecture component was moved online. Now, students have an organized three-module progression that consists of numerous online activities and lecture videos that feature Professor Anderson and experts in various social work specialties relevant to the course. Because of the well developed online content and interactive learning activities, seat time is reduced to four times each semester (one orientation session and three discussion sections that correspond to each of the three modules). Because the online content is well developed, it is also used to offer continuing education for social work professionals throughout the state. It also serves as a helpful resource to a public facing audience as the lectures are useful to families who care for loved ones with a developmental disability. View their public website.
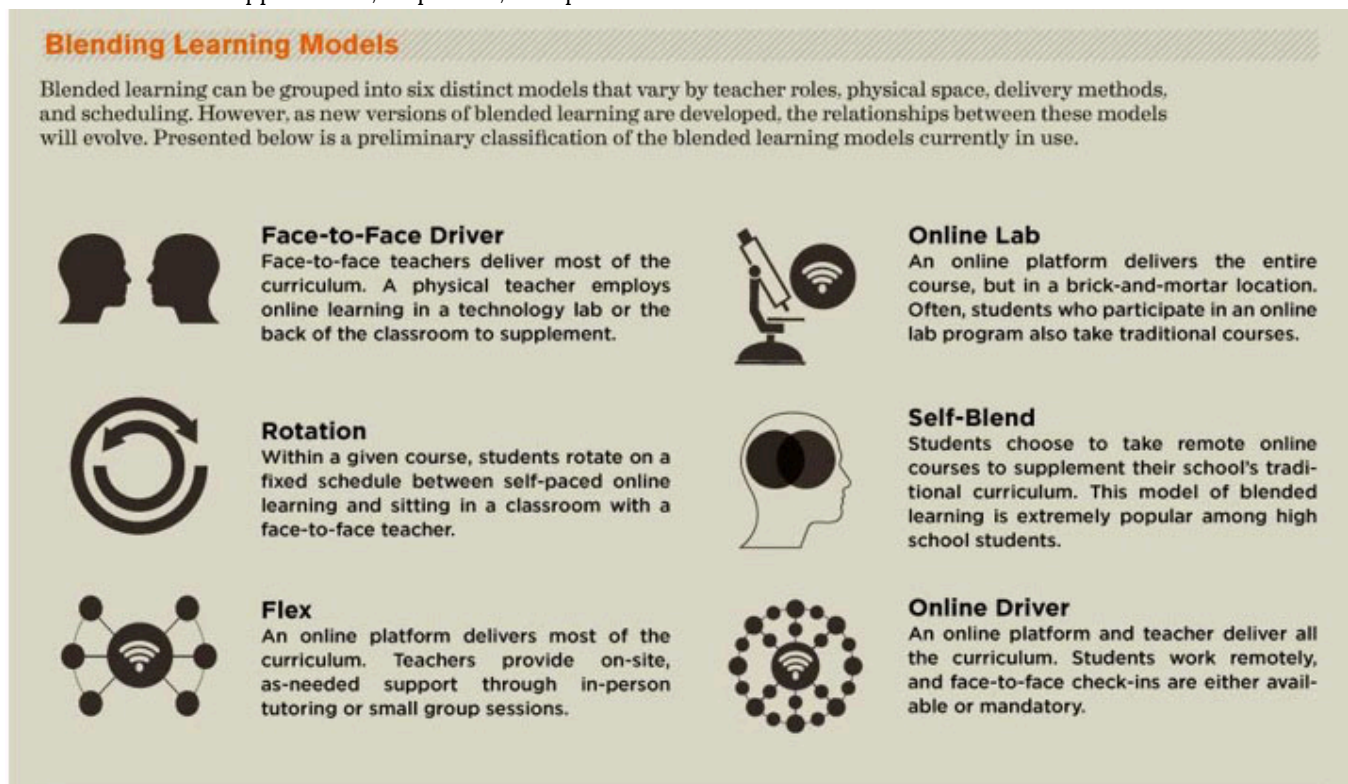
Observe & Consider

Other Models of Blended Learning

Though these three models above are the most common models of blended learning in higher education, there exists a spectrum of blended learning models (some of which are more often used in K-12 environments). Take a look at the

graphic below that describes the blended learning model spectrum. You'll notice that a few of these models overlap with one or more of the supplemental, emporium, or replacement models.

Blending Learning Models

Blended learning can be grouped into six distinct models that vary by teacher roles, physical space, delivery methods, and scheduling. However, as new versions of blended learning are developed, the relationships between these models will evolve. Presented below is a preliminary classification of the blended learning models currently in use.

Face-to-Face Driver
Face-to-face teachers deliver most of the curriculum. A physical teacher employs online learning in a technology lab or the back of the classroom to supplement.

Online Lab
An online platform delivers the entire course, but in a brick-and-mortar location. Often, students who participate in an online lab program also take traditional courses.

Rotation
Within a given course, students rotate on a fixed schedule between self-paced online learning and sitting in a classroom with a face-to-face teacher.

Self-Blend
Students choose to take remote online courses to supplement their school's traditional curriculum. This model of blended learning is extremely popular among high school students.

Flex
An online platform delivers most of the curriculum. Teachers provide on-site, as-needed support through in-person tutoring or small group sessions.

Online Driver
An online platform and teacher deliver all the curriculum. Students work remotely, and face-to-face check-ins are either available or mandatory.

Rise of the K-12 Blended Learning: Profiles of Emerging Models by Innosight Institute and Charter School Growth Fund

Flipped

The flipped classroom model is somewhat well known and often interchangeably used with blended learning, though it does not quite employ the same pedagogical approach as other blended learning models. For this reason, the flipped classroom is generally considered to be a step toward blended learning but not a true blended learning model. A flipped classroom can be somewhat narrowly characterized as course delivery approach that simply reverses the lecture and home paradigm – lectures are recorded and delivered online and homework is done during the regular class meeting time. While the flipped model significantly changes the way an instructor manages the course, the model might not fundamentally change the pedagogical approach of the course and engage with some of the key blended learning concepts (such as reduction in seat time, active student learning, and efficient use of in-class and online time).

That said, there are still benefits and opportunities for the students with the flipped classroom. First, the active portion of their learning is done in close proximity to the instructor during the in-class session. Second, the lecture recordings can be available on demand and can be played and replayed to help absorb complex topics or review in advance of an assessment. Finally, the approach opens possibilities for peer-to-peer learning and collaboration among students to help build a vibrant learning community. Developing a flipped classroom module can also help instructor move toward creating a more fully realized blended learning environment.

Read more about the flipped classroom and its use: Educause's "7 Things You Should Know About the Flipped Classroom"

HyFlex

The hyflex model is popular in K-12 education and is a hybrid of many of the other blended learning models. Effectively, the hyflex model is a "blended" blended learning model, meaning that the students can choose their method of delivery (in-class or online) for various activities and course content and have multiple modes of delivery to choose from per course module/assignment/activity.

Read more about the hyflex model and its use: [Educause's "7 Things You Should Know About the HyFlex Course Model"](#)

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20. Blended Learning Design

Chapter Objectives

- Consider various instructional design approaches as a pathway toward blended learning
- Examine learning objectives as a building block for blended learning design
- Outline how you might determine learning objectives for your own course and identify resources to help with this

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![Observe & Consider icon] **Observe & Consider**

Blended learning requires a thoughtful design process

The key to a successful blended learning environment is bringing face-to-face and online activities together in a seamless and complimentary way. That can mean there are many moving parts for which to keep track to minimize confusion and take advantage of the opportunities for deeper learning and improved outcomes. To help manage the process of aligning activates, assessments, and course content with the various technology choices and classroom management strategies, this week we'll turn our attention to instructional design.

In addition to helping manage the work involved with creating a blended learning course, instructional design process works to make thoughtful choices that directly benefit students. In their book BLENDED LEARNING IN HIGHER EDUCATION, D. Randy Garrison and Norman D. Vaughan concentrate on seven basic principles for blended learning and the blended learning design process:

1. Design for open communication & trust
2. Design for critical reflection and discourse
3. Create and sustain sense of community
4. Support purposeful inquiry
5. Ensure students sustain collaboration
6. Ensure that inquiry moves to resolution
7. Ensure assessment is congruent with intended learning outcomes

To that end, we'll look at several design approaches to help work toward these principles.

Please keep in mind that it is often a good idea to initiate blended learning by **starting small and growing over time**. The approaches we discuss this week can be applied just one activity or an entire course. If you ever need assistance, remember there are support units across campus like LSS and DoIT Academic Technology that are glad to help.

Observe & Consider

To get us started, this podcast with Jonathan Klein and Theresa Pesavento of UW-Madison L&S Learning Support Services and Ron Cramer and Chad Shorter of DoIT Academic Technology helps lay a foundation for further investigation of blended learning design.

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# 21. Blended Learning Design Approaches

Observe & Consider

Garrison and Vaughan point to many critical elements of a blended learning course environment, such as designing for open communication, trust, and critical reflection and discourse. So how do you begin to design a blended learning course or a module with these elements in mind? How do you identify learning goals that are fundamental to these elements? What is your road map for ensuring that the lessons that you plan and the tasks that you assign actually help students meet those goals?

For this, it is helpful to consider a few well outlined and defined instructional design approaches that can guide you toward these goals. All of these approaches offer a conceptual framework for thinking about your students' learning and a rough template for how you might begin with planning your course. While each approach offers a slightly different set of instructional design principles, you will notice that there can be quite a bit of overlap between elements of the various approaches that borrow from similar teaching pedagogies. All of these approaches are not necessarily unique to blended learning course design and highlight good pedagogical practices and course design for any learning environment. Given that, keep in mind that none of these are strictly prescriptive and are flexible design outlines; it is entirely possible to blend parts of multiple approaches into your own unique design approach that is the best combination for your personal course design needs.

Primary Design Approaches:

Backward Design
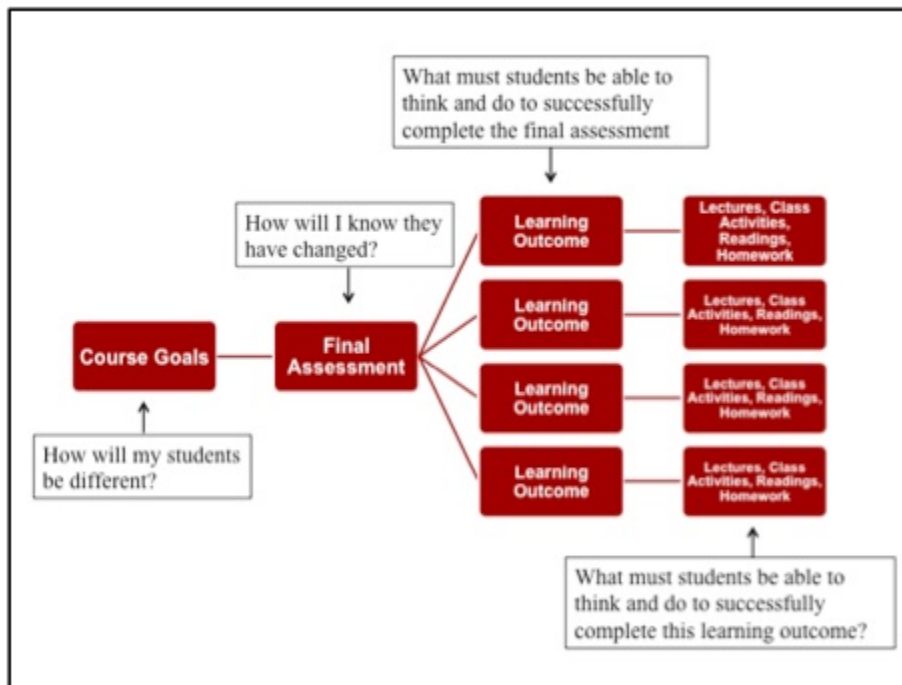
University of Indiana Center for Teaching & Learning

Backward design is an approach that makes learning outcomes the driver of course design decisions. The central question in backward design is "What do you want your students to know and be able to do by the end of your course?" The backward design process guides the instructor to ask and answer the following (in this order):

1. Identify desired results
2. Determine acceptable evidence, and finally:
3. Plan learning experiences and instruction.

Backward design is a widely studied and implemented design model and perhaps the most commonly used one. It is also a fundamental model for educational innovation–here on our UW-Madison campus and elsewhere–that encourages instructors and course designers to be attentive to student learning goals, the course outcomes, and efficient course and curriculum design.

In the clip below, Professor Erica Halverson in the School of Education at UW-Madison talks about curricular redesign and how the backward design framework can help you think through these issues:

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=68

Learn more about backward design and the principles of the backward design framework:

- [Understanding by Design template (Wiggins & McTighe)](#)
- [Understanding by Design Quick Overview (Wiggins & McTighe)](#)
- [Chapter 1: Understanding by Design (Wiggins & McTighe)](#)
- UW–Madison Teaching & Learning Excellence "Working Backward" discussion

## Prototype or Rapid Prototype Design (also called Iterative Design)
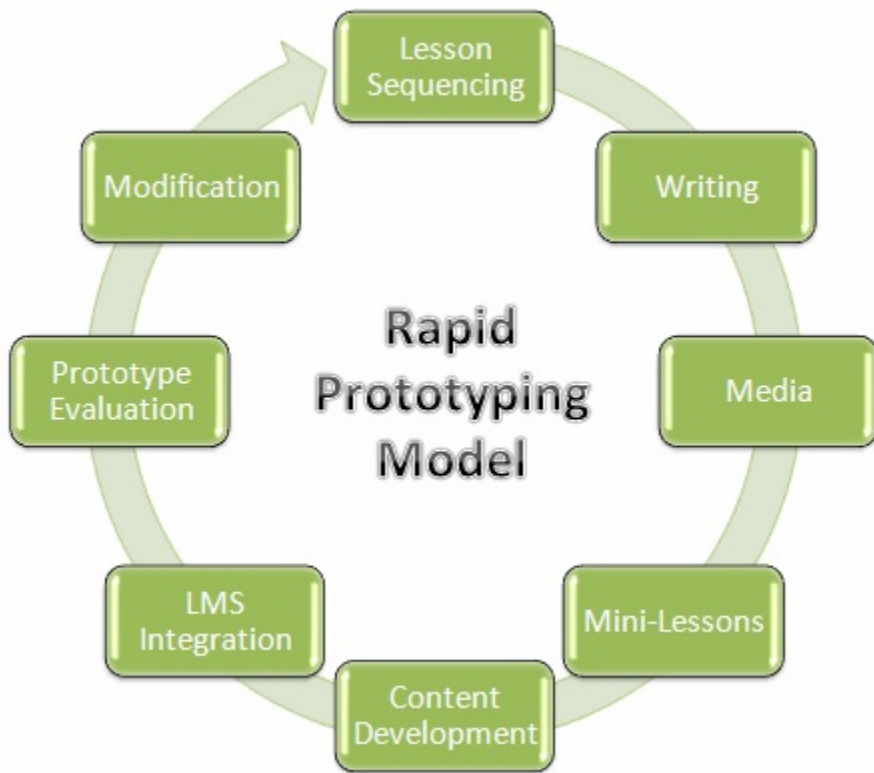
Camosaun Centre for Excellence in Teaching & Learning

The prototype design model is also frequently called iterative design, modular design, or scalable design. The prototype design process is based on the principle of incremental course redesign combined with constant reflection on how well this redesign worked; the instructor redesigns portions of the course (or modules) one at a time and immediately evaluates their efficacy, makes changes, and then "retests" the module before moving onto another course component. These course modules that the instructor designs can mean anything from a 10-minute segment of the face-to-face lecture to an entire 2-week-long lesson in the course curriculum. For this reason, the prototype model can be especially helpful to instructors who want to progressively move from an entirely face-to-face teaching model to a blended learning model and are not able to do an entire course redesign for a blended model before the course begins.

Read and learn more about prototype design and the principles of the prototype framework:

- Rapid Prototype Design Model
- Rapid Prototyping: An instructional design alternative

Multimodal design
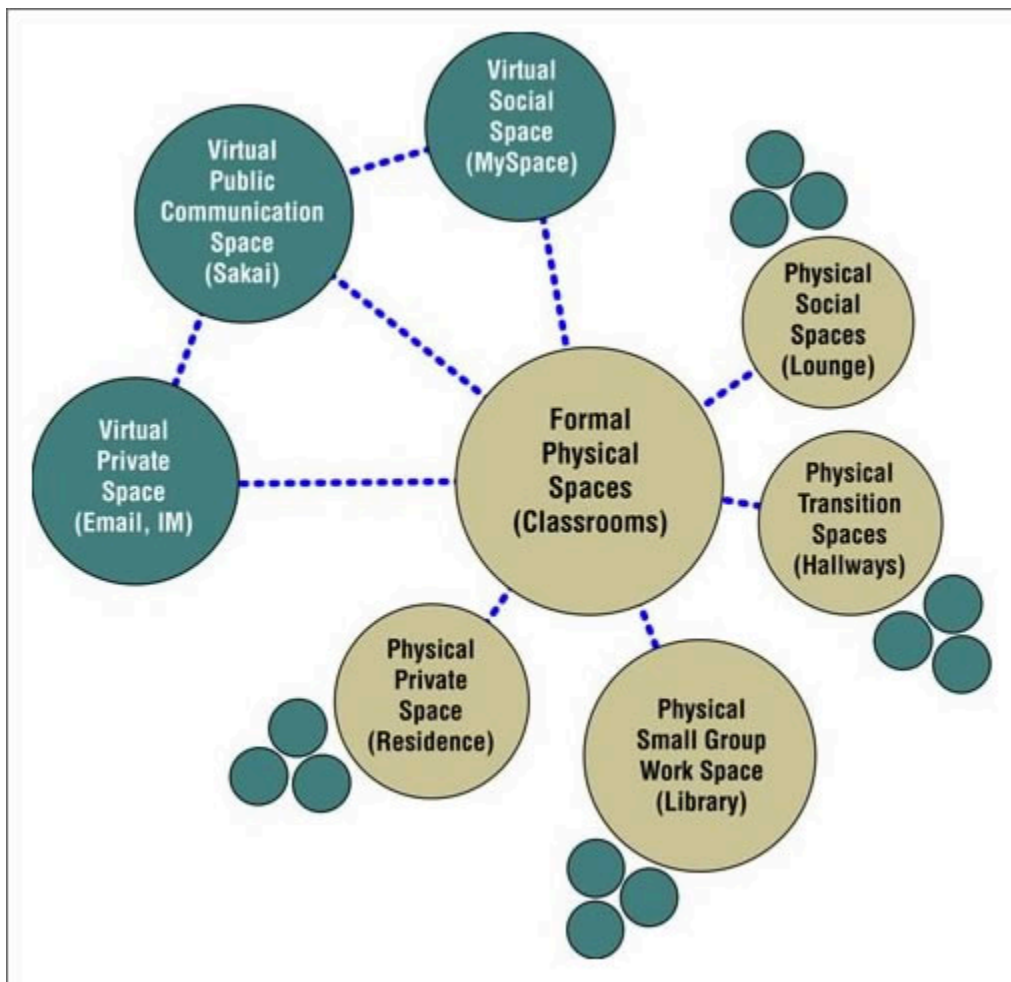
Sloan-C

The multimodal design model focuses on the delivery of the course content and materials and encourages the instructor to provide as many learning modalities as possible to give students a choice of pathways to learning that correspond to their individual learning strengths and skills. This means incorporating various methods of face-to-face instruction/learning and online learning in the course with the goal of responding to as many students' learning styles as possible. The multimodal design approach IS blended learning at its core, but how it is structured can vary widely: the face-to-face and online environments can "duplicate" lectures and activities, the instructor could primarily use a face-to-face or online environment but incorporate diverse activities in the other non-primary environment, or the instructor could include a true mix of both environments. The key concept is that the multimodal model promotes multiple points of access to materials in each environment and learning space (for example, the online environment might be a computer lab one day, an at-home assignment another day, and an online lecture the next).

Read and learn more about multimodal design and the principles of the multimodal framework:

- Engaging Students through Multimodal Learning Environments
- Blending with a Purpose: The multimodal model (Picciano)

Observe & Consider

Other design approaches:

Learner-driven design

The learner-driven design model is frequently used in K-12 education and encourages student-instructor collaboration, to some extent, in order to set learning goals and objectives. This design model enlists the users (students) to be active goal setters in their own learning and ask them to participate in a "feedback loop" of sorts that will ultimately determine the learning objectives of the course. Learner-driven design concepts are fundamental in all instructional design approaches, since all approaches are student-centered and consider the best pathway to effective student learning when designing a course. The strict learner-driven design model takes this student-centered curriculum one step further and relies heavily on classroom collaboration and the role of the instructor as the "facilitator" in students' learning processes.
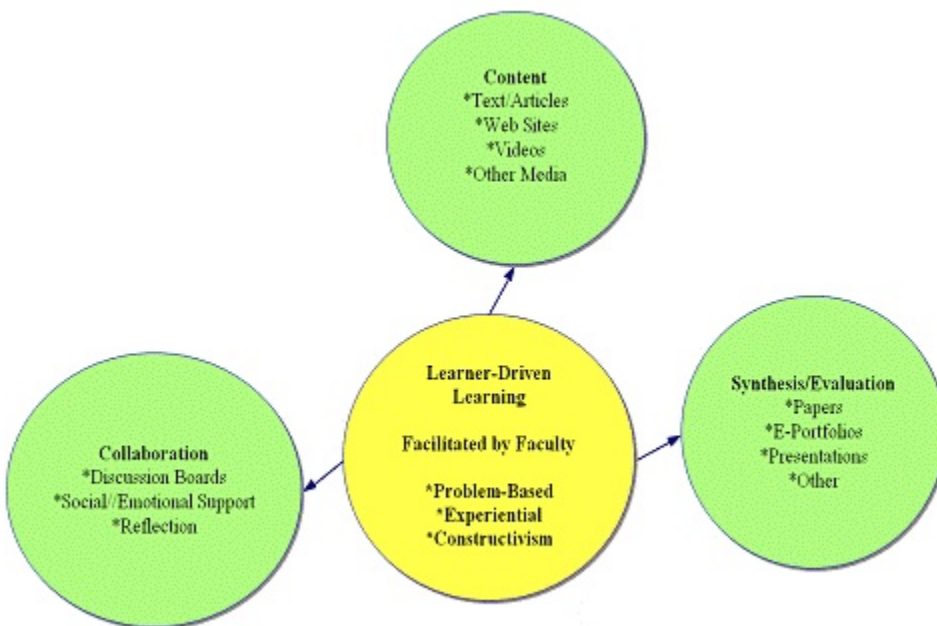
University of West Georgia Distance Education

Read and learn more about learner-driven design and the principles of the learner-driven framework:

- Learner-centered Curriculum Model
- Learner-driven Learning Design Model

Consider these other valuable resources that can help facilitate a design process:

- UW-Milwaukee Tips for Designing Blended Learning
- UW-Milwaukee – Ten Questions for Blended Learning Design

- [Success Factors for Blended Learning](#)
- [Getting Started with Blended Learning rubric (Vaughan)](#)

Share & Connect

Now that we have considered some of the key blended learning design principles and a few formalized design approaches, record your ideas about these design approaches and principles:

- How does a formal instructional design process either change or support the way in which you build your course interactions?
- Which design model resonates with you and why?

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22. Learning Objectives

 Observe & Consider

Perspectives on Learning Objectives

As we discussed in the previous section, well articulated learning objectives are a foundation for any blended learning design process because they establish what you want your students to know or do upon completion of your course. As we look to further explore the learning objectives, it is worth considering an objectives significance from various perspectives. Well crafted learning objectives allow all stakeholders in the course to share a common understanding of what the course is about.

Instructors & Course Designers

For instructors and course designers, the value of a learning objective is perhaps most obvious. In short, learning objectives enable the blended learning design process to happen. Learning objectives provide road map for a course and help align content, assessments and activities to round out the learning experience.

Students

Well developed learning objectives can also help students to understand better their own learning process. When the goals are explicit, students can more purposefully approach readings, activities, and assignments and more easily make connections that deepen the learning experience. Furthermore, students may be able to articulate skills more clearly and link their learning experiences to a real-world context.

Institutions, Departments and Programs

Though our primary focus remains at the course level, learning objectives can have significance beyond the course level. In thinking about how your course objectives take shape, it may be worth considering how programs, departments, and institutions might use learning objectives to help organize more holistic learning pathways for students. For example, our institution has the [UW Essential Learning Outcomes](#) help communicate to prospective students how a UW education will prepare them for life after graduation. At the same time, this communicates to prospective employers what skills and abilities a UW graduate will bring to an organization.

Departments and programs can also outline learning objectives that align with those institutional objectives but speak more specifically to how a program of study will prepare a student for a specific discipline.

Observe & Consider

Learning Objectives and Course Structure
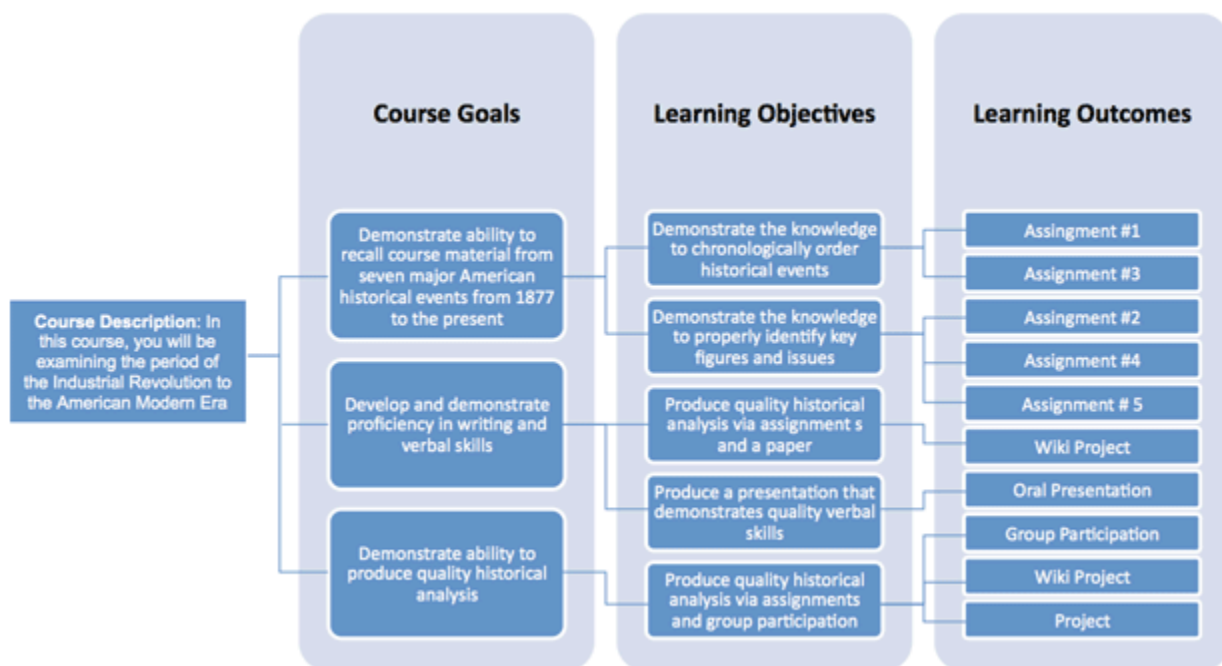
from UCF's Blended Learning Toolkit

Learning objectives might seem straightforward, but there are actually quite a number of considerations to make to ensure that an objective is complete and works to align with the various elements of a blended course. The diagram below outlines how objectives work at various levels of a course to build a the course structure and to help define the various assignments, activities, and assessments.

Anatomy of an Objective

A learning objective is a brief statement with several important characteristics:

- contains a **verb** that aligns with the designed learner action

- contains **object** that summarizes the desired knowledge or skill
- is **actionable** – can be put into practice or though activity
- is **measurable or observable**– can be assessed to determine whether the objective was met

While each characteristic above is an important component of a complete learning objective, it is worth spending a moment looking at the way in which the verb can link an objective to one of the six cognitive domains within [Bloom's Taxonomy](#).

[Learning Objective Verbs at Each Bloom Taxonomy Level](#)

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
arrange, define, describe, duplicate, identify, label, list, match, memorize, name, order, outline, recognize, relate, recall, repeat, reproduce, select, state	classify, convert, defend, discuss, distinguish, estimate, explain, express, extend, generalize, give example(s), identify, indicate, infer, locate, paraphrase, predict, recognize, rewrite, report, restate, review, select, summarize, translate	apply, change, choose, compute, demonstrate, discover, dramatize, employ, illustrate, interpret, manipulate, modify, operate, practice, predict, prepare, produce, relate schedule, show, sketch, solve, use write	analyze, appraise, breakdown, calculate, categorize, classify, compare, contrast, criticize, derive, diagram, differentiate, discriminate, distinguish, examine, experiment, identify, illustrate, infer, interpret, model, outline, point out, question, relate, select, separate, subdivide, test	arrange, assemble, categorize, collect, combine, comply, compose, construct, create, design, develop, devise, explain, formulate, generate, plan, prepare, propose, rearrange, reconstruct, relate, reorganize, revise, rewrite, set up, summarize, synthesize, tell, write	appraise, argue, assess, attach, choose, compare, conclude, contrast, defend, describe, discriminate, estimate, evaluate, explain, judge, justify, interpret, relate, predict, rate, select, summarize, support, value

Now that we've established the component parts of a well-written objective, let's look review a few examples. Consider the table below and note the difference between the strong and weak objectives. As you review the chart, notice how the strong objectives include each of the essential components of an objective (listed above). At the same time, note how the weak objectives contain a non-descript verb and imprecise object.

Weak Objectives	Strong Objectives
Know how to use t-tests and chi-square tests in data analysis	Describe the assumptions underlying t-tests and chi-square tests and use these tests to statistically compare two samples
Understand how to measure the association between a given risk factor and a disease	Define and calculate measures of association between a given risk factor and a disease.
Basic strategies for assessing environmental health hazards	List, describe, and compare the advantages and disadvantages of the basic strategies for assessing environmental health hazards
Know about Medicare and Medicaid	Compare and contrast Medicare and Medicaid with respect to political history, governmental roles, client eligibility, financing, benefits, and cost-sharing

Supplemental Resources

- [Writing Good Learning Objectives](#) from I-Tech
- [A Model of Learning Objectives](#) – Interactive tool based on A TAXONOMY FOR LEARNING, TEACHING, AND ASSESSING: A REVISION OF BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES by Rex Heer, Center for Excellence in Learning and Teaching, Iowa State University.

Practice & Apply

Reflect on Learning Objectives and Your Course

1. Does your program or department have well defined learning objectives or outcomes for students?
2. If so, how do those objectives impact your course design, activities, and assessments?
3. If you have learning objectives developed for your course, are they written in a way that is measurable and actionable?

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23. Strategies for Crafting a Module Blueprint

Chapter Objectives

- Consider management, planning, sequencing, and guiding principles of blended learning instructional strategies
- Evaluate rubrics, design tutorials, and planning tools to guide you toward developing these blended learning course activities or module redesign
- Craft a blueprint for blended learning activities that you can implement in your course

---

In this chapter we begin by presenting instructional strategies (or course activities and sequences) that make blended learning work to achieve the learning objectives you set for your course. Our goal is to consider how the classroom and online course components interact to engage students in deeper learning experiences.

Next, we shift our focus to a set of resources that begin to bring together key parts of previous chapters in this section as we work toward planning an actual blended learning activity, module, or course (whichever is most relevant to you!). We'll examine a few templates for course design and start to lay a foundation for the final chapter in this section (where we will solidify plans that can be implemented in your course).

Throughout the remaining chapters in this section, we'll be using materials from a variety of sources including the BlendKit, which was prepared by the University of Central Florida (UCF) and the American Association of State Colleges and Universities (AASCU) with funding from the Next Generation Learning Challenges (NGLC). It is provided as an open educational resource under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Observe & Consider

Professor Greg Downey in the School of Mass Communication and Journalism has developed several online and blended learning opportunities for his students. He discusses his motivations for creating these opportunities and the benefits, efficiencies, opportunities for deeper learning that he has identified over time.

A YouTube element has been excluded from this version of the text. You can view it online here: https://wisc.pb.unizin.org/teachingwithtech/?p=71

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24. Instructional Strategies in Blended Learning

Observe & Consider

In Week 2, we highlighted seven basic principles for blended learning and the blended learning design process that Garrison & Vaughan outline in *Blended Learning in Higher Education*:

1. Design for open communication & trust
2. Design for critical reflection and discourse
3. Create and sustain sense of community
4. Support purposeful inquiry
5. Ensure students sustain collaboration
6. Ensure that inquiry moves to resolution
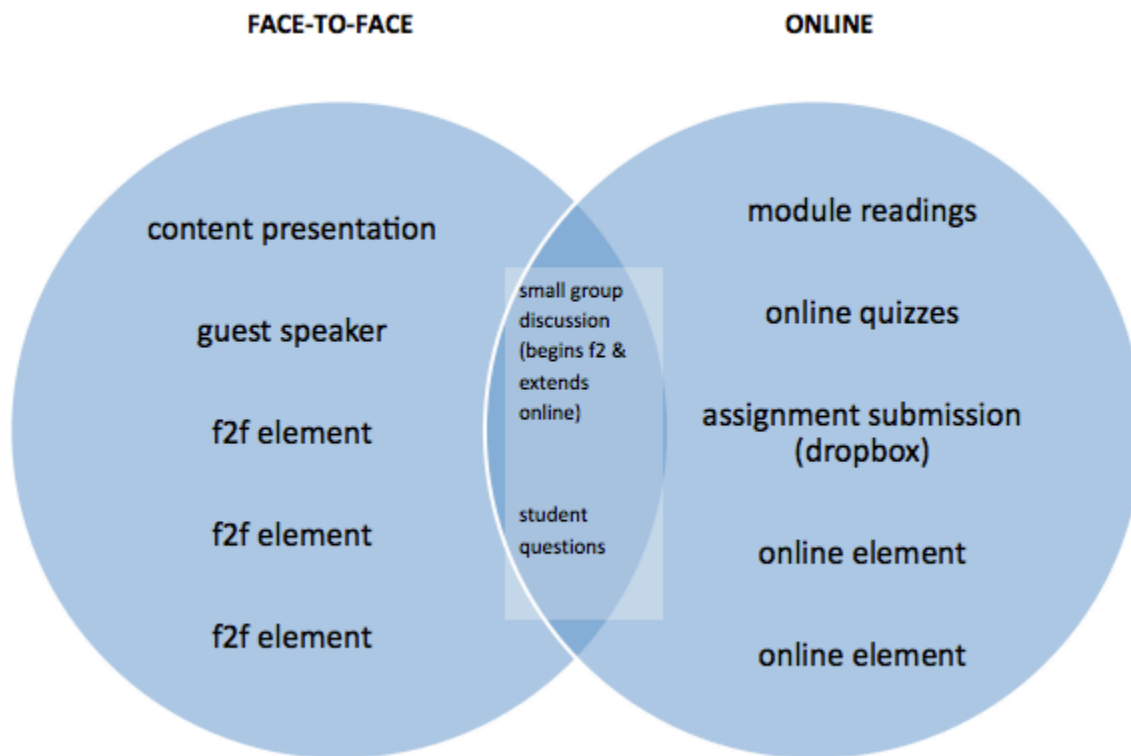7. Ensure assessment is congruent with intended learning outcomes

We have already discussed some course design strategies and models that can help us move toward these seven principles as conceptualizing our courses, but let's look at the primary components of a blended learning environment. These components can apply to a specific blended learning activity, a lesson or module, or an entire course design; however, we will primarily be working at the level of activities or modules here. Not all of these seven principles will apply to each guideline, but it is helpful to reflect on the principles and to try to integrate them as much as is appropriate for each component.

Student learning: Foster a student-centered blended learning environment

In addition to fostering good student-student and student-instructor interaction and setting clear expectations for this, your students will want guidance on how they can succeed in your blended learning course in other areas. evaluate your course from a student perspective, and keep in mind that the online components will need explicitly outline your expectations, instructions, and objectives so that they students can see the pathway to learning as clearly as possible. This does not mean that they won't meet challenges or frustrations with the blended environment or the integration of online components into your course, but being very thorough (more than you think you might need to be, even) and directive can help to mediate these challenges. Keep in mind that students often need to learn how to learn in a blended environment. For many, this many differ greatly from the delivery method of their other courses and they may not understand how this blended environment is a unique experience and pedagogy compared to a face-to-face only course. You may even meet some student resistance or opposition to this teaching style. For this reason, make sure to communicate your rationale and objectives to your students when appropriate and remind yourself that you are helping them to become self-directed and responsible learners in your blended learning environment via your instructions, tasks, and interaction with them.

Teaching goals inventory

Environment: Link the online environment to the face-to-face classroom

FACE-TO-FACE   **ONLINE**

content presentation   module readings

small group
discussion
guest speaker   (begins f2 &   online quizzes
                                    extends
f2f element   online)   assignment submission
                                                       (dropbox)
                                    student
f2f element   questions   online element

f2f element   online element

This Blended Learning Mix Map is part of the Blended Learning Toolkit. It is provided as an open educational resource under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Consider how the two environments interact and work to seamlessly engage students. There are phases of before, during, and after for each environment: before, during, and after the face-to-face session and before, during, and after the online session. The time between phases is a key area to make streamlined, clear, and impactful. The instructor can help connect these dots by establishing a clear learning objective and define the student responsibilities and instructions during each phase. For example, after a face-to-face session, be explicit about expectations for successfully participating in the online component that will follow. Now let's look at a model that helps us think through the three phases.

Step 1:

Consider the diagram at right and how the generic course elements listed within can blend a topic for your course. How might this diagram help you in organizing a blended learning activity or topic for your course? Is there a specific topic in your course that is already blended and would map to this model? Feel free to use your (or others) suggestions from the Activities Wiki to help you think about this.

Step 2:

The diagram at right is available in template form by clicking the link below. Download the template and complete it for a lesson plan that you could make blended. Be sure to align it with a specific learning objective for your course.

BlendKit "mix map" for blended learning environments | [(.docx)](#)

Facilitation: Engage with your students and outline how they will interact with each other

It is important to cultivate student-instructor and student-student relationships in any classroom environment but especially so in a blended learning environment so that your students know clearly what types and levels of interaction (with you and with each other) they should expect in each environment. You will be primarily responsible for fostering these interactions, setting the tone for these interactions, and encouraging your students to engage appropriately. Be clear about the formality, expectations, standards, and levels of engagement that accompany each; your students will want to know this up front, and it will be helpful for you to sketch it out for yourself as well. Time management is a key component of this facilitation. Make clear to your students how you will manage your time, when you will be interacting with them and how, and when you expect them to interact with each other and at what level. Clear expectations will ensure that the interactions in and between the face-to-face and online components are complimentary and as successful as possible.

Step 1: Review the Four Roles of the Instructor

In a previous topic in this Teaching with Technology workshop, we explored online discussions as a tool to promote dialogue between students. We discussed THE FOUR ROLES OF THE ONLINE INSTRUCTOR as a way to help prepare an instructor for the various hats they'll wear in managing an online classroom. As an initial step in thinking about how to best facilitate a blended classroom, review the chapter [The Four Roles of an Online Instructor](#).

Step 2: Complete the Student Interaction Worksheet

The BlendKit offers a worksheet to help in thinking about blended learning interactions for a specific module. The worksheet helps in outline learning objectives, activities that will achieve the objectives, and the interactions students in which students will engage.

BlendKit "module interaction worksheet" | [(.docx)](#)

Assessment: Reconsider traditional assessment structure and outcomes

You may well need to reevaluate traditional assessment methods in a blended environment to ensure that your assessments correspond to your learning objectives. Since all of the student learning is no longer taking place exclusively in the classroom, it would be appropriate to consider other assessment methods that align with the online environment where some of their learning is taking place. Consider discussions, self-checks or self-assessments, web quizzes, rubrics, in-class and/or online essays, "presentations" or discussion leading, and independent projects all as types of assessment for different purposes and to measure different levels of analysis and understanding. Using your learning objectives, ensure that each assessment serves a strategic purpose (both in content and in delivery method) and is useful to you and to the students; this may often mean that the traditional in-class exam or multiple choice on-paper quiz is not the most effective way of qualifying student progress. As with anything else, outline these assessments upfront in your syllabus and state clear expectations for how your students can be most successful with these.

BlendKit Assignment Template | (.pdf)

Syllabus elements: Provide practical support and resources

The last key consideration is making sure that all of your course components and your syllabus are clear, easy to location, organized, and practical for your students. Include any tutorials, support documents, or links to help for online activities and assignments in your course site, on your syllabus, and in any related online activities. Remember that integrating the online and face-to-face environments involves a bit of thoughtful planning where it's helpful to put yourself in your students' places to imagine what kinds of support will be valuable and provide guidance. Orient your students as much as possible to your course components and to your blended environment; you can do this via activities, course-specific tutorials, or even an email or "how to get started" instructions sent to your students before Day 1 of the course. Finally, go through your checklist to make sure that all course components are accounted for and outlined for you and for your students.

Here's a checklist for course components hosted by UC-Berkeley | (.pdf)

 Share & Connect

In the next section, we'll construct a blueprint for your personal blended learning module or activity. First, let's brainstorm some activities that might work well in a blended learning environment.

Think about some of the goals you have for your course. What specific things do you feel require face-to-face interaction, or what activities do you think fit well in a traditional face-to-face classroom environment? What activities can you envision fitting well with an online environment? Are there any face-to-face activities or modules that you might be able to reconfigure or modify for an online environment? Add your ideas to the list on our Blended Learning activities Wiki page.

Your Blended Learning Module Blueprint

Observe & Consider

Because the next chapter is dedicated to (1) building one or more activities or full modules that you can use in your course and (2) presenting some useful online rubrics and tutorials to guide you through this, as the final activity in this chapter we invite you to construct a "blueprint" that will help you start to sketch out these upcoming activities/modules. The idea with the blueprint is to synthesize the content from the previous chapters in this section in a manner that is most relevant to your particular course. Crafting a blueprint first will help you to provide a clear framework for your activity/ module design, validate that you respond to the critical design elements for blended learning, and ensure that your stated learning objectives match up with your expectations, tasks, directions, and assessment that you create for your activity/ module. We mentioned a few times that blended learning design is very scalable and easy to build on based on one activity or module that you initially craft and then later extend to other lessons, modules, weeks, and eventually whole the curriculum of your course. That's exactly the goal of building an activity blueprint; it will give you a great start and a foot in the door with blended learning design!

We know that not everyone prefers to start with a narrower focus and work up to the general course plan and that it can be just as helpful to conceive of whole course elements first and then to translate these into your activity/module plan. Here are a few resources to help you outline or model a more general course plan, if you prefer to start there:

- Comprehensive full-course design guide and checklist: Decision guide for planning your course (Vanderbilt)
- Two model blended learning courses and their design processes from BlendKit: Model courses

Practice & Apply

Your Assignment:

Take the concepts we've presented in prior chapters one step further and begin to apply them to your own course and instructional design process, using this template from Simmons College to map out a blended learning plan for at least one module or activity in your course.

Media Attributions

- 3-modesB
- 3-modesC

25. Creating a Blended Learning Activity

Practice & Apply

Objective:

Plan a precise blended learning activitiy to use in your course.

Directions:

In previous chapters, we've reviewed a number of resources that help explain how blended learning can work and the tools you can use to plan and implement blended learning in an organized and thoughtful manner. In this chapter, we will bring this material together and create a blended learning activity. We are bringing back several of the resources we've reviewed thus far to help guide us toward the completion of an activity that you can implement in your course. To complete the activity, follow the outline below and answer the "Key Questions" for each of the five steps. When you are finished, you will have a complete blended activity.

Step 1. Identify and reflect upon a prior learning activity:

Since we're taking a previous activity or topic and redesigning it to a blended learning framework, we will start by thinking about that prior experience and how it worked for your class.

Key Questions:

- What is the learning activity?
- What worked well with the assignment?
- What challenges did you or your students experience?
- Were there special materials you developed for the activity or topic?
- Was the topic formally assessed? How?
- How much time was devoted to the topic in class? Out of class?
- How much time would you like to devote to your blended learning activity in class? Out of class?

Step 2. Define your learning objectives:

The learning objectives are the foundation for the entire activity. Writing out clear and measurable objectives will help guide the remaining steps in the development of your activity. Remember to use a specific verb (avoid "understand" or "know") when crafting your learning objectives.

Key Questions:

- What do you want your students to know or do upon completion of the activity?
- At what level of Bloom's Taxonomy do you hope to position the objective (Remember, Understand, Apply, Analyze, Evaluate, Create)?
- What are the specific learning objectives for your activity?

Suggested Resources:

- [Week 2 Learning Objective Material](#)
- [UW Essential Learning Outcomes](#)
- [Bloom's Taxonomy](#)
- [Writing Good Learning Objectives – I-Tech](#)

Step 3. Define your assessment goal:

Without getting into too much detail, start to think about how you'll know whether your students have met the learning objective you defined above. Think about what you'll need to see in order to determine whether the students have attained the goal.

Key Questions:

- How will you know whether your students have met the objectives you defined for the activity?
- Will the student need to recall information? Demonstrate a skill? Produce something?

Suggested Resource:

Professor Erica Halverson's [video](#) on backward design from week 2.

Step 4. Consider the blended learning models:

Before we begin planning the activity, think about the blended learning models and how they might inform your decision making and parameters of your activity.

Key Questions:

- What physical resources do you have at your disposal to help meet the objective (classroom space, technology, text, articles)?
- What virtual resources do you have at your disposal to help meet the learning objectives (learning management system tools, blog, media)?
- What combination of virtual and physical resources might make sense as you look to plan your activity?

Suggested Resource:

Blended Learning Models & Examples (from the first chapter of this section).

Step 5. Plan and sequence your instructional strategies:

As we've seen, a blended learning activity can include a series of components that work together to meet specific learning objectives. Below are the key considerations. Depending on the length, complexity, and scope of your activity, not all of these may be elements to consider. However, keep these in mind as you plan for other blended learning activities or course design after this workshop and as you move toward a blended learning model for your course.

Key Questions:

1. Managing your activity

   - How will your orient students to the activity?
   - What instructions are necessary for the student to be clear about the task and successful in completing the requirements?

2. Cultivating the blended environment & facilitating community building

- ◦ What will student-to-student interaction look like? What are the parameters, requirements, and tone for this?
- ◦ What will student-to-instructor interaction look like? How will you facilitate this, and how will you communicate this to your students?
- ◦ What will student-to-content interaction look like? What expectations, instructions, and levels of engagement will you convey to your students?

3. Defining assessment measures

- ◦ What scoring criteria or rubrics will you use for this activity? What information will you make available to your students?
- ◦ How will this activity be weighted, scored, or assessed relative to the other assignments in the course?
- ◦ How will you communicate to your students the goal and the importance of this activity and its assessment?

4. Communicating precise instructions

- ◦ What mechanical details are involved in this activity (e.g., number of words/pages, style guide for citations, number of posts to discussion forum, etc.)?
- ◦ What tools or instructions to your students need (and do you need to make available to them) to complete this activity successfully?

Suggested Resource:

Instructional Strategies in Blended Learning

26. Next Steps

We hope that this section provided a good opportunity to explore more about the models, design, and pedagogical details of blended learning and to navigate the current discussions on the topic.

We also hope that the information and resources that we've provided during this section have enabled you to rethink elements of your course as needed; this could be one 10-minute activity, one lesson, one week, one course module, or the entire course. The goal was not only to provide a good foundation for developing a blended learning activity but also to reinforce that this does not have to be an altogether daunting task. You can start small with blended learning and incorporate blended learning concepts into your course in many scalable and modular ways so that, over time, you rely more and more on blended learning principles to engage students with the course materials, to make good use of the in-class and out-of-class time for the instructors and the students, to design courses and syllabi based on learning goals and outcomes that you hope the students will achieve, and to provide outlets for doing and sharing that effectively help the student reach these learning goals.

Since the possibilities of the blended learning environment are endless and in constant development, you might be wondering "where do I go from here?" If you didn't get a chance to work through all of our resources and activities, that might be a good starting point or a refresher. If you're hoping to move forward with an expanded scope for blended learning activities or even an entire module or course design, we've provided some extra resources and guidance here:

Consultation Opportunities

If you are in the College of Letters & Science, we would be happy to [consult](#) with you. You are welcome to contact us with any blended learning questions, activity or course design plans, or for other general instructional technology & support questions.

If you are not in L&S, you may prefer to consult [this contact list](#) of instructional technology support staff across campus to find your support unit on your own.

Online course design manuals

We have incorporated many other great course design guides into this section on blended learning, including portions of these two here below. If you'd like to follow an online course design step-by-step guide, these resources are both very helpful:

- [BlendKit online guide](#)
- [Carleton College course design tutorial](#)

Checklists

Once you get far enough with your course or module redesign, these checklists can help ensure that you've accounted for all of the key elements that you (and your students) will need to make your blended learning unit successful:

- [Course design checklist](#) (Simmons College)
- [Teaching checklist](#) (Simmons College)

Quality certification & peer review

You can also consider learning more about quality certification for your blended course via a program like [Quality Matters](#), a peer-based quality assurance program that supports quality and continued improvement for online and blended courses. Among many other tools, Quality Matters offers [an excellent rubric](#) for instructors to use as a guide in the design process.

Your department, unit, or institution might also have well-defined standards for blended or fully-online courses.

ACTIVE LEARNING

27. Active Learning Introduction

Section Goals

This session is an entry point designed to help you learn more about active learning and develop active learning concepts that you can integrate into your own teaching and learning. The materials here are intended to be useful to learners of every level of familiarity with active learning concepts, from the completely uninitiated to the expert. You'll find fundamental introductory resources and materials, as well as several outward pointing references to optional supplementary and more advanced materials.

While we'll have specific objectives for each chapter in this section, our overall learning objectives for this section of the text are to help each participant successfully do the following:

- Identify relevant methods, pedagogical approaches, and models for active learning in higher education
- Analyze learning spaces and their utility for active learning
- Demonstrate the ability to revise and improve existing course activities and assignments to increase their active learning potential
- Design a scaffolded sequence of activities that utilize means-tested active learning processes for a course you teach or would like to teach

# 28. What is Active Learning?

Chapter Objectives

- Define active learning
- Survey various models of active learning
- Understand why active learning is pedagogically effective
- Identify opportunities and benefits to using active learning
- Begin to implement feasible pedagogical approaches to active learning

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Active Learning?

Yeah, you heard right. ACTIVE learning. The phrase may conjure up all kinds of images and associations, from shop class to Montessori preschools to [new age creative writing instructors who lead participatory vision quests and don't believe in grades, structure, or lecturing,](#) to imaginative peers who struggled in the disciplinary regimes of old-school instruction, like our good friend Calvin:
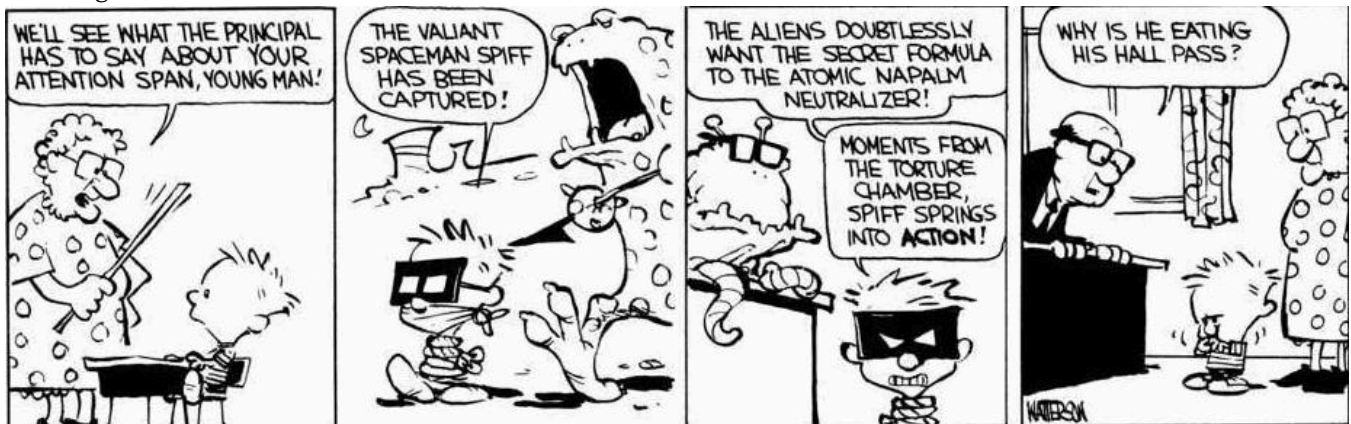
While we'll introduce and explore a few approaches to active learning together as the week continues, we wanted to provide a few initial assumptions up front to help introduce you to the topic as we understand it. In its most elemental form, active learning means **doing things and thinking about the things that you're doing** (what psychologists call [metacognition](#)).
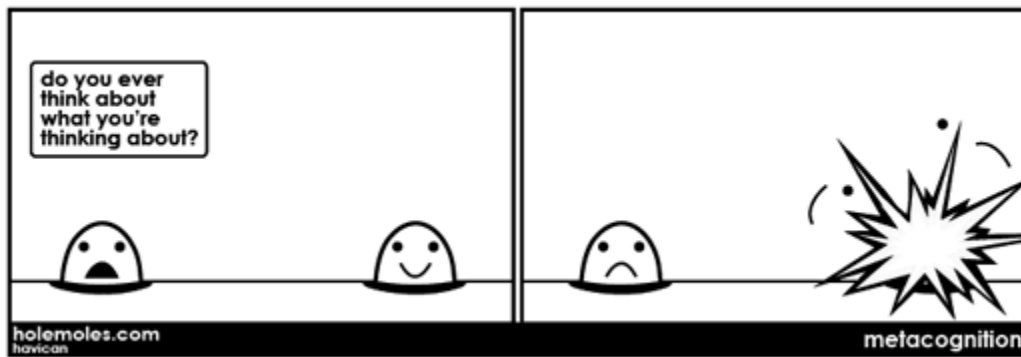
Countless examples from the history of education demonstrate both that people tend to support what they help create and that meaningful learning is strongly correlated with learners' active involvement in learning processes. All of us want to be better learners and to stimulate meaningful learning for others, and there's a (growing) [mountain of evidence](#) that when properly applied, active learning can help in major ways: it's challenging, it's effective, it's participatory, and best of all, it's fun!

This online workshop session on active learning is intended to instigate meaningful learning and thoughtful reflection about your own participation in teaching and learning. Wha? A module on active learning that itself employs active learning techniques? Meta-cognition about meta-cognition?
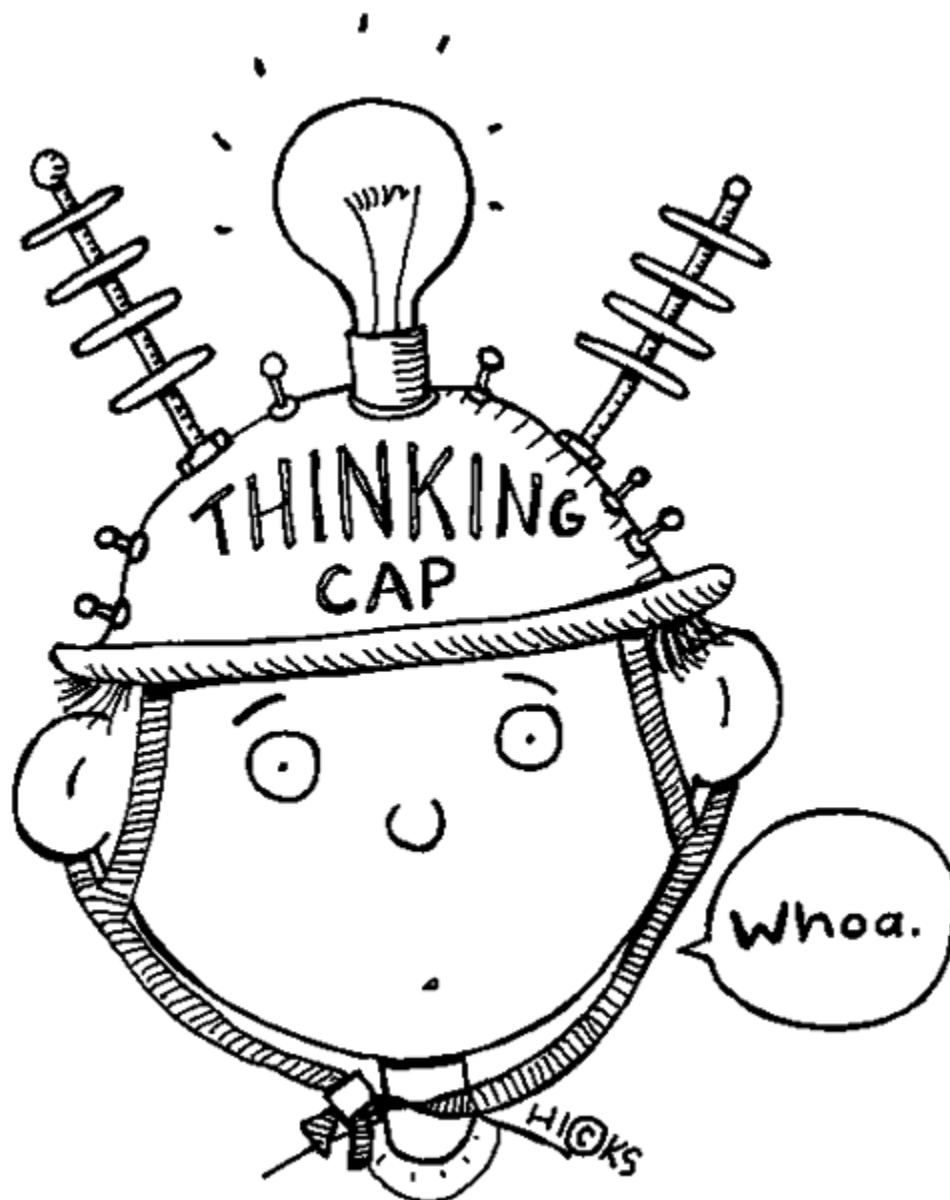
Yep. In this session we'll provide some means-tested, effective ways to incorporate active learning into your lives, introduce you to some of the ongoing conversations around the topic in higher education, and invite you to take an active role in constructing useful knowledges on this topic. Let's get started!

Share & Connect

Activity: Active Learning Definitions

1. Search the web (or available print texts) for some definitions of 'active learning'
2. Post the definition that seems most compelling to you (along with the source) under the "Compelling definitions from the web" heading on our [Active Learning Definitions Wiki Page](#).
3. Now develop your optimal definition of active learning. Consider your own teaching and learning style and your educational philosophy. Post your definition under the "Your optimal definitions" heading on our [Active Learning Definitions Wiki Page](#).
4. Read and consider definitions from your peers!

Active Learning: A Working Definition Now that you've read some of the definitions of 'active learning' floating around on the free web and created your own working definition of the term, we'd like to share some of our ideas about active learning, offer some history and context for the term, and explain why we believe it can help you accomplish many of your own personal learning (and teaching) outcomes. Earlier we wrote that active learning could be simply defined as doing things and thinking about what you're doing. While that's true, another functional definition of active learning would be the intentional construction of skills, abilities, or knowledges through participation or contribution. We believe that active learning does the following: requires high levels of involvement in information gathering, analyzing, and problem solving processes invites reflection upon ideas and how one has, is, or will use those ideas, and includes regular assessments of one's degree of understanding and skill at handling concepts or problems in a particular discipline. Active learning, in our experience, is also closely allied with what many educators refer to as Student-Centered Instruction [SCI]. Student-Centered Instruction is an approach to instruction which prioritizes the abilities, needs, and interests of the student (learner), so that student needs determine course content, activities, materials, and pace of learning. Instructors provide

structured opportunities for students to learn independently and from their peers, encouraging them to become fully involved in their own learning and coaching them as they develop any skills they need to do so effectively. Here are some general characteristics of active learning: Learners do more than just listen. Learners engage in structured, exploratory activities that stretch their current levels of knowledge and ability. Learners construct knowledge together, working collaboratively, exchanging ideas, testing, extending, developing, and evaluating each others' ideas, and sharing instructional responsibilities. Learners devote significant amounts of physical, psychological, and intellectual energy to learning tasks and class projects. Learner effort is focused more on acquiring and developing skills and competencies than on receiving transmitted information or explanations. Learners are involved in higher-order thinking and making activities (analyzing, synthesizing, evaluating, creating, translating). Learners regularly monitor and evaluate their own attitudes and values. While we believe that all participants have a shared responsibility for producing an environment conducive to active learning, it's true that instructors still bear much of the responsibility for cultivating spaces where active learning is the norm and learners can flourish in the ways described above. In the next pages of this module, we'll explore some of the ways that instructors have helped facilitate active learning, but first, we want to invite all of you to think about and share some of your own

succesful experiences as active learners in the activity below. Share & Connect Discussion Activity Please write down your answers to the following questions: What's something that you made a conscious effort to learn in the past year? What were some of the methods you used to learn this thing? Which of these methods did you find most useful to you in your learning process? What's something you'd like to learn in the coming year? Based on your own prior experiences, what are some learning methods you will use in working to accomplishing this goal?

Media Attributions

- 3-modesC

# 29. History & Context for Active Learning

![Observe & Consider icon] **Observe & Consider**

The idea that meaningful learning requires active engagement is an ancient one, and while it is not especially revolutionary, our contemporary educational practices don't always reflect what we believe or know about active learning. On this page, we'll take a look at some of the thinkers and ideas which have been most influential on our current ideas about active learning and effective student-centered instruction.

Active Learning and 'Constructivism'

The term "active learning" and the related idea of "student-centered" (rather than "teacher-centered") learning became prominent nodes of interest among educators during the late 1970s and early 1980s. As their era's leading buzzwords, they filled much the same role that blended learning and MOOCs are filling today. Over the past few decades, an increasing number of teachers, educational researchers, cognitive psychologists, and instructional designers have shown sustained interest in developing, propagating, and evaluating models of teaching and learning that afford greater opportunities for participation, exploration, and collaboration to students and learners.
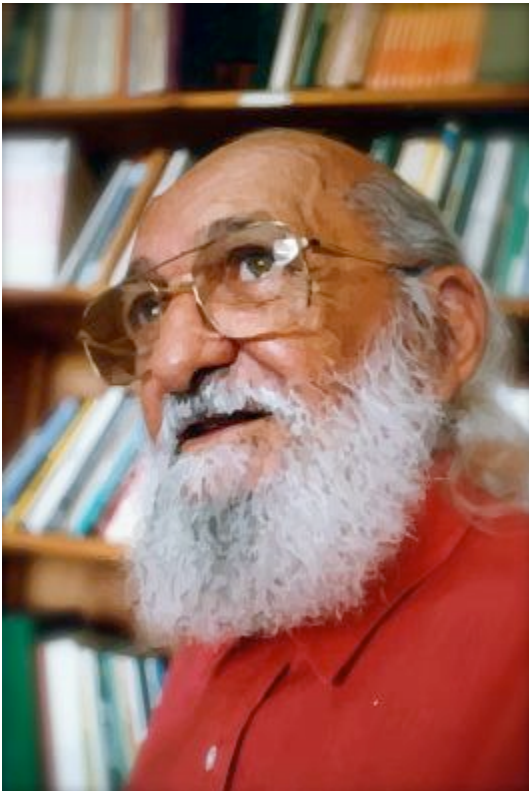
Paulo Freire

One of the most important contributions that proponents of active learning have made to our idea of effective education has been its revision of the defining metaphors we use to imagine teacher/student interaction. For some educational reformers, like Paulo Freire, prominent teaching methods of their day seemed to be founded on what they described as a "banking model." In this model, teachers behaved as if information could be directly transmitted from subject experts to novice learners, who passively received and deposited their lesson's content, filing it away or memorizing it for later withdrawal. Some even visualized education as the filling of smaller, mostly empty vessels [students] with content knowledge poured out from a large, overflowing vessel [instructor], an idea that's satirized deliciously in the Far Side cartoon below:.

"Mr. Osborne, may I be excused? My brain is full."
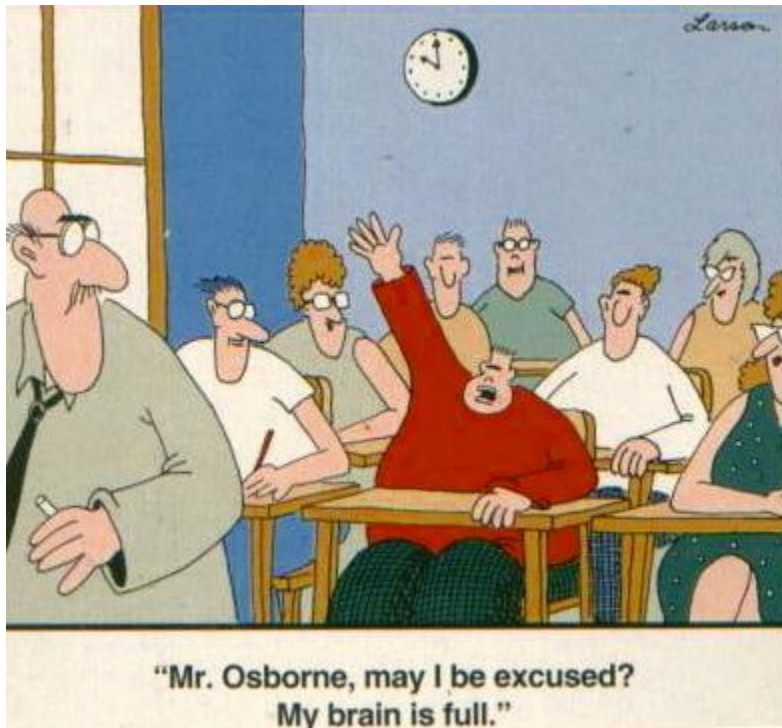
In the place of these metaphors of teaching and learning, proponents of active learning have stressed that learning is an active process, and have developed metaphors of teaching and learning rooted in a "constructivist" philosophy, which posits that knowledge is never merely transmitted between individuals, but is a dynamic capacity constructed by the learner using internal thought processes and acting on environmental stimuli. In other words, learning involves the active construction of meaning by the learner, who combines new information with existing mental models in order to make sense of the world that they encounter. Instead of receiving and importing ready-made knowledge, learners build mental representations or models of the "real world" that they use to solve problems. These representations can be well or poorly formed but are continually accessed and updated by each individual learner, including the individual(s) responsible for filling the traditional role of the instructor. In the sections below, we'll look at five thinkers whose ideas have provided many of the underpinnings of modern constructivist ideas of learning.

John Dewey

John Dewey

In American education, one of the earliest and most influential advocates for what we would now call 'active learning' was the philosopher and educator John Dewey [1859-1952]. In his influential book DEMOCRACY AND EDUCATION [1916], Dewey wrote that "learning means something which the individual does when he studies. It is an active, personally conducted affair." Dewey believed that people come to understand themselves and the world through their interactions with other people and things in the world, and that the purpose of education is to produce an environment in which useful interactions could be developed and sustained. He emphasized the need for active learning when he claimed that "there is no such thing as genuine knowledge and fruitful understanding except as the offspring of doing. The analysis and rearrangement of facts which is indispensable to the growth of knowledge … cannot be attained purely mentally–just inside the head. Men have to do something to the things when they wish to find out something."

To learn more about Dewey's ideas, we recommend reading "MY PEDAGOGIC CREED" [1896], which succinctly presents many of his ideas about the purpose of education, or his book DEMOCRACY AND EDUCATION [1916].

In the following video, A.G. Rud, Dean of Washington State University's College of Education, describes Dewey's lasting impact on education:

Maria Montessori

Maria Montessori

The Italian doctor and educator Maria Montessori [1870-1952] developed an educational philosophy in the early part of the 20th century that has had a massive impact on the way that chidren and young adults around the globe experience learning. In a series of influential books she published between 1909 and 1917, Montessori laid out what she called a "scientific pedagogy" that emphasized mixed-age classrooms, student autonomy, uninterrupted opportunities for creative exploration, and carefully designed learning environments. Over the subsequent years, her educational ideas gained traction

across several continents, so that today that are an estimated 30,000 schoold currently using some version of Montessori education. In her book, EDUCATION FOR A NEW WORLD [1946], Montessori provides a good summary of her basic ideas regarding the ideal student-teacher interaction by declaring that "Education is a natural process spontaneously carried out by the human individual, and is acquired not by listening to words but by experiences upon the environment. The task of the teacher becomes that of preparing a series of motives of cultural activity, spread over a specially prepared environment, and then refraining from obtrusive interference."

If you'd like to read about Montessori's approach to pedagogy in her own words, we recommend her book THE MONTESSORI METHOD [1912].

Gilbert Ryle and the Distinction Between Knowing *How* and Knowing *That*:

Gilbert Ryle

In 1945, the British philosopher Gilbert Ryle [1900-1976] published an influential lecture in which he argued that philosophers had not paid enough attention to the common-sense difference between two kinds of knowledge: knowing that something is the case and knowing how to do things, a distinction which has come to be known as the difference between **declarative** and **procedural** knowledge (knowing that and knowing how, respectively). In Ryle's lecture, he observes that "I can't be said to have knowledge of [a] fact unless I can intelligently exploit it. ... Effective possession of a piece of knowledge-that involves knowing how to use that knowledge, when required, for the solution of other theoretical or practical problems. There is a distinction between the museum-possession and the workshop-possession of knowledge." Ryle's ideas, developed at greater length in his subsequent work, especially THE CONCEPT OF MIND [1949], have been of special importance for psychologists and educators interested in developing active learning processes which facilitate meaningful learning by increasing procedural rather than declarative knowledge.

Jean Piaget

Jean Piaget

The Swiss psychologist and educational philosopher Jean Piaget [1896-1980] is best known for his study of children's cognitive development, and his interest in how learner's construct knowledge. For Piaget, knowledge was the ability to modify, transform, and operate on an object or idea in a way that grants the learner understanding through the process of use or transformation. He believed that learning was an activity, and that in emerged from experiences the learner had, both physically and logically, with objects around them. In a late-career interview with Jean-Claude Bringuier, Piaget stated that "Education, for most people, means trying to lead the child to resemble the typical adult of his society … but for me

... education means making creators ... You have to make inventors, innovators—not conformists." Piaget's ideas have had an enormous influence on our contemporary understanding of childhood development and our ideals of teaching and learning. To understand more about Piaget's thought, we'd recommend looking at [THE MORAL JUDGMENT OF THE CHILD](#) [1932], one of his most significant books.

You can watch Piaget explain his constructivist position, with examples from experiments conducted with young learners below:

Lev Vygotsky and the Zone of Proximal Development

Lev Vygotsky

Another developmental psychologist whose ideas have been particularly important to contemporary ideas about active learning was Lev Vygotsky [1896-1934]. While Vygotsky produced several works of great importance, his most influential

idea is probably his conception of **the Zone of Proximal Development [ZPD]**. The zone of proximal development is the distance between what an individual learner is currently able to do independently and what they have shown an ability to do under adult guidance, or in collaboration with more capable peers. Vygotsky believed that what children are able to do with the assistance of others is even more indicative of their present level of mental development than what they can do alone. The zone of proximal development offers a way of thinking about what kinds of things an individual is best prepared to learn and master for themselves, and helps teachers and learners identify knowledges, skills, or abilities that are currently at the upper level of a learner's competence. In other words, the zone of proximal development focuses not on what I can already do, but what I am almost able to do. For most learners, their zone of proximal development is always changing, since the things that they can perform today with assistance they will soon be able to perform independently, growth which prepares them for further learning. This idea has great relevance for models of active learning, since they often emphasize the value of collaborative exploration and peer teaching and focus on the the practical acquisition of procedural knowledge.

Share & Connect

If you've made it this far, congratulations! In many ways this page focused on declarative knowledge and employed a lot of the techniques and approaches associated with older, more passive forms of instruction that we disparaged as being part of the "banking" model in the opening paragraphs. So here's something for you to do if you'd like to make this a more active, participatory experience:

Step 1: Reflection

Think back to the most significant educational experiences you've had. As a learner, who has been particularly influential in your life? It could be a parent, a grade-school teacher, a college professor, a roommate, a fellow member of a bookclub, a river rafting guide, anyone whose teaching style made a difference for you, who initiated meaningful learning. Do you have someone in mind, someone who helped or inspired you to become an active learner? Good.

Step 2: The Gratitude Project

Make a plan to communicate to this person how their influence on your learning has benefited you. Tell them, sincerely, how they made a difference in your life and thank them for what they've done. There are many ways to do this: write a letter (anonymous or signed), send an email, make a phone call, visit face to face. You choose the means of communication, but the challenge is the same for everyone: to express gratitude to this guide or teacher.

Step 3: Trace a Genealogy of Influence

The next step in this challenge involves becoming an active learner again. As a part of your exchange with this influential guide or teacher, ask them who or what influenced *their* teaching style, approach to learning, or educational philosophy. Find out how they become the guide or teacher that they became, who or what influenced their growth and learning, and share your own experiences and insights where relevant. In our experience, this conversation can be just as rewarding as Step 2, and sometimes even more illuminating.

For example, when I [Steel] was doing this activity for myself, I chose my mother, and was surprised to hear her tell me about how she had started and run something called a ["joy school"](#) for me and several neighborhood children when I was very young. Without my even knowing it, Richard and Linda Eyre, the founders of the joy school movement, had been indirect influences on my own early learning experiences, and I've made it a goal to learn more about this program, its founders, and its educational philosophy during the coming weeks.

Step 4: Repeat and Revise

We've tried to show on this page how many of the best ideas and practices of the contemporary higher education have their roots in the experiments and convictions of teachers from the past. We believe that this is true for almost any idea or practice, that nearly everything we believe, know, and do has a rich and interesting contextual history, a past worthy of exploring. As you investigate the roots and influences of the experiences and knowledges that are most meaningful in your own life, you'll find unexpected things that you'll want to learn more about. When it comes to investigating the impact and influence of meaningful teachers, the potential for infinite regress is immense (it seems to be a case where it really is [turtles all the way down](#)!) We hope that you'll continue broadening and deepening your exploration and that you'll share the fruits of your inquiry by encouraging others to branch out, dig deeper, and connect more widely as they take responsibility for their own active, meaningful learning.

Media Attributions

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30. Active Learning Models & Approaches

Observe & Consider

In the following podcast, Steel Wagstaff from L&S Learning Support Services facilitates a conversation about active learning approaches with Jim Brown, an assistant professor in English; Mary Claypool, a recent Ph.D. in the Department of French and Italian; and Beth Fahlberg, a clinical associate professor in the School of Nursing:

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[Download the .mp3](#) (right-click and 'save link as')

Observe & Consider

Models of Active Learning

Active learning can take many forms, follow different models, and serve many different instructional goals. Many of these approaches have areas of overlap with each other and draw on similar pedagogies that focus on student-centered instruction and course learning objectives. In this way, active learning module and lesson design planning relies heavily on the >backward design process (discussed at greater length in a chapter from our section on Blended Learning, where instructors will identify and craft key learning objectives for their students and then work "backward" to design assessment opportunities and in- and out-of-class activities that respond to these learning objectives and help the students be successful in achieving them. This [helpful Educause article](#) on active learning design by three Virginia Tech educators briefly touches on a few of these key design elements and how some might be unique to the active learning environment.

We'll explore these approaches in greater detail and look at some concrete examples of active learning ideas for both smaller courses and large-lecture sections in later chapters, but here are a few active learning models and pedagogical approaches to get us started:

Collaborative Work

Collaborative active learning emphasizes structured group work, sharing, and project coordination in order to solve an academic task or to learn or develop a new skill. This group work can take the form of pair work, small groups of students, or all-class collaboration. Many of these approaches draw on the use of partnerships and targeted working groups in the classroom environment and leverage the community-building energies that these groups foster. The effect can

be increased student engagement, student accountability for their participation and group contributions, and enhanced class cooperation.

Graduate student Eric Vivier [at right] provides peer coaching at The Writing Center

Examples of collaborative work activities include:

- Peer tutoring
- Class debates
- "Share out" and interactive discussions
- Group projects
- Student- or group-led lessons (or portions of a lesson)

Some teaching approaches that can work well with collaborative work activites are: inquiry-based teaching, peer feedback or evaluation strategies, independent (or student-led) project assignments, and student-driven pedagogies. A few great examples of UW-Madison collaborative work environments or resources that model collaborative work are the DesignLab (in College Library), The Writing Center, and GUTS peer tutoring.

Problem- & Inquiry-based Learning

Problem – and inquiry-based learning activities have a flexible format but typically follow a pattern of diagnosis and evaluation of a challenge or problem. The students would be asked to

1. define or identify the problem or challenge,
2. diagnose potential reasons for this problem,
3. brainstorm and evaluate alternative solutions or options, and
4. choose the most appropriate solution and justify the reason for their choice.

Problem- and inquiry-based learning asks the students to assume responsibility and a higher level of engagement with their learning process (and the teaching process) while also encouraging critical assessment, inquiry, and skillful analysis of course materials and topic content. These types of activities can often be very interactive and deeply rewarding for the students, since they frequently feel a sense of accomplishment while completing and sharing their findings.

A case scenario used in the UW Medical School.

Some examples of problem- and inquiry-based activities are:

- Case study analyses
- Independent projects
- Mock trials
- Strategic writing reflections

Some teaching approaches that can work well with problem- and inquiry-based learning activities are: discovery or self-exploration activities or processes, technology-enhanced role simulations, case-centered instruction, and model scenario training. Disciplines like physics, economics, nursing & medicine, and sociology often rely on problem-based learning strategies (as well as many other disciplines). One great UW resource for crafting problem- and inquiry-based learning activities is the Case Scenario Builder/Critical Reader tool created by DoIT Academic Technology.

Games & Simulation Activites

Games and simulation exercises immerse students in responsive active learning environments that frequently simulate a real-life experience. These activities can help create learning situations that would not otherwise be available in the traditional classroom and allow safe, fun opportunities for learners to develop, practice, and improve coping skills for potentially stressful, unfamiliar, complex, or controversial situations. In addition to helping augment course materials, these types of activities can encourage personal initiative and often generate very high levels of motivation, engagement, and enthusiasm.
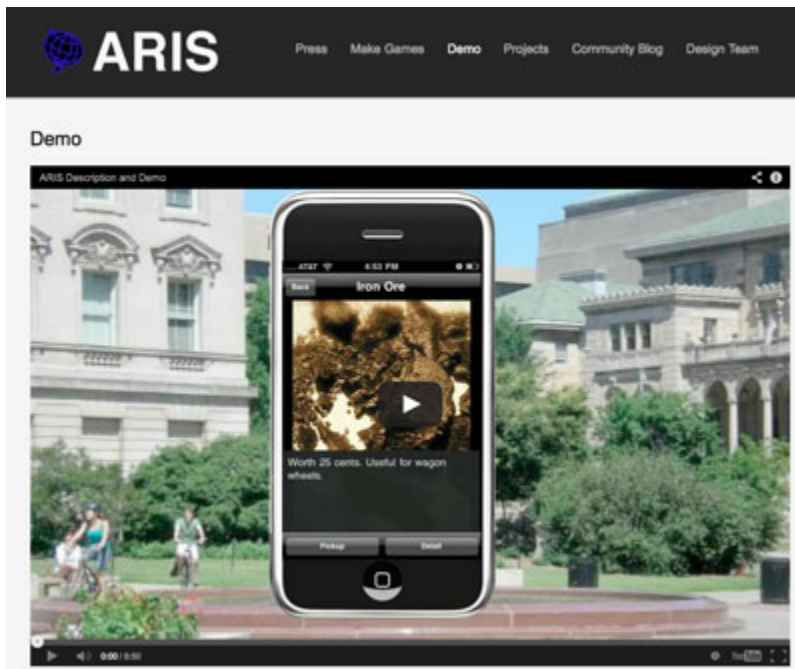
Watch a [demo of the ARIS gaming software](#) being developed here at UW-Madison.

Some examples of games and simulation activities are:

- Technology-enhanced role playing (avatars, for example)
- Place-based gaming
- Game or puzzle creation
- Digital storytelling media

Some teaching approaches that work well with games and simulation activities are: problem-based learning (see above section for some additional details), technology-enhanced instruction, "third place" classroom teaching concepts (the idea that instruction can happen in a third space that is situated in or approximates the real world and is neither in the classroom or online). In addition to technology-enchanced gaming, other examples of games and situated learning activities can run the gamut from in-class mini dramas or play acting to study abroad scenarios. A few UW-Madison examples of game and situational learning resources include DoIT's [ARIS](#) program, [WisCER's Epistemic Games Group](#), and [Games+Learning+Society](#).

   Read an article about epistemic games and their potential to help enhance student learning from the Epistemic Game Group in the Wisconsin Center for Education Research (WCER): ["Assessing Learning in the 21st Century"](#)

Space & Format Interventions

This model of active learning is a broader catchall term that refer to both changes in the physical environment in a learning space as well as adjustments of content and delivery to accomodate more active learning. Space and teaching format interventions can involve reorganizing and reconceptualizing the classroom space so that the environment better encourages independent student work, allows for a fluid and flexible use of class time and work, and fosters collaboration

amongst students. This reorganization can range from rearranging class furniture and making other design modifications to establishing new teaching and learning "movements" which alter the classroom's 'traffic flow' to simply recognizing the different ways that people might naturally occupy a space when they're actively engaged in the learning process.

A WisCEL learning space in College Library

Some examples of space and format interventions are:

- Lab-type classrooms
- Enhanced or Interactive Lectures
- Emporium or collaboration areas
- Studio space
- Moveable furniture classrooms

Most any active learning teaching approach (or traditional teaching approach, for that matter) can work well in an active learning space. We have a growing number of these active learning spaces at UW-Madison, including the Wisconsin Collaboratory for Enhanced Learning [WisCEL] spaces in College Library and Wendt Commons.

If you'd like to learn more about these active learning spaces, check out "Learning in libraries: New center marries instructional and study space," a recent news article about the WisCEL space in Wendt Commons.

Observe & Consider

If you'd like to read more about active learning and explore details of some of the models and approaches mentioned above, here are some additional resources that we'd recommend. Again, we'll be discussing aspects of these models and approaches in depth in Weeks 2-3 when we address specific active learning goals, pedagogies, and activies in small classrooms, active learning spaces, and large lecture courses.

- A brief summary digest of Charles Bonwell and James Eison seminal 1991 book, ACTIVE LEARNING: CREATING EXCITEMENT IN THE CLASSROOM.
- Key ideas from Joel Michael and Harold Modell's ACTIVE LEARNING IN SECONDARY AND COLLEGE SCIENCE CLASSROOMS: A WORKING MODEL FOR HELPING THE LEARNER TO LEARN.

- We can't recommend the outstanding National Resource Council publication HOW PEOPLE LEARN: BRAIN, MIND, EXPERIENCE AND SCHOOL highly enough. You can [download the full-text](#) of the book or check out these specially recommended chapters: on learning generally [[Chapter 1](#)], on designing active learning spaces [[Chapter 6](#)], and on teaching with technology [[Chapter 9](#)].

Guided Self-Assessment

 Practice & Apply

As we've seen in the previous section, there are a number of approaches to making learning more active. In this activity, you'll think though the implications of how a part of your course might work when using one or more of the four models of active learning. Keep in mind that high impact, low risk adaptations are ideal.

Instructions:

1. Download the Worksheet

Active Learning Guided Self-Assessment Worksheet

To get started, download the Guided Self-Assessment worksheet to record your information, or use your own system to write down your notes.

2. Recall the Four Models of Active Learning.

Refer to the previous page for examples of how to align active learning with learning objectives. For quick reference, the four models for active learning are:
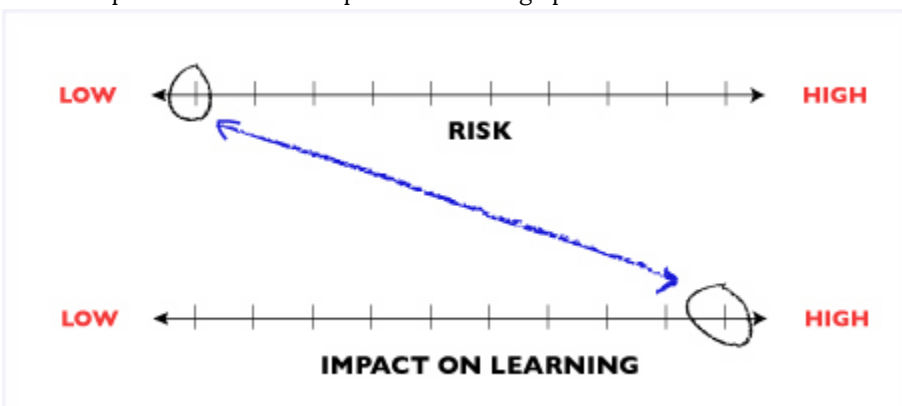
- Collaborative Work
- Problem- & Inquiry-based Learning
- Games and Simulation Activities
- Space and Format Interventions

3. Assess the Risk and Impact of Adaptation or Redesign

Take note of where your changes fall on the spectrum of risk of implementation and impact on learning.

Risk of Implementation and Impact on Learning Spectrum

The ideal interventions combine low risk and high impact on learning

4. Next Steps & Discoveries

    What did you learn from this activity? What did you find out about the alignment of your ideas with their potential impact?

Media Attributions

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31. Why Use Active Learning in Smaller Classes?

Observe & Consider

Lots of motion, little development, no progress. Not what we want in a learning environment.

Teaching in smaller classes offers all kinds of advantages: instructors can usually learn each student's name, tailor their instruction to class interests and ability levels, manage collaborative and cooperative projects, and more easily have meaningful interactions, including discussions, with the whole class. While smaller class sizes seem in some ways to lend themselves naturally to more effective active learning, there's no guarantee that a class will be actively engaged in learning simply because there are fewer students. Similarly, we should be careful not to confuse activity with learning; it is not the case that just because students are actively doing things that they are experiencing meaningful learning, in fact, some kinds of activity may actually detract from learning goals and prove detrimental in the long term. With that caveat in place, we believe that there are active learning is generally both a welcome and effective addition to most small to medium sized courses.

As a general rule, we'd suggest that active learning activities are most effective when they:

1. Promote learners' thoughtful engagement with course material and the learning process
2. Are accompanied by clear instructions and timely feedback (including any necessary correction)
3. Are intentionally aligned with specific learning outcomes.

On this page we'll highlight some of the evidence for the impact of active learning practices on lerarning in smaller classes, focusing on two low-risk, high-impact elements: **involvement** and **student cooperation and collaboration.**

Why Involvement Matters

Alexander Astin

The highly influential educational researcher Alexander "Sandy" Astin (now [emeritus at UCLA](#)) spent much of his research career trying to understand which variables are most likely to predict student success in college. Through the course of his research, he became convinced that what he called "student involvement" was central to undergraduate success. In a [now famous article](#), first published in 1984, Astin defined involvement as "the amount of physical and psychological energy that the student devotes to the academic experience," and argued that the amount of student learning and personal development that learners experience in an academic setting is directly correlated to the quality and quantity of the learner's involvement. Astin believed that the consequences of his findings were fairly clear: in order for a particular curriculum to succeed, above all else it must "elicit sufficient student effort and investment of energy," which meant that educators should "focus less on what they do and more on what the student does: how motivated the student is and how much time and energy the student devotes to the learning process."

How Involvement Affects Learning

In the subsequent decades, Astin's ideas have been deeply influenced several important developments in higher education, especially the development of what are often called [learning communities](#) (whether they be specialized dorms, first-year interest groups, mentoring relationships, service learning courses, language houses, honor societies, or even student orgs). Several thorough research studies have also confirmed many of Astin's core findings: for example, [one study of over 6,000 students](#) in introductory physics courses at two nearby state schools whose sports teams also wear red and white and will remain unnamed found that students' scored nearly twice as high on tests measuring their conceptual understanding in courses that used active learning methods than their peers in traditional courses. Other studies have found

similar improved learning gains in courses that employ an active learning approach, and the researchers who have conducted these studies credit these gains to the nature of active engagement itself and not to any extra time spent studying the topic.

Why Cooperation and Collaboration Matter

The Brothers Johnson!

All of us have experienced the dynamic, multiplying power of working in a healthy collaborative relationship. Cooperation is one of the most fundamental of human activities, the glue of our society, the engine of our deepest and most important relationships. Collaboration and cooperation can also be key drivers in successful active learning experiences, particularly in smaller courses. For more than 40 years, the brothers David and Roger Johnson (both long-time faculty members in the Education department and founding directors of the Cooperative Learning Institute at the University of Minnesota), have studied cooperative learning techniques in the classroom and collected empirical evidence about the impact of cooperation and collaboration on student learning. To learn more about cooperative learning and some popular approaches to its use in the college classroom, we'd recommend this introduction written by two chemical engineering professors from North Carolina State for a symposium on active learning in the analytical sciences.

How Cooperation & Collaboration Affect Learning

Just kidding. The first image was of a Brothers Johnson [George and Louis], but not our Brothers Johnson [Gary and Roger], who are pictured above.

The Johnsons' findings are both convincing and compelling. In their book, ACTIVE LEARNING: COOPERATION IN THE COLLEGE CLASSROOM, the Johnsons and their research collaborator Karl Smith reviewed nearly a century of research into cooperation and reported that cooperation improved learning outcomes in nearly every instance. In 1998, they published a short article in the journal *Choice* which summarized their views on cooperation and its impact individual student learning, and in 2009, they produced what was essentially a concise summary of their career work in EDUCATIONAL RESEARCHER, both of which are well worth reading. They have described successful cooperative learning situations as possessing the following essential elements:

1. Positive interdependence (each group member depends on and is accountable to others, providing a strong incentive to help and accept help from their peers)
2. Individual accountability (each person in the group learns the material)
3. Promotive interaction (group members help one another, share information, offer clarifying explanations)
4. Social skills (group members must practice leadership, communication, compromise)
5. Group processing (group members must regularly assess how well they are working together and make necessary

adjustments)

The Johnsons and other researchers have found that when these elements are present in a cooperative learning setting, the gains in learning that students experience can be enormous. Cooperative learning doesn't only impact academic achievement, either; it has repeatedly been shown to improve the quality of learners' interpersonal interactions, their self-esteem, and their retention in schools or academic programs. As an added bonus, there is some evidence that collaboration is particularly effective for improving retention of traditionally underrepresented groups, which is a major point of concern at UW-Madison. For instance, one meta-analysis of the impact of small-group learning by Leonard Springer, Mary Elizabeth Stanne (educational consultants then based in Madison, and Minnesota, respectively) and Samuel Donovan (then a biology professor at Beloit College) found that small-group learning had a "significant and positive" effect on achievement, persistence, and attitudes among undergraduates, and that this positive impact was "significantly greater for groups composed primarily or exclusively of African American and Latinas/os compared with predominantly white and relatively heterogeneous groups." They also attempted to determine the impact of the amount of time students spent working together on student learning outcomes and attitudes. They found that medium group time had the highest correlation with achievement-related effects, but that high amounts of group time had the strongest positive impact on students' attitudes (to learn more about their criteria for group time or their specific findings, please refer to the study itself).

In a 2004 review of the evidence for active learning's impact, engineering professor Michael Prince summarized the major meta-analyses of cooperative learning then extant and presented the following tables of cooperative learning's effect size on various learning outcomes relative to individualistic or competitive approaches:

Reference	Learning Outcome	Effect Size
Johnson, Johnson and Smith [12]	Improved academic achievement	0.64
	Improved quality of interpersonal interactions	0.60
	Improved self-esteem	0.44
	Improved perceptions of greater social support	0.70
Johnson, Johnson and Smith [13]	Improved academic achievement	0.53
	Improved liking among students	0.55
	Improved self-esteem	0.29
	Improved perceptions of greater social support	0.51
Springer et al. [43]	Improved academic achievement	0.51
	Improved student attitudes	0.55
	Improved retention in academic programs	0.46

Table 1. Collaborative vs. individualistic learning: Reported effect size of the improvement in different learning outcomes.

Reference	Learning Outcome	Effect Size
Johnson, Johnson and Smith [12]	Improved academic achievement	0.67
	Improved interpersonal relationships	0.82
	Improved perceptions of greater social support	0.83
	Improved self-esteem	0.67
Johnson, Johnson and Smith [13]	Improved academic achievement	0.49
	Improved liking among students	0.68
	Improved perceptions of greater social support	0.60
	Improved self-esteem	0.47

Table 2. Collaborative vs. competitive learning: Reported effect size of the improvement in different learning outcomes.

While effect size can be a difficult idea to grasp (especially if you're not a stat-head who already works with it as a mea-

sure), Prince explains that with respect to academic achievement, even the effect documented in the lowest of the three studies cited (Springer et al.) would move a student from the 50th to the 70th percentile on an exam, and would be roughly equivalent with raising a student's grade from 75 to 81.

After surveying the available evidence, Prince (an engineering professor) concludes, "Looking at what seems to work, there are significant positive effect sizes associated with placing students in small groups and using cooperative learning structures," which I imagine is engineer-speak for "Holy cow, this active and cooperative learning stuff really seems to work!" If that's indeed what he is saying, we agree!

Additional Reading:

We made reference to a few different studies on the impact of involvement and collaboration/cooperation on learning on this page. While each of the studies are linked to above, we're collecting each of them here in one place for your convenience.

- Alexander Astin's "Student Involvement: A Developmental Theory for Higher Education" (originally published 1984).
- Richard Hake's "Interactive-engagement versus traditional methods; A six-thousand-student survey of mechanics test data for introductory physics courses" (1998). [Warning: the author is a physicist, and the article certainly reads that way. Not for the faint of heart.]
- Richard Felder and Rebecca Brent's "Cooperative Learning" (2007)
- David Johnson, Roger Johnson, and Karl Smith's "Cooperative Learning Returns to College" (1998).
- David and Roger Johnson's "An Educational Psychology Success Story: Social Interdependence Theory and Cooperative Learning" (2009).
- Leonard Springer, Mary Elizabeth Stanne, and Samuel Donovan's "Effects of Small-Group Learning on Undergraduates in Science, Mathematics, Engineering, and Technology: A Meta-Analysis" (1999).
- Michael Prince's "Does Active Learning Work? A Review of the Research" (2004).

What's Next?

In the next chapter we'll look at active learning spaces on campus (and beyond!), and in the chapter which follows we'll explore some specific practical ideas to increase student involvement and cooperative learning in the small- to mid-sized classes you teach or help support.

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32. Active Learning Case Study

 Observe & Consider

Sample Active Learning Assignment

Here at Learning Support Services, we consult with a lot of outstanding teachers, many of whom are developing their own innovative active learning ideas. One of these instructors, Takako Nakakubo, a faculty associate in the Department of East Asian Languages and Literature, teaches EA 104, a second-semester introductory Japanese language course. Takako's course employs a blended learning model, making frequent use of a course website built in [Moodle](). Despite not being able to understand one bit of Japanese ourselves, we recently saw some conversational videos created by students in one of Takako's classes and were impressed by their quality, inventiveness, and complexity. Below, you can see the initial assignment that led up to the student videos (which Takako was kind enough to translate into English from the original Japanese for us):

Skit Presentation

Schedule

4.17 *(Tue)*

Form a group of three or four and think about the topic for your skit. The skit should be approximately 5-minutes long. You may create a video to present it or perform it live.

4.23 *(Mon)*

Submit the first draft of your skit. Your skit should include the following:

- Grammatical constructions which feature honorific verbs, the passive form, and the causative form.
- Vocabulary that has been introduced in the textbook. Try to use no more than 5 new words.

4.30 (Mon)

Submit the final draft of your skit. This draft must reflect the revisions you've made based on the comments you received on the first draft.

4.25 (Wed) – 5.6 (Sun)

Practice, rehearse, and/or record your skit in preparation for your in-class presentation.

5.7 (Mon) – 5.8 (Tue)

Present your skit in the discussion class. Each class will vote to select what they feel was the discussion section's best skit.

5.9 (Wed)

The students whose skit was selected as the best skit in each discussion section will perform it (or show it if it's a video) during the lecture class.

Grading criteria

1. Clarity: Was the skit easy for the audience to understand?
2. Variety of grammar and vocabulary
3. Memorization
4. Accuracy and fluency
5. Contribution: To be assessed through a peer evaluation conducted by each group member assessing questions like: 'Did each member contribute to the skit equally?' or 'Did all group members practice together?'

Please note that in case of video-recorded presentations, our expectations for 3) and 4) will be higher, because you can record scenes repeatedly and edit them later to create your final product.

Observe & Consider

Reflecting on this Assignment:

Now that you've read Takako's assignment, you probably noted how well this assignment does several of the things that we've highlighted in this module:

- it has clear and specific instructions, including some format and length constraints,
- it provides the instructor's assessment criteria in advance,
- it invites students to work collaboratively and cooperatively towards building or creating an original project,
- it is scaffolded and has several milestones with deadlines along the way to completion of the final project, and
- it encourages student self-reflection through its use of a group evaluation at the end of the project.

In the following podcast, you can hear Takako speak briefly with us this assignment, why it was designed in the way that it was, what she learned from the experience, and the insights that these student films gave her into the benefits of using active learning in her teaching. She also offers some useful context for what's going on in the two films we feature later on this page (which we found really helpful in the absence of subtitles!)

Your browser does not support HTML5 audio. If you'd like to listen to the file, use the download link below.

Download the .mp3 (right-click and 'save link as')

Examples of Student Films

Obviously, a discussion of this active learning assignment wouldn't be complete if we didn't include a couple of examples of these student projects as evidence of the fruits of active learning. While there were more than a dozen student films, we've selected two of our favorites to share as examples of the kinds of work that motivated, empowered, active students at UW-Madison are capable of producing (even in entry-level courses) and without any special technology or film-making training!

We hope that you agree that these are outstanding, creative examples that clearly demonstrate meaningful student learning. It's hard to believe that these are just first-year Japanese language learners. Our belief is that our courses are full of learners like these students (and like Bill Costello, the student we profiled in a video from earlier in this module), students who are curious, capable, eager to be stretched, and willing to fill an active role in their own learning. Like Takako, we've been continually surprised and impressed by what learners make and build when they've been properly prepared, sufficiently primed, and challenged to create products which showcase their knowledge or demonstrate their learning.

![Share & Connect logo]

Share & Connect

Active Learning Assignment Remix

Instructions:

In our discussion with Takako, she expressed a strong interest in hearing what our course participants thought of the assignment and welcomed any of your active learning-inspired suggestions, improvements, or modifications to this assignment. Hopefully, you've already gained experience as an active learning consultant through the improvements you've made or planned to your own teaching and learning and are feeling excited about the opportunity to put your skills and ideas to good use in the service of improved undergraduate education. Now that we're nearing the conclusion of this active learning module, we have one final challenge for each of you:

1. Imagine that you've been invited to serve as an educational consultant for Takako's EA 104 course and have been asked specifically to examine the course's capstone assignment, the Skit Presentation included above.
2. In our conversation with Takako, she indicated that because this is an introductory language course the next time she gives this assignment she wants to ensure that students share the speaking work more equally among group members, even if they choose the film option over the live performance. What specific changes would you advise that she make to the assignment to help ensure this outcome? Share your ideas and comment on your peer's suggestion in the discussion forum we've set up for this challenge.
3. Reflect back on the various active learning strategies, approaches, and techniques we've considered over the past 4 weeks. What else would you modify, change, or alter to improve or adapt this assignment for the next instance of this course? Along with your suggestion(s) for improvement, please indicate briefly why you think your idea would be a helpful change and what its intended impact on student learning would be. Share these ideas along with your ideas for step 2 above.

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33. Active Learning Spaces

Observe & Consider

Active learning classrooms are teaching and learning environments designed with a more student-centered teaching approach in mind. These spaces often include modular furniture that can easily be rearranged and reassembled, moveable writing surfaces, and integrated technologies that support instructors' desires to increase their students involvement by integrating media, peer-to-peer interaction, and collaborative learning activities into their teaching. A key feature of active learning classrooms is their flexibility; the furniture and design choices allow for various room configurations, respond to natural traffic patterns and the "flow" of learning and teaching in that space, and accommodate diverse groupings of students. This design principle of flexibility creates a class environment that can transition easily between class components or activities, like an instructor's presentation, small group work, or student-led demonstrations. As you might imagine, these types of classrooms expand options for teaching and help support the many ways that different students learn.

In the following podcast, Steel Wagstaff from L&S Learning Support Services continues last week's conversation with Jim Brown, an assistant professor in English; Mary Claypool, a recent Ph.D. in the Department of French and Italian; and Beth Fahlberg, a clinical associate professor in the School of Nursing. This week, they offer advice for integrating active learning into smaller enrollment courses and talk about their experiences with active learning spaces:

Your browser does not support HTML5 audio. If you'd like to listen to the file, use the download link below.

Download the .mp3 (right-click and 'save link as')

Observe & Consider

Active learning classrooms are popping up all over our UW-Madison campus and in higher education environments, but these classrooms have long been a key element of primary education (think the square, four-person tables of a kinder-garten classroom or moveable group work tables in a middle school lab setting). Scale-Up (Student-Centered Active Learning Environment for Undergraduate Programs) is a leading national organization that helps to support, define, and advocate for active learning spaces in higher education. Many of our peer universities are also highly engaged in active learning classroom design and implementation and have produced helpful resources encouraging others to build active learning classrooms on their campuses. The University of Minnesota and McGill University both have very well regarded active learning classroom initiatives and are actively publishing current research on best practices for active learning spaces and class environment design (for instance, see McGill's report on their 2009 active learning redesign).

The UW-Madison has been quite engaged in active learning classroom redesign, especially for new buildings and class-room remodeling projects. Take a look at some of the great initiatives on our very own campus!

The Wisconsin Collaboratory for Enhanced Learning (WisCEL)

WisCEL classrooms in College Library

WisCEL hosts some of the best-known active learning spaces on campus. Current WisCEL spaces are in operation in College Library and Wendt Commons in the School of Engineering (with more WisCEL spaces hopefully to be added in the future). WisCEL's goal is to provide collaboration-friendly and technology-enchanced learning spaces that increase student success and support and encourage innovative pedagogies and course design. Find out more about WisCEL by reading this brief descriptive fact sheet or by watching a short video demonstrating a WisCEL course in action:

Afro-American Studies professor Tracy Curtis leads a course in a Media Studio classroom

College Library Media Studios

Just one floor below the WisCEL space in College Library are the Media Studios (connected to the DesignLab space). These bright and welcoming classrooms support courses that integrate digital, multimedia, or otherwise collaborative project-based assignments and design into the curriculum. These are the classrooms that Jim Brown describes using in this week's podcast. You can read more about the adjacent DesignLab and its connection to these spaces in [this library news article from last year](). If you're interested in teaching in one of these space, see the news item we posted last week. Make sure that you get your application in soon, as these spaces fill up quickly!

Classrooms in the new Nursing, Human Ecology, and Education buildings

An artist's rendition of one of the new active learning spaces planed for Signe Skott Cooper Hall.

The UW-Madison's School of Nursing has long been involved in active learning initiatives and is one of the main innovators of active learning space use on our campus. Their new building, Signe Skott Cooper Hall (currently under construction near the Health Sciences Learning Center), is based entirely on scalable and sustainable principles of active learning classroom design. Beth Fahlberg, who you can hear more from in this week and last week's podcast, has written a useful guide to [what works best in an active learning space](), based on the School of Nursing's experience with active learning classrooms.
   Read more about the active learning spaces in the new Cooper Hall School of Nursing building:

- [New building drives changes at School of Nursing]()
- [Signe Skott Cooper Hall fact sheet]()

The Learning Hall in the SoHE's new Nancy Nichols Hall

The School of Human Ecology's new [Nancy Nichols Hall](#) (opened in 2012) and the renovated [Education building](#) (renovations completed in 2011) are not only a great example of active learning classroom design (as seen in the SoHE Learning Hall at right) but also of great space design in general! Each of these buildings incorporates myriad flexible learning and teaching spaces for collaborative work, presentations, studying, and small group projects.
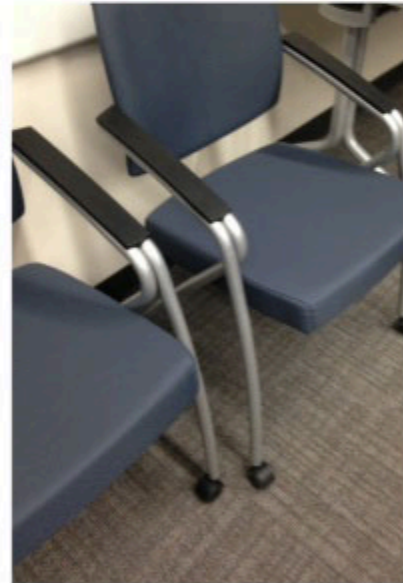
The videoconferencing classroom in 290 Van Hise

Other flexible classroom spaces (like 290 Van Hise)

Many unique flexible classroom spaces exist on our campus, tucked away in various buildings and hallways. One example is our new videoconferencing and collaboration space in 290 Van Hise. This space, like other flexible learning spaces on campus, incorporates modular furniture, a movable teaching station and standing whiteboards, and integrated technology and media support to enhance teaching initiatives and active learning-based course design. Come down to 290 Van Hise to check out the space!

Psychology professor Jenny Saffran teaching an undergraduate class in a typical classroom space at UW–Madison. Photo by Jeff Miller.

Many spaces you already teach in!

The rooms to the right likely look familiar to you as representatives of more traditional classroom spaces around campus. While many of the spaces we use on a daily basis weren't built with all of the affordances of active learning in mind, with a little bit of imagination, some elbow grease, and a willingness to reconceptualize your classroom environment, these too can become active learning spaces!

Even if you take simple steps such as moving a few classroom items around, reconfiguring the furniture, or redesigning parts of your course to allow for more group work (or muster up enough daring to occasionally take your class out of the classroom entirely and into a new and different "active learning" space, like Bascom Hill), you'll have moved toward modifying your traditional classroom into a space that more readily invites the kinds of active learning we've been discussing. In fact, that's just what we'll do in our Share & Connect activity...

![Share & Connect logo] **Share & Connect**

Redesign a space for active learning

Sample Classroom

Now that we've discussed several considerations for active learning spaces, design, and environments, we'd like you to explore ways that you'd make a more traditional teaching space more friendly to active learning. This can be either very conceptual or wholly practical, depending on what's most helpful to you: you can completely redesign the space (ignoring any structural or pragmatic limitations) or just reorganize the room (moving furniture around, bringing furniture in, etc.) to accommodate an active learning activity. The sky's the limit!

Pick a space you teach in or have taught in OR use the sample small lecture room at right as your template. Identify some changes you'd make, and share them in the discussion space. Chime in with ideas and feedback for other class participants, too.

Media Attributions

- 3-modesB
- 3-modesC

34. Practical Active Learning Ideas for Smaller Classes

Observe & Consider

"Learning To Draw": Active Learning from the Learner's Perspective

In last week's discussion, I [Steel] said that I wanted to learn how to draw during this coming year. Well, I was eating lunch with Bill Costello, one of Learning Support Services student workers, and he mentioned that as a fifth year senior he had a few extra spots for electives this year and had decided to take a drawing class. I got excited, and asked if he'd take some time to make a short film with me discussing active learning from an undergraduate learner's perspective and give me a short drawing lesson so I could get started on my own learning goal. He did, and thanks to David Macasaet, our resident filmmaker and media production guru, we made this short film, "Learning to Draw." Enjoy!

Observe & Consider

Last week, we devoted an entire section to Active Learning models and approaches, suggesting that many approaches to active learning could fit into 4 broad categories. This week, we wanted to provide specific instances from among these broad categories that have been successfully applied to small classes as a way of helping you to think about strategies that might work in the courses with which you are involved.

Ask Better Questions

Here are some ideas:

- **Encourage divergent responses:** To encourage dialogue, pose questions that might elicit differing opinions and allow multiple students to respond before weighing in or redirecting the conversation.
- **Reverse the paradigm:** Give students some responsibility in asking good questions by establishing a framework that guides student generated questions. Giving students input can help students take ownership in the class discussion.
- **Follow up:** Ask students to describe how they arrived at an answer.
- **Get comfortable with silence:** there's a broad base of research that shows that if you waiting briefly before calling on someone to answer, more students feel like they have time to think about a question, ensuring a higher quality of

discussion.

- **Consider Bloom's Taxomony:** Align the question with the goal for your activity. Know whether your question seeks an answer that demonstrates knowledge, comprehension, application, analysis, synthesis, or evaluation.

Write and Reflect in Class

Planned writing and reflection activities, from low- to high-stakes, and from formal to informal, offer a great way of increasing student engagement and triggering meaningful learning. We'll look more at writing as active learning in week 4, but for now here are a few ideas for implementing writing and reflection in smaller classes:

- **Assign a rhetorical model:** Ask students to follow a pattern or a template for a written assignment (compare and contrast, definition, film or book review, analysis, exemplification, etc.), provide opportunities for peer review or other revision, and provide them feedback.
- **Three-Minute Papers:** At the end of a class session, invite students write for three minutes in response to a specific question (it could be as open-ended as "What's the most important thing you learned today?" or "Which concept or idea from today's class was the most difficult for you to understand?" or "What was the most confusing part of today's class?").
- **Concept Evaluation:** Make a handout with several likely student questions on your topic for that day and ask students to circle the ones they don't yet know the answers to and turn in the paper. A variation of this activity could be to distribute a 3×5 card to each student with a statement related to content knowledge written on it. Half should feature true statements, and half should make false claims. Students must decide if their card's statement is true or false, using any available means and must group themselves on one side of the room or the other. After grouping, the whole class works through the claims, discussing their accuracy and reviewing the ideas on each card.
- **Letter of Advice:** Near the end of a course ask student to write a letter of advice to future students on how best to succeed in your course.
- **Conceptual Haiku:** After students have been introduced to a new topic or concept, ask each of them to write a haiku (a three-line poem which follows a simple syllabic pattern, 5 syllables, 7 syllables, 5 syllables) on that topic and share their writing with a classmate or small group.
- **Directed Paraphrasing:** Ask students to paraphrase part of a lesson for a specific audience and a specific purpose (when possible, try to make this activity useful by giving it a real-world connection).
- **Word Journal:** In a similar assignment, ask students first to summarize an entire topic with a single word. Then give them 5 minutes to produce a paragraph which explains their word choice
- **Focused Reflection:** After an in-class experience/activity, ask students to reflect on "what" they learned, "so what" (why is it important and what are the implications), and "now what" (how to apply it or do things differently)

Solve Problems

Posing meaningful problems with a direct connection to your academic discipline, course content, or subject area and inviting students to develop creative solutions is a fantastic way to catalyze meaningful learning. Here are some ideas:

- **Case studies:** Immerse students in an authentic context using case studies that illustrate how course concepts map to the real world. See more about how the UW Engage program is helping instructors develop interactive case sce-

narios.

- **Decision making model:** Present a problem and have students use John Dewey's decision making model in groups. This model follows this basic structure: (1) Diagnose several possible causes, (2) search for alternate solutions, and (3) evaluate alternatives to choose the best solution.

If you're planning to introduce problem-solving activities to your class, consider these means-tested approaches and advice adapted from AJ Romiszowski's "The development of physical skills: instruction in the psychomotor domain." in INSTRUCTIONAL-DESIGN THEORIES AND MODELS: A NEW PARADIGM OF INSTRUCTIONAL THEORY, Volume 2 (1999).

1. **Model the problem-solving process for students.**

   - Let the student observe a sequential action pattern before attempting to do it.
   - Demonstrate a task from the viewpoint of the performer.

2. **Setting specific goals can lead to more rapid mastery of a skilled activity.**

   - Involve students in producing a shared definition of what constitutes success.
   - Ensure that students have a clear understanding of what it means to solve different kinds of problems.

3. **In general, 'learning feedback' (results information) promotes learning, and 'action feedback' (control information) does not.**

   - Letting students complete the problem-solving task before receiving feedback about their success promotes learning better than offering comments at each step in the solution.
   - In general, feedback is more effective in promoting learning when it transmits more complete information. Students learning to solve problems need more than a simple assessment of whether their answer was correct or not.

4. **Transfer and retention of skills and abilities are improved by what educational researchers call 'overlearning.'**

   - The more problems students solve (with appropriate feedback), the more readily they will be able to solve novel problems, a defining characteristic of meaningful learning.
   - Avoid too fast a progression to more difficult tasks. Present students with a sequence of problems that moves from easy to hard as their performance improves.

Collaborate and Cooperate

Successful collaborative or cooperative learning activities generally accomplish two things: they enhance student learning and autonomy and they develop social skills like decision making, role development, conflict management, and effective communication. Research into effective collaborative learning in the college classroom has found that there are three simple, often-overlooked components which enormously improve the quality of small-group work:

1. Students should receive clear, explicit instructions about the tasks they are expected to perform
2. An appropriate amount of time must be allotted for the activity and agreed upon in advance
3. Students in the groups should agree upon their roles within the group. In most cases one student from the group

should be assigned as a recorder/reporter and be charged with providing feedback when the group reports back to the larger class.

Here are some ideas for cooperative activities:

- **Peer teaching:** Form a group assingment that requires students to lead a class (or portion of a class). Require more than just a presentation.
- **Role play:** Organize a discussion where students assume the role of characters in a hypothetical situation. Shedding their real identity provides learners freedom to disagree and consider alternate perspectives.
- **Scenarios:** Build activities around realistic scenarios (perhaps current events) to give an opportunity to apply abstract concepts.
- **Create healthy competition:** Develop competitive exercises (games) that allow learners to challenge and motivate one another ([Game-based learning](#)).

Practice & Apply

Let's put some of these ideas into practice. Use either your own course or one of the two mock course scenarios below as a template. Picture how a typical class day in this course might go: What are the activities? How is the hour structured? How is a lecture delivered? Are the students engaged with the material, and if so, how exactly? Now choose a short segement of this class (10 to 15 minutes) and reimagine that segement as a short active learning mini-module. Use our session notes, discussions, and ideas above to help guide you and to help you construct your active learning mini-module. Remember, active learning can be applied to your course design slowly and in small chunks; it does not have to be as dauting as sitting down to redesign your entire semester-long course all at once! Let this activity encourage and inspire you, and perhaps you might even incorporate the mini-module that you reinvent here into your course sometime soon!

Sample Scenarios:

- A mid-sized History lecture course (about 50 students). The course is mostly lecture-based, and while the students seem interested in the material, they aren't quite as engaged as they could be. It is still early in the semester, so some community-building activities couldn't hurt to help to encourage a more cohesive group. The course meets twice per week for 75 minutes each time. The course is currently only face-to-face with no online or blended course components.
- A small, intensive, upper-level literature course (about 18 students). The students are very familiar with the course materials but don't seem to grasp entirely the current analytical approach that you're discussing in class. The course meets four times per week for 50 minutes. The course does include some blended and online elements for out-of-class practice and a few assignments.

Media Attributions

- 3-modesB

35. Active Learning in Large Lecture Courses

Observe & Consider

The Large Lecture and Its Challenges

As Bill Costello, our guest undergraduate turned art teacher, shared with us in last week's video, a common student perspective is that the typical undergraduate class "mainly consists of the professor getting up on the stage and giving variations on a PowerPoint." This perception isn't just shared by undergraduates either. In fact, in a 2008 survey of UW-Madison instructors conducted by DoIT Academic Technology, more than two-thirds of all respondents chose "Making lecture more interactive and engaging" as their number one teaching challenge from a list of 15 choices. In 2010, more than half (53%) of all respondents listed "Making lecture more interactive and engaging" as their top teaching challenge, with another quarter (24%) of respondents listing "Providing students with practice or reinforcement" as their top challenge. It's clear that both students and faculty are interested in injecting active learning activities and approaches into the traditional lecture, but it's not always as clear how to best do this.

"Getting up on the Stage": Making Lectures More Interactive and Engaging

Before we begin exploring specific practical ideas for reconfiguring the lecture, we want to stress that we don't believe that lecturing itself is inhospitable to active learning. In this week's podcast, you'll even hear David Zimmerman offer a

defense of what he calls "the humble lecture." Students can (and do) learn from lecturing, and if you teach a course where lecturing plays an indispensible role in accomplishing your course goals, it's important to prepare and deliver quality lectures, and to perform them in ways that fit your own personality and teaching style. It can also help to review some of what we do know about effective lectures. We believe that most effective lectures share a few common features, including the following:

1. **Variety:** Most effective lecturers use a variety of instructional strategies and materials on different days and within a given lecture. This also applies to your own presentation style: as you vary the speed, the loudness, and the tone of your voice you send signals about the relative importance of different material in each lecture.
2. **Visual Engagement:** Carefully selected visuals (whether projected or produced verbally through descriptive language and evocative storytelling) can help focus students' attention and reinforce lecture material. This principle also applies to how you establish and use eye contact and move through classroom space: consider dividing the room up into four sections and practice periodically directing your attention to each of the sections as you lecture. In now infamous studies of how we communicate our feelings (which became the source of the oft-quoted [7-38-55 rule](#)), Albert Mehrabian found that listeners perceive our body language and vocal delivery as far more important indicators of our emotional state than the words we say.
3. **Personal Relevance:** Students learn best when they are asked to provide personal insights and interpretations. Tell stories (from your own life or from literature or history) which help illustrate your lecture's content or provide a memorable hook for abstract ideas. You can promote real-world application by starting a segment of your lecture with a real-world problem and then working backward to the concepts, formulas, solutions, or application of knowledge which help resolve it.
4. **Clarity, simplicity, organization:** Share your daily objectives and lecture outline at the outset of your lecture and clearly signal when you move from one segment of your lecture to another. When incorporating a class activity, build in opportunities for reflection on the activity's purpose and the learning objectives it supported.

In addition to these key features, there are a number of other suggestions in the literature for revitalizing or reinvigorating the traditional lecture. While we obviously can't share all of them with you, here are two helpful sources we do recommend:

- In 2009, DoIT AT and the UW Teaching Academy partnered to host an event that addressed the instructor survey described in this section's opening paragraph by introducing the idea of "threshold concepts" and listing several methods for incorporating these into lecture courses. We've made [a brief 2 page handout](#) based on their presentation materials.
- In 1996, the well-regarded teacher and historian [Charles Bonwell](#) published a short article called "[Enhancing the Lecture: Revitalizing a Traditional Format](#)." It's pretty much what it sounds like from the title.

"Giving Variations on a PowerPoint": Using Presentation Software

While some lecturers prefer to speak directly to their classes without technological intervention, many teachers use presentation software to help them execute their lecture plans. The most ubiquitous in college classrooms ([for](#) [good](#) [or](#) [for](#) [ill](#)) is still [Microsoft's PowerPoint](#), though there are [number of competitors or similar products](#), including [Apple's Keynote](#) and the free web-based presentation tool [Prezi](#).

Each of these tools has their own strengths and weaknesses, and while any of them can become a crutch for a unprepared or disengaged presenter, they can also help presenters support their meaningful learning and serve as aids for active learning ideas. If you use presentation software in your lectures, and want some tips or ideas about improving its effectiveness, we've collected a few useful resources to help you get more out of your lectures:

- The University of Minnesota's Center for Teaching and Learning has built really useful self-paced tutorials on "[Active Learning with PowerPoint](#)" "[Designing Smart Lectures](#)" and "[Making Active Learning Work](#)." All three of these are detailed, practical, and very thorough resources.
- The University of Central Florida's Center for Teaching & Learning has built [a great page on the effective use of PowerPoint](#), complete with best practices, sample approaches, how-to guides, and curated resources.
- In February 2013, UW-Madison's very own [DesignLab](#) hosted [a fantastic workshop](#) on improving your (and your students') presentations. Here are [the slides from that workshop](#) (complete with best practices, tips, and campus resources).
- DesignLab consultants Kevin Gibbons and Dan Banda also made a concise, attractive [two-page handout](#) which encapsulates their big take-away ideas, compares leading presentation softwares, and lists best practices.

Now that we've discussed some of the ways of improving traditional lectures without abandoning the form itself, in the next chapter we'll take a look at some of the specific problems that traditional lecturing poses in relation to student learning and explore some specific approaches to the large lecture class that incorporate active learning activities.

Media Attributions

- 3-modesB

36. Practical Active Learning Ideas for Large Lecture Courses

Observe & Consider

In this week's podcast, Steel Wagstaff from L&S Learning Support Services facilitates a conversation with Janet Batzli, the Associate Director of the Biocore program; David Baum, a professor of Botany; and David Zimmerman, a professor of English, about their experiences teaching large lecture and laboratory classes. In this conversation they share best practices, offer useful ideas and tips, and provide valuable insight into how they've introduced active learning and increase student involvement in larger courses.

> An audio element has been excluded from this version of the text. You can listen to it online here:
> https://wisc.pb.unizin.org/teachingwithtech/?p=122

Download the .mp3 (right-click and 'save link as')

Observe & Consider

Common Problems with the Large Lecture

Learning by osmosis? These students appear to be practicing the popular, though non-scientific, learning method of placing their faces on course materials, closing their eyes, remaining perfectly still, and concentrating very hard.

It's probably no surprise to you that the large lecture has received heavy, sustained criticized as an instructional format. And yet, it has survived, like other unhelpful nuisances (Hello flat-earth theorists, Sunny Delight, the electoral college, and the mosquito!). You've all had (and hopefully shared) horror stories, seen examples of disengaged teaching, passive participation (or worse) from students, and felt the frustrations of trying to fit a round peg (effective, engaged pedagogy and meaningful learning) into a round hole (poorly designed spaces, overenrolled courses, and unprepared or disinterested students). Some of the biggest problems with large lectures are the following:

1. the limits of student attention
2. poor rates of retention & transfer
3. encourages learner passivity or distraction

In the following sections, we'll examine some specific, practical ideas that address these problems and have been demonstrated to improve learning outcomes in large lecture courses.

Problem #1: The Limits of Student Attention

Researchers studying the learning experiences of college students in standard lectures found that after an initial settling-in period of five minutes, students readily assimilated material for the next five minutes. Ten to 20 minutes into the lecture, however, confusion and boredom set in and assimilation fell off rapidly, remaining low until a brief spike just before the lecture's end. These findings have been confirmed and verified in a number of subsequent studies. If we know that

learning is uneven or even ineffectual when spread continuously in a 50 minute (or longer) lecture without breaks or variations, why continue doing it?

Solutions:

The most basic solution to this problem is to intentionally break the lecture every 15-20 minutes, inserting brief demonstrations or short writing and reflection exercises followed by class discussion. There are a number of formal strategies that take this basic approach, including the following:

1. **The Feedback Lecture**: Initially developed at Oregon State University in the late 1970s, the feedback lecture is built around a supplemental study guide that provides assigned readings, pre- and posttests, learning objectives, and an outline of lecture notes. The basic format consists of two mini-lectures (each roughly 20 minutes in length) separated by a small-group study session where students respond to discussion questions focused on the lecture material provided by the instructor. These questions can take many forms, from standard open-ended questions to having groups of two or three students begin by considering a judgment question and then building a specific response based on specific information or evidence presented in the course. This large-lecture method was enormously popular among students who experienced it: 99% of students stated they found the discussion break either "useful" or "extremely useful" and 88% indicated that if given a choice, they would prefer a course taught using the feedback lecture over a traditional lecture course.

2. **The Guided Lecture:** In a guided lecture, the instructor begins by announcing the lecture's primary objectives, which students are encouraged to record. The instructor then asks students to put away their writing utensils and electronic devices and actively listen to a dynamic lecture which lasts approximately one-half of the class period (25-30 minutes). Their instructions are to try to determine the major concepts presented and remember as much supporting data as possible. At the end of the lecture, students are given five minutes to recording all of the salient points of the lecture they can recall. After these five minutes have passed, students are placed in small groups where they work to conceptually reconstruct the lecture, listing its major points and relevant supporting data. Once they've done this, students then prepare their complete lecture notes, with the instructor making herself available to resolve questions as they arise. As a homework assignment, students are asked to reflect on the lecture later in the day and to write the major concepts and relevant supporting information in narrative form (some instructors ask them do this without making reference to their lecture notes). At the beginning of the next class, faculty may instruct students to write a brief response to a question or problem based on the previous lecture and then pair with a partner seated on the left or right to compare and discuss their responses.

3. **The Responsive or Interactive Lecture:** There are a number of variations on this approach. In one, instructors devote one class period per week to answering open-ended, student-generated questions on any aspect of the course (see this course's module about effective online discussion for some ideas about how to do this online). A few rules apply: all topics must be couched as questions and while any student can submit as many questions as they wish, they were also asked to briefly explain why they considered the question important. The class then ranks or orders the question based on relevance or interest, and the instructor responds to as many topics as time allows. Another variation of an interactive lecture can begin with students brainstorming what "they know or think they know" about a given topic while someone records the contributions in a location where all participants can see them. The instructor then uses these contributions to build a conceptual framework around the topic and correct any observed misconceptions.

Resources:

- Education professor Charles Dennis Hale has assembled [a very thorough chapter outline](#) on several types of inter-active lectures. As prose, it's not the smoothest read, but it's packed with resources, references, and has an excellent bibliography.
- William Cashin, an emeritus professor at Kansas State, has written [a short IDEA paper on effective lecturing](#) that includes several useful tips and ideas as well as a helpful bibliography.

Problem #2: Poor Rates of Retention and Transfer

Want some depressing news? What do students remember from a course a few months after they've completed it? The research shows that in most cases the answer is "almost nothing." While it's unrealistic to expect all of our students to remember all (or even) most of our lecture content, most of us want to believe that our teaching does make a substantial difference in our students' development, that what we do and say can positively impact their long-term memory and that what they learn in our context- and discipline-specfic class will be useful to them in other parts of their lives (what educators and psychologists call [positive transfer](#)). The researchers who have studied the difficult problems of content-knowledge recall and skill transfer have found that there are things that you can do, even in large lecture classes to positively impact what students learn (and retain) even after they've taken your final and destroyed thousands of brain cells over their winter or summer break.

Solutions:

One surprising research finding from the past few decades has been that testing seems to have an almost magical ability to improve student learning. Researchers don't understand exactly why they work in this way, but in several studies, students who are asked to take a quiz or test immediately after a lecture were found to have much higher rates of long-term retention, for both factual and conceptual knowledge.Students do experience considerable anxiety about tests and quizzes, some of which is probably productive, and some of which probably isn't, but here's the remarkable thing: testing seems to have the same positive impact on learning even when their results aren't heavily weighted as part of their final grade. Cognitive psychologists have come to describe the effect as "the testing effect" of "testing-enhanced learning." David Myers describes some of the basic principles behind the testing evidence in this engaging 5 minute film:

UW-Madison psychology professor Brad Postle recently received a DoIT Engage award to implement a testing-enhanced learning plan in a large undergraduate lecture course he teaches and found that it had a dramatic effect on student performance, doubling the number of 'A' grades earned in his course compared to prior semesters, drastically reducing the number of students who failed the course, and improving overall performance. You can watch a brief video in which Dr. Postle describes the project's impact on student learning [at the DoIT engage site](#).

When it comes to applying the evidence for testing-enhanced learning in your large lecture courses, here's our advice: use quizzes, exams, and tests as regular parts of your lecture plan, including for non-evaluative purposes. Many instructors on the UW campus and elsewhere, particularly in STEM courses, have begun integrating student response systems (a fancy name for clickers and clicker software) into their lecture plans, with positive initial results. Regular low-stakes tests and quizzes provide crucial self-assessment and evaluation opportunities and allow students to practice/demonstrate

content mastery. Composing these exams can even be a collaborative assignment for students. Ask students to make up a test or suggest test questions that require higher-level thought about concepts contained in their reading assignments. Put learners in groups and ask them to take each others' tests. Students can then discuss their exams tests with partners, verify answers, question wording, see if tests relate well to the reading assignment, and share particularly good (or difficult) questions with the whole lecture session.

Resources:

- Read [a review of the literature documenting the testing effect](#) published in PERSPECTIVES ON PSYCHOLOGICAL SCIENCE in 2006 by Henry Roediger and Jeffrey Karpicke, psychology professors at Washington University in St. Louis. Roediger also directs the [Test-Enhanced Learning in the Classroom project](#), which runs a website listing their several publications.
- Read Shana Carpenter's brief (5 page) 2012 [review of the evidence for testing's impact on positive transfer](#) (learner's ability to apply their learning to new situations).
- German educators designed [a study testing the effectiveness of online quizzes](#) used in conjunction with a large lecture course. Students in the interactive quiz lectures reported higher levels of satisfaction with the course, and also reporting higher levels of attention, activity and perceived learning success. Because it was conducted by Germans, it was very precise.
- Read Shanta Hattikudur and Bradley Postle's [description of the effects of Test-Enhanced Learning](#) on their cognitive psychology undergraduate lecture course at UW-Madison.
- DoIT's Engage program also hosts a very useful [page about student response systems (clickers)](#) and their impact on student learning.
- In 2012, University of New England professor Shawn Keogh [published a review of the existing literature about the classroom use of clickers](#), highlighting major perception and outcomes of their use, and empirically documenting their usefulness in the management discipline.

Problem #3: Encourages Learner Passivity

Want even more depressing news? Consider what the typical student does in a typical lecture to meaningfully engage their higher-level cognitive abilities. Research indicates that left to their own devices, most students do almost nothing that contributes to long-term meaningful learning. In some classes they're little more that amanuenses, furiously transcribing the lecturer's slides word for word from projection screen to their notebooks. In other lectures, they passively watch, listen, or receive information, taking in a performance as if it were being televised. In other lectures, they drift off into their own private worlds, sleeping, chatting or texting with peers, or browsing the web on personal electronic devices. Without proper design, guidance, and instruction, large lectures can actually discourage meaningful engagement and establish (or confirm) poor learning patterns and habits.

Solutions:

A few paragraphs up we discussed the idea of the interactive lecture and our podcast guests shared a number of activities that have helped them discourage passivity in their large lectures and laboratories. David Baum's idea of 'barbed content' is a particularly vivid image, and there are several ways that you can add barbs to your lecture ideas and help students engage intellectually with your lecture material and take up a more active, constructive role as learners in your course. In the video below, David Abbott, a professor of Obstetrics & Gynecology at UW-Madison, discusses ways that he recently transformed his large lecture course into a more interactive, active learning environment with help from an DoIT Engage award.

In addition to the ideas that Dr. Abbott described and those described in this week's podcast, we'd also suggest trying any or all of the following:

"Where Am I Stuck?" Activity: Fancher Wolfe, now an emeritus economics professor at Metropolitan State University, developed a helpful activity in which he would regularly break students into small groups (4-6 students per group) 15 minutes before the end of class. He would give each person in the group two minutes to tell others where they were feeling stuck in the course, what they presently found difficult or confusing. If a student feels everything is clear, she can pass. One student keeps time and another acts as the group's recorder. Once each member has spoken, the instructor gives them three minutes to try to reach a consensus on a particular sticking point that's troubling the majority of the group members which the group's recorder can then report back to the larger group or share directly with the instructor, who adjusts future lecture plans accordingly.
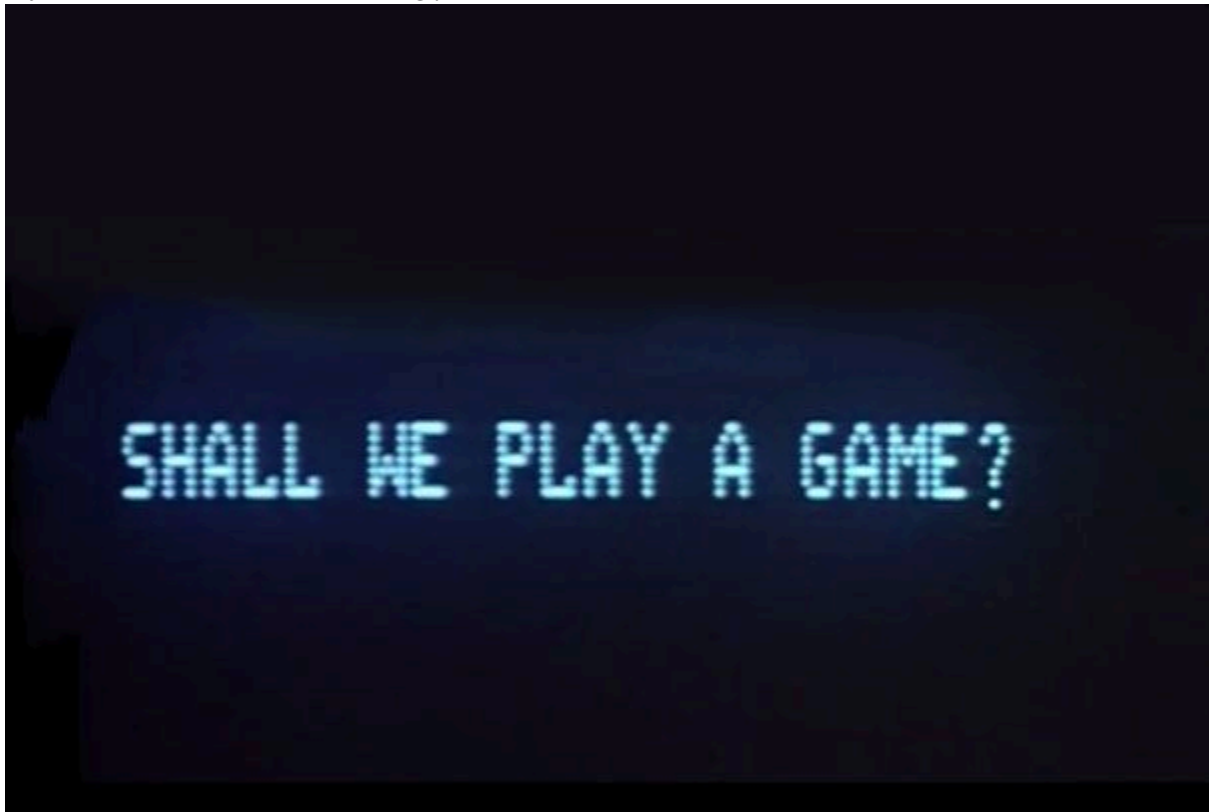
Large-Lecture Activities: With careful planning and some advance preparation, large lecture settings can be effectively used for staged debates, simulations, role playing, or even place-based instruction or field trips (which Janet Batzli discusses in this week's podcast). One way to approach these activities is to build the lecture around a problem or challenge that can best be solved with ideas or concepts introduced during the lecture. Instructors prepare the group with

a minilecture and then pose or introduce a specific, real-world problem. The instructor might then divide the class into two or more large groups, giving each a well-defined role in and asking them to develop a position or describe a course of action. Once the groups have had sufficient time to discuss and develop their ideas, the instructor can ask each group for participants to represent their group's position in whatever activity format the instructor has chosen for that class: whether it be a formal debate, a simulation, role playing, or even a panel discussion.

Structured Note-Taking: Even in lectures where the instructor is the primary speaker or actor, students need not be passive listeners only. Instructors can do a great deal to train students in the art of active listening and help provide useful guidance when it comes to effective note taking and study habits. There's a wide and extensive literature describing several different note-taking and active listening methods, which generally indicates that students who develop the habit of succinctly summarizing lecture content and those who ask and answer questions in their note taking practice perform better than untrained students who tend to simply copy and lecture material verbatim for later review. Something as simple as building structured pauses into lectures for students to consolidate their notes and reflect on their learning can make a surprising difference. In one study, an instructor paused for two minutes on three occasions during each of five lectures; the intervals between pauses ranged from 12 to 18 minutes. During the pauses, students discussed and reworked their notes with a peer, with no direct instruction or interaction with the lecturer. At the end of the lecture, students wrote down everything they remembered from the lecture in three minutes. In two separate courses repeated over two semesters, the results were striking and consistent: students hearing the lectures where the instructor paused did significantly better on both the free-recall quizzes and an end-of-semester comprehensive test (the difference in mean scores was large enough to make a difference of up to two letter grades). Next week we'll discuss even more writing and reflection activities in greater detail, but for now you can read that study as well as a comparative study of note-taking methods in the resources section below.

Resources:

- Legendary education professor Jim Eison has written a fantastic, detailed [description of active learning techniques for large lectures](), including references to the pause procedure (described in literature from the late 70s-early 80s).
- In 1992, Alison King, then a California State education professor, published a [comparative study of the effectiveness of different styles of notetaking]() in the AMERICAN EDUCATIONAL RESEARCH JOURNAL.

Practice & Apply

Guided Self-Assessment: Active Learning in Large Lectures
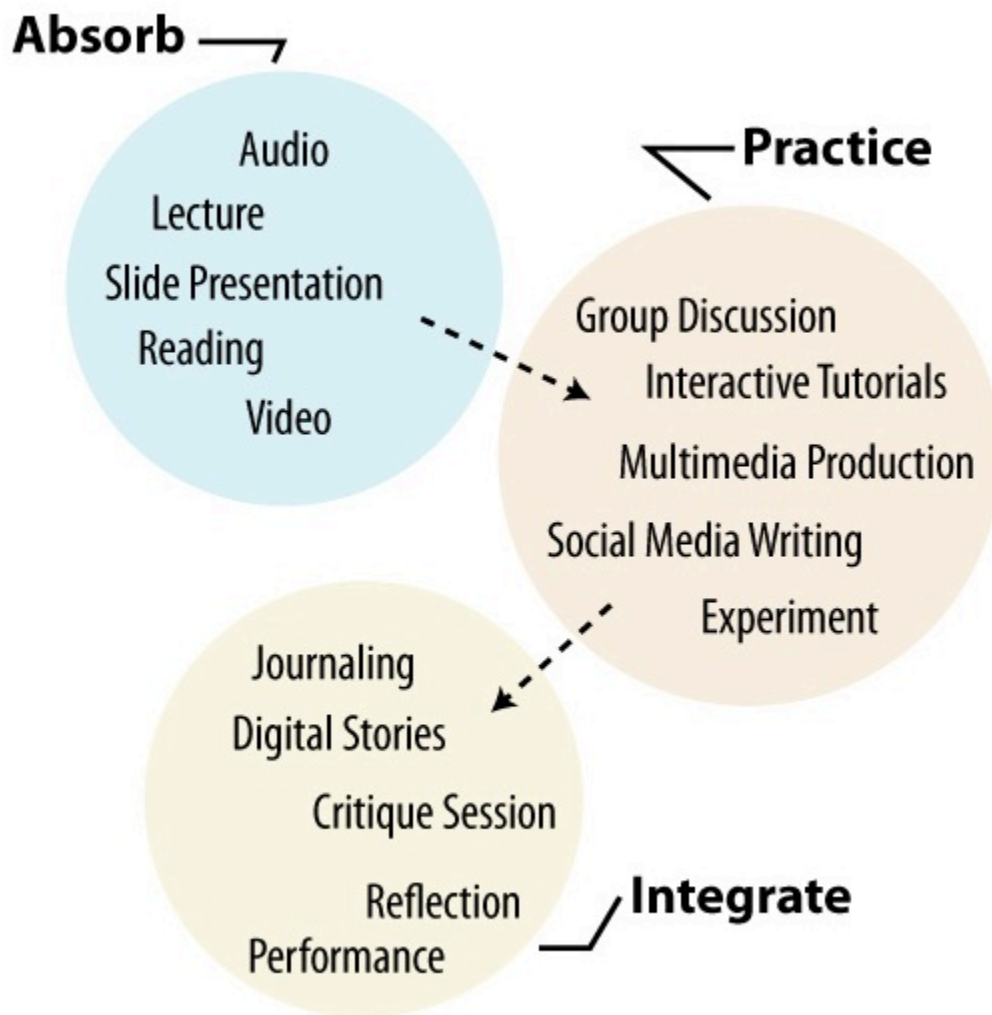
Visualization of active learning activities. Concepts adapted from William Horton's E-LEARNING BY DESIGN, 2nd ed., 2011.

   Absorb activities are a way to communicate essential course concepts so students are both informed and inspired. Activity objectives in this domain involve words like infer, interpret, paraphrase, recall, detect, & attend.

   Practice activities help students focus on taking the information they have learned and actively work with it. Practice objectives in this realm include words like discover, verify, organize, discuss, develop, & apply.

   Integrate activities allow students to apply what they've learned in a realistic context or link new information to what they already knew. These activities are generally flexible to allow students to make a personal connection with course concepts.

Instructions:

Guided Self Assessment Worksheet (pdf)

Think about a lecture that you give or one that you're familiar with as a student. Next, break the lecture down into its component parts. Use this worksheet to record and adapt the lecture's main elements. Identify areas that you would like to make more active.

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# 37. Active Learning in Blended & Online Classes

Observe & Consider

In part one of this week's two-part podcast, Steel Wagstaff from L&S Learning Support Services facilitates a conversation with [Greg Downey](#), a professor in the School of Journalism and Mass Communication and School of Library and Information Studies, and Brad Hughes, the longtime director of UW-Madison's outstanding [Writing Center](#). In this segment of their conversation, they talk about how their experiences with blended and online courses have impacted their views of student engagement, the importance of active learning, and the power of connection.

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The Challenge Posed by Blended and Online Classes
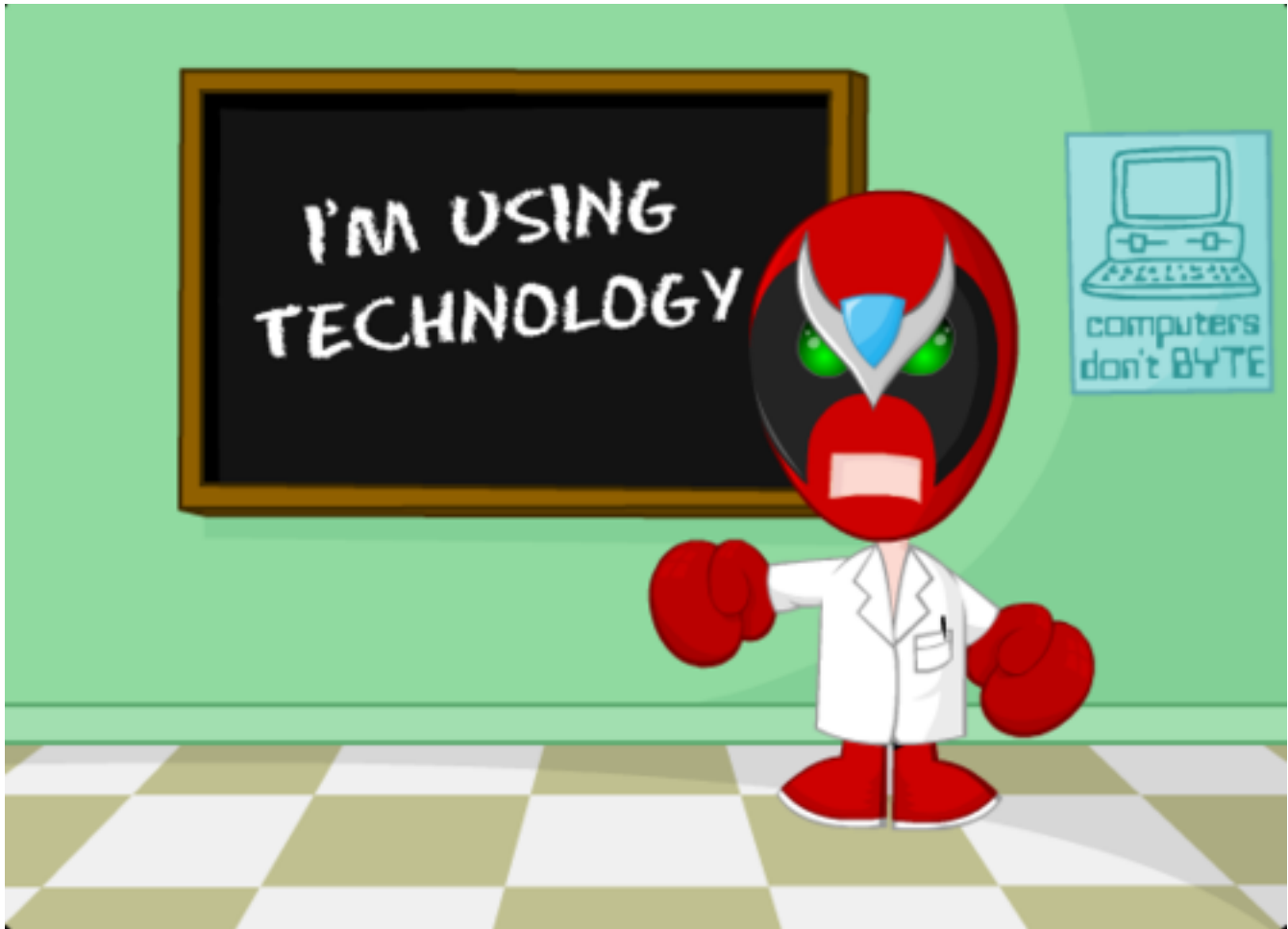
Strong Bad is probably all over MOOCs

If you thought that large lecture classes were impersonal and rife with passivity, what does that mean about online-only courses, courses in which you can't even see the bored, sleep-deprived students, classes in which you have far fewer non-verbal or visual cues to increase your awareness of where students are flagging or confused, and whose asynchronous nature makes it difficult to get an accurate reading of the overall class' pulse and progress at a given moment? Are students struggling to understand the content you posted two weeks ago, or have they not yet got around to reading it? It can sometimes be difficult to know.

Assessing and diagnosing barriers to student learning is only one part of the challenge posed by online instruction. Some online courses are criticized by instructional designers for their occasional tendency to maximize some of the worst elements of higher education (like large class sizes and impersonal instructor-student and student-student interactions). They're popular among administrators who want to decrease student time to graduation, offer consumers greater convenience and flexibility, and grow tuition revenue while decreasing labor costs, but there are several instructors and students who have complained that without proper care and planning, online instruction can resemble the banking or transmission model on steroids, relying too-frequently on less-engaging models of content delivery, skill development, and evaluation.

Making Online Courses Interactive and Engaging

Ally Sheedy and Matthew Broderick demonstrate the power of collaborative learning in a very early online learning environment. Game of chess, anyone?

Before we begin exploring specific practical ideas for active learning in a blended or wholly online learning environment, we want to stress that we believe that online learning can be profoundly active. As we noted in our previous module on blended learning, online resources offer several advantages to both instructors and learners when they're used intelligently. For these advantages to be maximized, however, we believe that the following considerations should be in place:

1. **Alignment:** Most effective courses, whether blended, online, or entirely face to face, are intentionally and carefully aligned, meaning that each of the course's most important components (like instructional materials, learning activities, student assignments, assessment, course tools or media) work together to ensure that students achieve desired learning outcomes. Consider regularly sharing your daily and weekly objectives upfront with all class participants, and ask students to help you identify areas or parts of the course that feel disconnected or poorly aligned.
2. **Clear instructions & explicit expectations:** In many blended or online environments, students don't have all of the opportunities for informal interaction, direct modeling, or question asking that can help establish norms and practices in face to face classes. When teaching a blended or online course, it's especially important that instructors clearly explain their expectations for students, and provide simple, direct models for them to follow as they begin to develop the habits and practices they'll need to master to succeed in the course. In the podcast, Greg and Brad both note the importance of helping students understand the course's unique communication situations early on, which may require instructors to be more explicit about their instructions and expectations than they might otherwise be.

It's also helpful to establish working routines and regular deadlines in courses without much face to face time so that can begin establishing patterns or schedules of engagement with course materials, interacting with their peers, and completing required work.

3. **Offer multiple invitations/opportunities for engagement:** The most effective blended and online courses offer learners with several points of entry and methods of engaging and interacting with its various components (whether it be instructional material, the instructor, or other learners). Consider developing several different types of activities and assignments, and look for ways to encourage (or require) students to make meaningful connections between their lives and interests and course material. When developing a class activity for a blended or online course, take special care to build in opportunities for reflection on the activity's purpose and the learning objectives it supported.

In addition to these key features, there are a number of suggestions in the literature for improving the quality of active learning in blended and online courses. While we obviously can't share all of them with you, here are two helpful sources we do recommend:

- Quality Matters, a faculty-centered peer-review process developed by the University of Maryland and in use around the country, offers a set of standards and manages a peer-review system that helps subscribing colleges and universities (and very recently, individual instructors!) improve the quality of their face-to-face and online courses. They've developed and made public a standards rubric for instructors and course designers to use in evaluating the quality of their course.
- Take a look at THEORY AND PRACTICE OF ONLINE LEARNING, an outstanding collection of materials on online teaching edited by Terry Anderson, a distance education professor at Canada's Athabasca University.

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38. Practical Active Learning Ideas for Blended & Online Courses

Observe & Consider

In the second part of this week's podcast, Steel Wagstaff from L&S Learning Support Services continues his conversation with [Greg Downey](#), the director of the School of Journalism and Mass Communication, and Brad Hughes, the director of UW-Madison's [Writing Center](#). In the segment below, they discuss several practical ideas for incorporating active learning into blended and online courses, with a special emphasis on writing and reflection activities.

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Introducing Active Learning Into a Blended or Online Course

Many of the suggestions we made in previous chapters for introducing active learning into other types of courses are obviously directly relevant to blended and online courses. Rather than rehashing those suggestions, we'll take a look at three broad categories of active learning activities that we think are especially useful in online courses.

Active Listening & Reading

One the most crucial and longstanding teaching and learning challenges is figuring out a way of unlocking student creativity while developing and encouraging learners to become more than just passive consumers of information. As teachers, we want learners in our courses to actively assess, evaluate, and respond to the ideas and concepts they encounter, to make connections with other ideas that they have, and ultimately to demonstrate their understanding by using their new knowledge outside of our class. We want to cultivate what's often called critical thinking, and we want learners to develop their active listening and reading skills. Here are some specific tips to help accomplish this aim:

- Allow students to download advance lecture or reading notes that include significant blanks, and encourage them read or listen carefully, fleshing out and completing these advance notes.
- Ask students to keep a regular reading journal in which they respond to a set of basic reading questions, with additional preparatory questions as needed. These questions can be used to guide student learning or develop strong reading/researching habits, and can be paired with writing/reflection activities. Some sample questions might be similar to those mentioned by Greg in this week's podcast: "Who is the author? What are their credentials? Why is the instructor asking me to read this material at this time?" or can focus on summary and understanding, like these questions: "What for you was the most interesting/significant sentence in this week's reading?" or "What is this

author's main argument and what are the three most important pieces of evidence they offer in support of their claim?"

- Pose regular discussion questions that require students to respond to course ideas and each other in a meaningful ways. The most engaging questions are often focused on the intersection of the course's core content with current events and elicit higher order thinking about concepts (why, how, should questions, or discussion prompts which include the following action words: compare/contrast, plan, design, develop). See Greg Downey's LIS 201 course website or discussion section blogs for examples of what these kind of engaged discussions might look like (or view the list of assignments for this course).
- Develop or use interactive content built within Case Study Critical Reader tool that Brad Hughes described in the podcast. The CSCR is a desktop tool that help users built interactive, media-rich learning materials, including active or close reading activities.

If you're interested in more ideas for helping you foster critical thinking in your courses, we recommend Joanne Kurfiss' excellent ASHE-ERIC Higher Education report, CRITICAL THINKING: THEORY, RESEARCH, PRACTICE, AND POSSIBILITIES (1988).

Writing & Reflection Activities

As you heard in this week's podcast discussion, one of the most important things that any course can do to stimulate active learning is to introduce meaningful writing and reflection activities. In his influential book MAKING THE MOST OF COLLEGE, Harvard education professor Richard Light reported that "the relationship between the amount of writing for a course and students' level of engagement … is stronger than the relation between student's engagement and any other course characteristic." In addition to its impact on student engagement, there is a well-established and thoroughly documented body of literature that comprehensively demonstrates numerous positive benefits for students and instructors alike, several of which Brad Hughes describes in his brief article "Why Should I Use Writing Assignments in My Teaching?" It's important to note, however, that these benefits do not happen magically just because you ask students to write a lot, but require explicit instruction and structured guidance: a number of large-scale studies have shown that writing skills improve most when students are provided with specific rhetorical patterns as models, given several low-stakes opportunities for practice, and provided with timely feedback. The research also shows that no matter what subject you teach, regular, sequenced writing activities can help increase the effectiveness of student learning in your course.

Resources:

- Here's a 4-page handout describing both the Writing Center's services and programming and UW-Madison's Writing Across the Curriculum program.
- UW-Madison's Writing Across the Curriculum program (the one Brad Hughes described on this week's podcast) publishes an annual print sourcebook which includes several very helpful resources, some of which are available on their website. Some of our favorites include the following:
  - Brad Hughes' suggestions for "Helping Your Students Improve Their Writing and Learning"
  - Practical sequential instructions about designing and leading in-class discussions of student writing by Molly

Peeney, a Russian Professor at Notre Dame who earned her Ph.D. at UW-Madison.

- ◦ The National Council of Teachers of English's "[Beliefs About the Teaching of Writing](#)," a statement of core principles and ideas about how writing is best taught and most effectively learned.
- This short, colorful [two page handout](#) from Salt Lake Community College offers about a dozen specific reflection prompts that you can use or adapt for courses you teach.

Providing Meaningful Feedback

In blended and online courses, it's especially important that instructors think intentionally about their plans to provide both [formative](#) and [summative assessments](#) to learners as they begin to practice and extend their knowledge. There are few things that can be more discouraging to learners than repeatedly trying and failing to implement or apply a new idea or skill, especially when they lack understanding as to why they're struggling or how to correct their errors. We'd also stress that providing regular feedback does not always correlate with more work for already overburdened teachers. Meaningful feedback need not only come from a course instructor or TA; in fact, many effective courses implement collaborative learning structures which harness the power of peer response and feedback from other learners. Peer tutoring is something that Brad Hughes and the UW-Madison Writing Center have long been utilizing to great effect for all participants in the tutoring relationship, as documented in "[What They Take With Them: Findings from the Peer Writing Tutor Alumni Research Project](#)" an [award-winning](#) article that Brad and two co-authors published in 2010.

Resources:

- Brad Hughes has written an excellent list of [17 best practices for responding to student writing](#). The Psychology department's Sara Lindberg offers a similar [collection of practical advice](#) for encouraging and rewarding revision, as does [Rebecca Nowacek](#), a former WAC director who now teaches English at Marquette.
- WAC has also collected several examples of [guidelines and activities for setting up meaningful peer review processes](#) in your class as well as [several evaluative rubrics across several disciplines](#) that might be useful to you in helping you decide how and when you'd like to provide feedback to students.
- Learn more about [Feedback Manager](#), the fantastic DoIT-built tool that Brad described in the podcast as helping biology instructors provide meaningful feedback while reducing their total workload (exactly the kind of low risk, high impact intervention we've been promoting!). This tool is currently being used by instructors in several colleges at UW-Madison and is available to all UW-Madison instructors.

Practice & Apply

Applying Active Learning Ideas:

In addition to the numerous ideas we've already presented or discussed, Kevin Yee, the Director of the University of South Florida's Academy for Teaching and Learning Excellence, has curated [a tremendous list of nearly 200 interactive techniques](#) that can be used in all kinds of inventive ways in all kinds of university courses. Here's what we'd like you to do:

1. Scan or read Dr. Yee's list of active learning ideas.
2. Identify one of these ideas (or a variation) that you've already successfully used in a class, and at least one new idea that you'd like to try.
3. Write out a plan for integrating or scaffolding these activities together in a course that you teach.
4. Share your plans, ideas, questions, and feedback with other participants in the discussion forum.

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Conclusion

children running from a school door

You've finished the book Congratulations! We hope that this text provided you with several enticing invitations to explore various approaches to active learning and reimagine your own teaching and learning practices, in ways both large and small.

One of our major goals in delivering this content was to demonstrate that increasing your use of active learning in your teaching need not be either intimidating or so time-consuming that it feels prohibitive. We hope that you've identified and begun to use several low-risk, high-impact practices, and have renewed your commitment to increasing student engagement, building a dynamic learning environment, and facilitating meaningful learning directed toward significant learning outcomes.

As you've no doubt gathered, there are thousands of things that you could do to encourage active learning in your classes. It wouldn't surprise us if you're reading this and wondering "Where do I go from here?" If you didn't take the opportunity to engage with all of our resources and activities, we'd suggest that as a good place to begin. If you've already formed tentative plans to implement active learning activities in a lecture redesign, or even to introduce large-scale changes to an entire module, course, or program, and would like to talk through your ideas, we'd love to invite you to schedule a consultation with support staff.

First, if you are employed within UW-Madison's College of Letters & Science, we (L&S Learning Support Services) would love to consult with you. Please contact us with any active learning questions, activity or course design plans, or for other general instructional technology & support questions.

If you don't work within the College of Letters and Science, please refer to this list of instructional technology support staff across campus to find your support unit.