Online Teaching and Learning Resource Guide

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Welcome

You have made the decision to move your class online and now wonder how to go about doing that. That is the purpose of this CTE resource guide – to assist you in rethinking your teaching so that your online experience is a success.

Teaching and learning online is different from traditional means of education. You and your students are interacting with each other and your content without physically being together. This suggests new practices are required.

You already have experience teaching. In developing your traditional classes, you probably used an approach like this:

![Diagram of teaching process]

In classes you have taught in the past, you had clear learning outcomes in mind. You assembled content that supported those outcomes and crafted interactions in class which helped students meet those outcomes. You used formative and summative assessment to evaluate whether students in fact met the outcomes, and used that evaluation to adjust your content and interactions.

Now you will be doing the same, but in a new online environment. One could argue that teaching online is no different, but we disagree – while the underlying fundamentals are similar, the “practices” you will use to achieve your learning outcomes in an online environment are very different.

We will lay out some steps to get you started, look at how course design is different when teaching online, give you some tips when teaching online, discuss common issues for managing your online class, provide some examples for class and student evaluation and assessment, and give you further resources to review as you continue to develop your class.

In this resource guide, we have assembled research-based resources and background articles on each topic, as well as “how-to” processes and best practices covering a range of topics. We begin with a white paper that lays the groundwork for rethinking teaching practices and processes for an online class. Building from Content to Community: [Re]Thinking the Transition to Online Teaching and Learning (2009) will serve as a starting point for reflection as you begin this process.
After you have reviewed the white paper, use the menu above to jump to the resources you most need (or start in Getting Started and work your way through all resources). For those who desire a consultation with any of us in the CTE, use the links provided in Additional Resources.

Welcome to the world of online teaching and learning!

**Online Teaching and Learning White Paper:**

**Building from Content to Community: [Re]Thinking the Transition to Online Teaching and Learning**
The CTE authored this white paper, Building from Content to Community: [Re]Thinking the Transition to Online Teaching and Learning, to serve as a resource for faculty who are teaching online or are considering making a transition. We hope this paper serves as the starting point for conversation and reflection as you begin this process yourself.

The paper is linked here: White Paper Online VCU (May 2009).pdf
Getting Started

You might think that we are going to dive right in to designing your course and crafting your new teaching practices for online classes. We could…but it might make sense to first review some background information on teaching and learning online. Oblinger and Hawkins (2006) noted that few faculty members have the pedagogical or technical expertise to just start teaching online. So before we start assisting you in designing and building your online class, we want to look at the research which provides a foundation for online teaching. This section will give you a good overview of what "online teaching and learning" are all about. Some key questions in this section:

- What does research tell us about effective online teaching?
- How has the evolving web impacted online teaching and learning?
- How could you assess if you are ready to teach online (and and likewise, how could your students determine if they are ready to learn online)?

Research on Teaching Online

There is a body of research underlying effective online learning. A synthesis of some of the key findings suggests that the following attributes are important:

- **Interaction**
  - Successful online courses are not simply a conglomeration of material and individual exercises.
  - Online faculty members tend to spend significant amounts of time providing feedback, facilitating discussion, and modeling online involvement.
  - Developing community through very intentional activities is time well spent.

- **Engagement**
  - Not surprisingly, students who spend more time engaged with online materials/activities achieve at a significantly higher level.
    - The US Department of Education has just released a new report "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies", which noted: "The meta-analysis found that, on average, students in online learning conditions performed better than those receiving face-to-face instruction."
  - Generally, students value the convenience and flexibility (logistics) of online learning but express concerns about reduced contact with peers and their professor, as well as a feeling of being overwhelmed as an individual.
  - Students who are self-reliant with an internal locus of control generally are the better achievers in online courses.
  - Monitoring student progress and intervening early when students need assistance can make a big difference in student retention and success.

- **Instructional Design**
The quality of course layout / organization / navigation impacts learning.
Communication of high-level expectations (student learning outcomes) and specific directions for assignments / activities is vital.
A learner-centered approach to instructional design is more likely to generate student success and satisfaction.

**Assessment**
- Tools available in the online environment actually can help provide more assessment and quicker feedback to students than traditional paper-based, face-to-face activities.
- Frequent formative assessment and timely acknowledgement and feedback contribute to student success.

The following resources are well aligned with the best practices research outlined above.

- **Sloan Consortium for Quality Online Education**
  Sloan-C has a variety of information services, events, and publications that will help you improve the development of your online and blended courses.

- **The Excellent Inevitability of Online Courses**
  Margaret Brooks outlines eight reasons why universities should proudly — and without apology — offer online courses.

- **Teaching Online for the First Time -- The Quick Guide**
  Teaching online and within a course management system for the first time can feel like exploring a new and unfamiliar space: the individual components look familiar, but the overall feeling is quite different. Judith Boettcher discusses ten practices that promote effective teaching online.

- **Implementing Best Practices in Online Learning**
  A study of 21 institutions reveals common denominators for success in internet-supported learning.

- **Seven Principles of Effective Teaching: A Practical Lens for Evaluating Online Courses**
  "Taking the perspective of a student enrolled in [an online] course, we began by identifying examples of each of Chickering and Gamson's seven principles. What we developed was a list of "lessons learned" for online instruction that correspond to the original seven principles."

- **Criteria for Evaluating the Quality of Online Courses**
  This document from Grant MacEwan College in Edmonton includes a comprehensive checklist to assist you in evaluating the effectiveness of your online course design. It is organized into the following sections: (1) general information, (2) accessibility, (3) organization, (4) language, (5) layout, (6) goals and objectives, (7) course content, (8) instructional or learning strategies and opportunities for practice and transfer, (9) learning resources, (10) evaluation, and (11) overall.

- **Distance Education Guidelines for Good Practice**
  This report was prepared by the Higher Education Program and Policy Council of the American Federation of Teachers. It presents fourteen standards for quality design of distance education courses.

**SLOAN-C Surveys**

- **Staying The Course - Online Education in the United States, 2008**
  The 2008 Sloan Survey of Online Learning reveals that enrollment rose by more than twelve percent from a year earlier. The survey of more than 2,500 colleges and universities nationwide finds approximately 3.94 million students were enrolled in at least one online course in fall 2007. The sixth
annual survey, a collaborative effort between the Babson Survey Research Group, the College Board and the Sloan Consortium, is the leading barometer of online learning in the United States.

- **Online Nation: Five Years of Growth in Online Learning** (2007)
  Online Nation: Five Years of Growth in Online Learning represents the fifth annual report on the state of online learning in U.S. higher education. This year’s study, like those for the previous four years, is aimed at answering some of the fundamental questions about the nature and extent of online education. Supported by the Alfred P. Sloan Foundation and based on responses from more than 2,500 colleges and universities, the study addresses the following key questions:
  - How Many Students are Learning Online?
  - Where has the Growth in Online Learning Occurred?
  - Why do Institutions Provide Online Offerings?
  - What are the Prospects for Future Online Enrollment Growth?
  - What are the Barriers to Widespread Adoption of Online Education?

- **Making the Grade: Online Education in the United States, 2006**
  Making the Grade: Online Education in the United States, 2006 is based on data collected for the fourth annual national report on the state of online education in U.S. higher education. Supported by the Alfred P. Sloan Foundation and conducted by the Babson Survey Research Group in partnership with the College Board, the report, based on responses from over 2,200 colleges and universities, examines the nature and extent of online learning among U.S. higher education institutions.

**The Web and the Changing Landscape of Learning**

We live in an era where the vast storehouse of human knowledge is readily available and easily accessible - quite literally at our fingertips. Using devices from laptops to mobile phones, we can connect to the Internet from anywhere and in moments search for and find information that not only helps us answer questions, solve problems and complete tasks, but also entertains, inspires and confounds us. At the same time, the web has become a place where anyone with a computer and a connection to the Internet can readily publish text, images, audio and video. The web has become a space where human knowledge is stored, reshaped, accessed and redistributed. Information is abundant and knowledge has been set free.

This state of affairs is unprecedented in human history.

The video below by Michael Wesch, professor at Kansas State University, captures in four minutes what we mean by this changing state of affairs. We are all engaged in gaining a better understanding of the implications this has for traditional conceptions of education. These changes bring into sharper relief the need to [re]conceptualize what online teaching might mean. Our view is that teaching online is in many ways fundamentally different from teaching face-to-face.
Let us illustrate how the web is changing how and where learning takes place through some examples that have evolved in recent years.

In India, a joint venture of the Indian Institutes of Technology and Indian Institute of Science - representing eight schools in total - have launched the National Programme on Technology Enhanced Learning (NPTEL). Part of this program has focused on providing open access to full video recordings of course-based lectures. NPTEL has posted content in the form of topical play lists that represent complete lecture materials for individual courses. There are currently ninety-five (95) courses listed with a total of over 3560 videos uploaded. One purpose of this content is to provide open access to science and engineering course materials to India's vast population, many of whom have limited access to advanced educational opportunities. It is common for individual lecture videos, many of which have been up for less than one year, to have 30,000+ page views.

The Massachusetts Institute of Technology (MIT) has been engaged in their OpenCourseWare (OCW) project for over seven years. The OCW is a web-based publication that contains course content for nearly every undergraduate and graduate subject taught at MIT. Syllabi, lecture notes, readings, exams and videos are available for free, and no registration is required to access content. Many of the courses have been translated into Chinese, Spanish, Portuguese, Thai and Persian. MIT OpenCourseWare averages 1 million visits each month; translations receive 500,000 more.

Academic Earth (http://www.academicearth.org/) is an organization that acts as a clearinghouse for thousands of video lectures from the world’s top scholars, all openly accessible and free. Currently, Academic Earth houses over 1500 videos from MIT, Stanford, Berkeley, Harvard, Princeton, and Yale all of which have been published under a Creative Commons license at the host institution.

This placement of content online has been occurring at an ever-expanding rate for nearly a decade. Content alone does not make a course, nor an education. Anyone can access the courses in MIT’s OCW program, but obviously a degree from MIT not only reflects the access to content, but crucially includes, the access and interactions that occur when skilled faculty in the field facilitate that education. In other words, access to information does not lead to knowledge. Everyone has access to high quality learning content. Teaching online therefore means more than serving up content. You are critical, in that you are the driver of quality course design, content mastery, and the skilled facilitation of learning.

Within this context of openly accessible and abundant learning content on the web, it becomes very clear that online teaching is not only about sound course design and high quality learning content, but increasingly it is
about the skilled facilitation of learning by faculty who understand how to interact with and engage students in this new learning landscape. From our perspective, this transition is far from seamless.

We believe that the practice of teaching online requires a shift toward practices that facilitate learning in web-based environments. Our experience suggests that these shifts are not always transparent to those wishing to make the transition to teaching courses online.

**State of Online Learning Nationally**

Nearly four million students nationally were taking at least one online course during the fall 2007 term - a 12 percent increase over the number reported the previous year and a 66 percent growth in three years (Allen and Seaman, 2008). At the regional level, the Commission on Colleges of the Southern Association of Colleges and Schools has now added accreditation standards for online courses (COC-SACS, 2006). Student demand for online courses nationally is increasingly generating competition between institutions (Allen and Seaman, 2008). Online education nationally has matured in the past decade from pilot programs to a mainstream method for delivering courses of instruction at many institutions.

As institutions of higher learning have begun to provide instruction over the internet, three separate and distinct methods of delivering instruction have emerged, so let us start with some basic definitions. **Face-to-face instruction** remains the predominate mode of instructional delivery at most institutions, though it is common for these classes to be web enhanced, with from 0 to 29 percent of instruction actually delivered online. In the past decade, it has become common nationally for institutions to have courses and even entire programs which are delivered as totally online courses, which we define as having at least 80 percent of the course content, activities, discussions, and assessments occur online, either synchronously or asynchronously. If national trends are any indication, the demand for totally online delivery of instruction is expected to increase. In between face-to-face instruction and totally online instruction, we have hybrid or blended courses where between 30 to 79 percent of the instruction is delivered online (Allen and Seaman, 2008).

In the sixth annual Sloan Consortium report on the state of online learning in U.S. higher education, Allen and Seaman (2008) reported that online learning in America has continued to grow at rates that far exceed the growth of higher education itself.

- Over 3.9 million students were taking at least one online course during the fall 2007 term; a 12 percent increase over the number reported the previous year.
- The 12.9 percent growth rate for online enrollments far exceeds the 1.2 percent growth of the overall higher education student population.
- Over twenty percent of all U.S. higher education students were taking at least one online course in the fall of 2007.

Nationally, over 80% of these nearly 4 million online students are undergraduates. Many of these undergraduates are working adults trying to balance home, work and academic lives. Doctoral institutions have reportedly lagged other forms of higher education in adopting online delivery, primarily because online delivery was not previously seen as implicit with the core mission of the institutions or its student population. However, 55% of doctoral/research institutions now report that online delivery is critical to the long term strategy of the institution (Allan and Seaman, 2008). This reflects changes in student demand as well as recruitment challenges. The SLOAN report found that the recent economic downturn was having a positive
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effect on online demand and enrollment across all forms of higher education. It also found that online education was growing across all disciplines and not restricted to any particular discipline. Interestingly, the student demand for online education does not translate into students seeking universities across the world. The most recent study found that the trend for students to take online courses from local institutions remained consistent. Eighty-five percent of online students live within 50 miles of their institution of higher education (Allen and Seaman, 2008).

A survey of 8,500 faculty nationally found that student need was the primary factor in the decision to move to online delivery of education. Faculty members cited meeting student access needs and meeting needs of particular students as the two top reasons for providing online education (NASULGC, 2008).

**Faculty Readiness to Teach Online**

Teaching online poses new challenges. Whether you are a new or experienced faculty member, you tend to come to teaching with a background in how to teach face-to-face. You have experienced face-to-face classes yourself and have that body of experience upon which to draw. Few of us have experience taking online courses, and now we are expected to teach online.

As an online teacher, you become more than a transmitter of knowledge; you also become a more proactive facilitator of learning. Some highly seasoned instructors from the traditional on-ground environment will easily adapt to the online model, while others may find the transition challenging at first. The facilitator in the online environment uses a different and unique set of tools to perform effectively.

To help you reflect on your own readiness to teach online, the following resources are provided to help you self-assess your readiness to teach online.

  Reflect on your teaching style, circumstances and technical skills for teaching online.
- [Illinois Online Network, "What Makes a Successful Online Facilitator?"](#)

**Student Readiness to Learn Online**

We are sure that it occurred to you that you cannot examine the skills and practices of faculty without exploring the skills and practices needed by students.

Many faculty members assume that students today have the skills and knowledge to learn online. After all, they are called the Net Generation. The Educause Center for Applied Research has surveyed college students for the past five years and annually reports on their use of information technology (ECAR, 2008). The 2008 report on college freshmen and seniors at 98 institutions noted:

- Laptop ownership is up to 82.2%
- 66.1% own an internet-capable cellphone but few use that feature
- Students spend an average of nearly 20 hours a week online for school, work and recreation
- Technology is primarily for communication; 85.2% are members of social networks like Facebook
79.5% consider themselves very skilled at using technology and the internet
Most prefer “moderate” amounts of information technology in their courses over “extensive” use
Face-to-face instruction is preferred to online instruction; students perceive online classes as “more demanding”
Nearly 70% view the use of a course management system like Blackboard as positive. Convenience is the dominant reason for using a course management system.
Fewer than half the students rated their instructors’ use of information technology as effective

It is worth noting that one Net Generation member described her technology skills (and those of her fellow students) as an ocean that is miles wide but only inches deep (Windham, 2005). Our students often have skills in narrow areas (like Facebook) but lack deep expertise in using technology. The ECAR study was heavily slanted towards full-time on-campus students, which traditionally steered away from online courses. However, programs are beginning to see student demand rise for online courses, and some programs like VCU’s Homeland Security program are designed from the start as totally online programs. As the number of online offerings rise, the question also arises as to what qualities students require to be successful in these courses.

University of Central Florida has an online self-assessment for their students as to their readiness for online courses (UCF Learning Online, 2005). It is comprehensive and includes:

- **Types of Courses**
  What are the different types of online courses?
- **What Does a Course Look Like**
  This section will illustrate how an online course looks and feels.
- **Technical Requirements**
  What computer requirements are necessary for an online course?
- **Skills Requirements**
  What skills does one need to be successful in an online course?
- **Pros/Cons**
  What are the benefits? What are the disadvantages?
- **Frequently Asked Questions**
  View frequently asked questions and answers from students.
- **Testimonials**
  See and hear some first hand views from students who have taken online courses.
- **Is Online Learning Right For Me?**
  A learning style survey to find out if one is suited for an online course.

Another set of guidelines that is more text-based is provided by the Illinois Online Network (2008), who suggested that online students should possess the following qualities:

1. **Be open-minded about sharing life, work, and educational experiences as part of the learning process.**
   There is a degree of anonymity associated with the web that sometimes allows individuals to open up in ways that do not occur in campus classrooms. Introverts as well as extroverts find that the online process requires them to utilize their experiences. This forum for communication eliminates the visual
barriers that hinder some individuals in expressing themselves. In addition, the student is given time to reflect on the information before responding. The online environment should be open and friendly.

2. **Be able to communicate through writing.**
   In the Virtual Classroom, nearly all communication continues to be written (though new audio and video forms are emerging), so it remains critical that students feel comfortable in expressing themselves in writing. Some students have limited writing abilities, which should be explored and addressed before or as part of the online experience.

3. **Be Self-motivated and self-disciplined.**
   With the freedom and flexibility of the online environment comes responsibility. The online process takes a real commitment and discipline to keep up with the flow of the process. Faculty can assist students by providing structure to the class in the form or time lines or draft opportunities.

4. **Be willing to "speak up" if problems arise.**
   Many of the non-verbal communication mechanisms that instructors use in determining whether students are having problems (confusion, frustration, boredom, absence, etc.) are not possible in the online paradigm. If a student is experiencing difficulty on any level (either with the technology, with the course content, or just with life itself), he or she must communicate this immediately. Otherwise the instructor will never know what is wrong. This also suggests that faculty should use tools such as course statistics to spot trouble issues and address them earlier as opposed to later.

5. **Be willing and able to commit to 4 to 15 hours per week per course.**
   Online is not easier than the traditional educational process. In fact, many students will say it requires much more time and commitment.

6. **Be able to meet the minimum requirements for the program.**
   The requirements for online are no less than that of any other quality educational program. The successful student will view online as a convenient way to receive their education – not an easier way.

7. **Accept critical thinking and decision making as part of the learning process.**
   The learning process requires the student to make decisions based on facts as well as experience. Assimilating information and executing the right decisions requires critical thought; case analysis does this very effectively.

8. **Have access to a computer and the internet.**
   The communication medium is via computer; the student must have access to the necessary equipment. This may involve use of on-campus computer labs if the student does not own the necessary equipment.

9. **Be able to think ideas through before responding.**
   Meaningful and quality input into the virtual classroom is an essential part of the learning process. Time is given in the process to allow for the careful consideration of responses. The testing and challenging of ideas is encouraged; you will not always be right, just be prepared to accept a challenge.

10. **Feel that high quality learning can take place without going to a traditional classroom.**
    If the student feels that a traditional classroom is a prerequisite to learning, they may be more
comfortable in the traditional classroom. Online is not for everybody. A student that wants to be on a
traditional campus attending a traditional classroom is probably not going to be happy online. While
the level of social interaction can be very high in the virtual classroom given that many barriers come
down in the online format, it is not the same as living in a dorm on a campus. This should be made
known.

In summary, the Illinois Online Network suggested that an online student is expected to:

- Participate in the virtual classroom multiple times a week
- Be able to work with others in completing projects
- Be able to use the technology properly
- Be able to meet the minimum standards as set forth by the institution
- Be able to complete assignments on time
- Enjoy communicating in writing.

The ECAR Study illustrated that undergraduates today view the web in a somewhat bipolar way. They see
much of what they do online as communicating with peers, connecting with friends, finding entertainment,
and informally learning on a just in time basis. They like course management systems but see them more as
places of convenience than as places for learning. With the myriad of applications now available for online
teaching and learning, the opportunity exists today to tap into this informal learning network and add rich
capabilities to current learning management systems, thus facilitating learning. You will have the opportunity
to use collaborative writing spaces such as blogs or wikis to expand the communication and networking
aspects of this generation’s lives (which they already do) into your formal learning environment.

Given the self-directed nature of online learning, the learning process can feel accelerated and overwhelming.
It requires commitment on the student’s part. Staying up with the class and completing all work on time is
vital. Once a student gets behind, it is difficult to catch up. Building structure into the class and providing
timelines can help students succeed. You may have to more intentionally contact students personally to offer
assistance and remind the student of the need to keep up.

Alan Roper (2007) studied successful online students who had completed at least 80% of their degree credit
online with a GPA above 3.50. He identified seven attributes to their success:

- Develop a time-management strategy.
- Make the most of online discussions.
- Use it or lose it (find ways to use the course content).
- Make questions useful to your learning.
- Stay motivated.
- Communicate the instruction techniques that work.
- Make connections with fellow students.

You should consider ways to build off of these qualities by proactively suggesting time management
strategies. For instance, having online discussions due on different days from written work helps students
balance workloads. You can provide relevant issues for study that tie course content to real world challenges.
Using group work helps build connections. Finally, your social presence in the online space sends powerful
signals and is a strong motivator for success.
Blended Classes – the Alternative to Total Online Teaching and Learning

Blended or hybrid classes use a combination of face-to-face instruction and online instruction to give students an integrated approach to the subject matter and optimize the strengths of both delivery methods.

As we noted earlier, institutions of higher learning have begun to provide instruction over the internet, three separate and distinct methods of delivering instruction have emerged. **Face-to-face instruction** remains the predominate mode of instructional delivery at most institutions, though it is common for these classes to be web enhanced, with from 0 to 29 percent of instruction actually delivered online. **Totally online courses** have at least 80 percent of the course content, activities, discussions, and assessments occur online, either synchronously or asynchronously. In between face-to-face instruction and totally online instruction, we have **hybrid or blended courses** where between 30 to 79 percent of the instruction is delivered online (Allen and Seaman, 2008).

So, blended or hybrid courses are courses in which significant portions of the learning activities have been moved online, a combination of traditional classroom and internet instruction. Time traditionally spent in the classroom is reduced but not eliminated. The goal of hybrid courses is to join the best features of in-class teaching with the best features of online learning to promote active independent learning and reduce class seat time. Using computer-based technologies, you can use the hybrid model to redesign some lecture or lab content into new online learning activities, such as case studies, tutorials, self-testing exercises, simulations, and online group collaborations.

This addition of online learning to the classroom learning has been shown to have advantages over traditional face-to-face instruction when it comes to teaching and learning, according to [a new meta-analysis](2009) released in 2009 by the U.S. Department of Education.

The study found that students who took all or part of their instruction online performed better, on average, than those taking the same course through face-to-face instruction. Further, those who took "blended" courses -- those that combine elements of online learning and face-to-face instruction -- appeared to do best of all.

These resource pages focus primarily on total online courses, but for those interested in a blended approach, here are some resources we have found helpful:

- **Blended Learning Systems: Definitions, Current Trends, and Future Directions**
  This chapter by Charles Graham from The Handbook of Blended Learning "addresses five important questions related to blended learning systems: What is blended learning? Why blend? What current blended learning models exist? What issues and challenges are faced when blending? What are the future directions of blended learning systems?"

- **The Hybrid Online Model: Good Practice**
  A model for hybrid courses is presented in this article about the experiences of faculty at Baldwin-Wallace College in suburban Cleveland. Course design includes a first face-to-face class, followed by online activities including e-mail, synchronous chat, weekly online quizzes, and asynchronous
discussion boards. A final face-to-face class involves the final exam. The authors map the ways in which this course design gel with Chickering and Gamson’s Seven Principles for Good Practice in Undergraduate Education.

- **Wisconsin-Milwaukee Hybrid Course Site**
  The University of Wisconsin at Milwaukee, under the leadership of Bob Kaleta, is a leader in blended/hybrid course design and evaluation. This site includes the following links: (1) Why Teach Hybrid?, (2) Sample Hybrid Courses, and (3) Student Resources. The site also includes links to the Wisconsin-Milwaukee Blending Life and Learning program, which is supported by a $500,000 grant from the Sloan-Consortium.

- **University of Manitoba wiki on Blended Learning**
  Includes a variety of definitions of blended learning, with an excellent proposed definition. Also points to additional resources.
Course Design

Before you teach online, you must first design your course for the online environment. In the last section, we looked at the theory behind online instruction.

In this section, we will examine processes or models for course design, which are useful whether you are building a new course from scratch or redesigning a face-to-face course you have taught in the past for online delivery. We will suggest specific considerations you may want to keep in mind when delivering instruction online, and how those considerations play out in the Blackboard learning management system.

We will also examine how to use Blackboard as a learning portal to the larger World Wide Web.

Some key questions in this section:

- What are models for online course design?
- How do you design and customize the VCU Blackboard course management system to optimize the management of the course, and how do you customize it for learning?
- How do you incorporate other web applications such as LON-CAPA, blogs, wikis, Google apps (just to name a few) with your course management system?
- What learning situations are optimized by the use of synchronous delivery of your course versus the use of asynchronous delivery?

Course Design Processes

Whether you are designing a course from scratch or translating an existing course for online delivery, the ADDIE model is a useful one for conceptualizing the design process:

[Diagram of the ADDIE model]

(www.regent.edu/admin/ctl/addie/)
There are a number of good rubrics and guidelines to use when designing your course:

- **CSU Chico Rubric for Online Instruction**
  One of the best standards for evaluating the quality of online course design. It provides anchors for baseline, effective, and exemplary designs across the following dimensions: (1) learner support and resources, (2) online organization and design, (3) instructional design and delivery, (4) assessment and evaluation of student learning, (5) innovative teaching with technology, and (6) faculty use of student feedback.

- **Quality Matters: Peer Course Review Rubric**
  This site includes a rubric for reviewing the quality of online courses across the following dimensions: (1) course overview and introduction, (2) learning objectives, (3) assessment and measurement, (4) resources and materials, (5) learner interaction, (6) course technology, (7) learner support, and (8) accessibility. This is an excellent resource for assessing the quality of online course design.

- **Criteria for Evaluating the Quality of Online Courses**
  This document from Grant MacEwan College in Edmonton includes a comprehensive checklist to assist instructors in evaluating the effectiveness of their online course design. It is organized into the following sections: (1) general information, (2) accessibility, (3) organization, (4) language, (5) layout, (6) goals and objectives, (7) course content, (8) instructional or learning strategies and opportunities for practice and transfer, (9) learning resources, (10) evaluation, and (11) overall.

- **Distance Education Guidelines for Good Practice**
  This report was prepared by the Higher Education Program and Policy Council of the American Federation of Teachers. It presents fourteen standards for quality design of distance education courses.
A Design Checklist for Courses Incorporating Technology

"Course design should be an ongoing process based on sound pedagogy, faculty reflection, and student feedback. This checklist is a tool for faculty to use in the design/redesign process as one way to obtain a greater degree of confidence that the course is likely to be successful." This checklist is intended for use with any technology-rich course, whether enhanced, hybrid, or fully online.

Articulating Your Goals and Learning Objectives Online

You have written goals and learning objectives before, but they take on added importance in online courses. Given that you will not be seeing your students face-to-face, it is crucial that you craft clear statements about what specifically you want your students to learn. Well-crafted learning objectives guide the online course development process. The choice of course materials, assignments or activities, and assessments should all reflect the learning objectives. Each element of the course should relate back to one or more of the learning objectives.

The University of Washington has some helpful tips in “Planning a Distance Learning Course”. They suggest that because you cannot orient your students to your course in person, you should write a comprehensive course introduction. We would add that video screencasts are an excellent way to also introduce your course and spell out your expectations. UW also suggests that well-designed, easy-to-follow lessons with interesting assignments are the key to a successful learning experience for the online student. Lessons should have a consistent look, including such items as:

- Overview of Lesson
- Summary of Learning Objectives
- Reading, viewing, or listening assignment
- List of key terms
- Discussion of Key Questions
- Assignments or Exercises

Learning Contracts

The Illinois Online Network suggests that learning contracts can be useful in online classes. Learning contracts connect educational needs to individual student needs and are useful when there is diversity in learner needs and interests in a class. A learning contract is a formal agreement written by a learner which details what will be learned, how the learning will be accomplished, the period of time involved, and the specific evaluation criteria to be used in judging the completion of the learning. Learning contracts can help you and the learner share the responsibility for learning.

Contract learning can bring about many practical benefits, including deeper involvement of the learner in the learning activities which they themselves have been involved in planning. Once a learner passes through the stage of confusion and anxiety associated with developing a contract, he/she will get excited about carrying out their own plans. Another benefit of utilizing contract learning is an increase of accountability, since the learning contract provides more functional and validated evidence of the learning outcomes. The contract also
provides a means for the learner to receive continuous feedback regarding progress toward accomplishing learning objectives.

Learning contracts can be extremely effective in the online environment. Because physically meeting with the class to discuss learning goals, objectives, and expectations is difficult online, you as the instructor should be very clear and concise in what is expected from your students. Likewise, your students should also be clear about what he/she expects from you and your course. A learning contract can facilitate negotiation and clarity of learning goals and outcomes. Sample learning contracts can be placed on a web page for the student to use as examples, and students can be encouraged to brainstorm ideas for learning contracts with their online peers as well as negotiate the final contract with the instructor through utilizing email or online conferencing.

**Concept Mapping as a Planning Tool**

Concept mapping was originally developed by Dr. Joseph Novak to document the way children learn science (Novak, J. and Canas, 2006). The basic process started as a paper and pencil exercise, but computers have added valuable capabilities. Computerized concept mapping enables the easy and quick documentation of ideas in the form of graphic images and titles. The design process becomes visual and is enhanced by descriptive text. Individual thoughts can be placed on the page as fast as you can type a word and hit enter; a process that at least one software company calls "rapid fire". As you begin to see relationships, you may connect the ideas with lines and arrows, and sometimes clarify a sequence of events or how ideas are interrelated and connected to multiple points. The computerized maps now give you the ability to add links and multimedia, as well as collaborate with others. According to Novak, the important information in the concept map is the identification of a word that defines the relationship of one idea to another. Although these programs invite a visual approach, they generally will convert the map into a text outline with the click of a button.

The following list of advantages in using concept maps for curriculum design was composed from the work of Allen, Hoffman, Kompella, & Sticht (1992), Dyrud, Edmondson, and Martin.

- By constructing a concept map, you can see areas that appear trivial, that you may want to drop from the course.
- You can discover the themes you want to emphasize.
- You can understand how students may see or organize knowledge differently from you, which will help you better relate to the students and to challenge their ways of thinking.
- The mapping process can help you identify concepts that are key to more than one discipline, which helps you move beyond traditional disciplinary boundaries.
- Concept maps help you select appropriate instructional materials. You can construct a map that incorporates teaching strategies as well as time and task allocations for various parts of the course.
- You can visually explain the conceptual relationships used for your objectives in any course.
- You can facilitate efforts to reconceptualize course content.
- Rather than being a traditional course plan that assumes students will integrate learning, concept maps depict the intentions of faculty -- the integration you expect to occur.
- You can use concept maps to provide a basis for discussion among students and to summarize general course concepts.
• Concept maps support a holistic style of learning.
• Mapping concepts can increase your ability to provide meaningfulness to students by integrating concepts.
• Concept maps can increase your potential to see multiple ways of constructing meaning for students.
• Mapping the concepts can help you develop courses that are well-integrated, logically sequenced, and have continuity.
• Concept maps help "teachers design units of study that are meaningful, relevant, pedagogically sound, and interesting to students" (Martin, p. 28).
• Concept maps help "the teacher to explain why a particular concept is worth knowing and how it relates to theoretical and practical issues both within the discipline and without" (Allen et al).
• Student-generated maps can also help to make student thinking visible. You gain an appreciation of just how students understand a concept by viewing their visual representation of a concept.

The Theory Underlying Concept Maps and How To Construct and Use Them
Seminal article by Joseph Novak and Alberto Canas.

Designing Courses on Napkins: Is there a better way?
Article by Bud Deihl on use of concept maps to design a class.

Some Common Concept Mapping Tools

• Cmap
The CmapTools software suite allows users to construct concept maps representing their understanding of a domain of knowledge. In the case of a large domain, or of a detailed representation of a domain, a single concept map can become unmanageable for the user to comprehend, display, and manipulate. To facilitate the construction of large representations, CmapTools allows the user to split them into collections of concept maps (Cmaps). To show the relationships between the Cmaps in the set, the software facilitates the linking of Cmaps, enabling the navigation from one Cmap to another. Additionally, the user can establish links to other types of resources (e.g. images, videos, sound clips, text) that help explain and complement the information in the map.
- **Gliffy**
  Gliffy allows you to create online maps and share them, facilitating collaboration.

- **MindMeister**
  MindMeister brings the concept of mind mapping to the web, using its facilities for real-time collaboration to allow truly global brainstorming sessions. Users can create, manage and share mind maps online and access them anytime, from anywhere. In brainstorming mode, fellow MindMeisters from around the world (or just in different rooms) can simultaneously work on the same mind map and see each other's changes as they happen.

- **Bubbl.us**
  Bubbl.us is a simple and free web application that lets you brainstorm online.
  - Create colorful mind maps online
  - Share and work with friends
  - Embed your mind map in your blog or website
  - Email and print your mind map
  - Save your mind map as an image

**Instructional Design Considerations When Converting to Online**

As we introduced in Design Processes, California State University, Chico, has developed a rubric to answer the question: **What does a high quality online course look like?** [The complete rubric is here](#), but the section on organizational design noted that:

1. A quality course should be well-organized and easy to navigate. Students should be able to clearly understand all components and structure of the course.
2. The course syllabus should identify and clearly delineate the role that the online environment will play in the total course.
3. The aesthetic design should present and communicate course information clearly throughout the course.
4. All web pages should be visually and functionally consistent throughout the course.
5. Accessibility issues should be addressed throughout the course.

If you are designing a course from scratch, you will need to budget a good deal of time to design your course. If you are translating a course you previously taught face-to-face into an online course, it may move faster, but not much. The design phase is a critical investment in the future success of your online course. The [Tennessee Board of Regents website](#) on course design has the following excellent advice:

**COURSE DESIGN -- IT’S ALL ABOUT CONTENT AND INTERACTION**

Keep it simple; make it better; and resist the temptations to do otherwise.

- It's about content. Having something to say or share with students that they will find worth reading, seeing and experiencing. There are lots of resources, so choosing the best wisely is key.
In many ways you are a guide to the resources and a simplifier of how to get the right result the first time. How you organize the resources and provide students useful directions and information about using them are critical.

It’s also about interaction. In an online course there are three types of interaction you will be creating with the activities you plan:

1. interaction between the student and the content material;
2. interaction between the student and you; and
3. interaction among students in the class.

In each case the interaction should be instrumental to success in the course or task. Become familiar with the array of web tools for interaction and select those that best fit what you are trying to accomplish. Talk with your fellow online faculty, surf other course sites, look at the courseware tutorials.

- Don't provide anything -- information, links, or functionality -- that you don't expect students to use.
- Keep in mind that you will get what you inspect not what you expect, so plan ways that students show you that they have used and learned what you have provided them. Be very specific in your assignments. Students may be confused by any ambiguity due to the lack of face-to-face contact.
- Use a consistent organizational pattern (module template).
- Make sure content is accurate, technically correct, readable and easy to follow. Navigation should work correctly and that the authority and currency of the page can be determined.
- Facult members should be aware of the copyright issues, privacy of information, and net-etiquette with the Internet.
- Solicit feedback and suggestions on how to improve your site. Seek out the advice of your peers.
- Some of your students will be very “internet savvy” and can provide valuable information to improve your course design. Some of this course “tweaking” can be done during the semester or between semesters. Encourage your students to report dead links, inactive pages, or other malfunctions in your web course.

As you brainstorm approaches to inform your design, you might want to look at two theories of learning and knowledge that seem to be gaining traction nationally - Constructivism and Connectivism.

Given that your goal is to educate students and help them learn better, you obviously do not see your students as passive participants in your course. With this shift from giving information to the passive student sitting on the other side of the screen, to one of engaging the student in becoming a part of the learning environment, the entire conception of online learning and design has been altered.

Constructivism is an alternative approach to how people learn and assimilate new knowledge. Humans are seen as active, knowledge-searching creatures that transform and interpret experiences. They assimilate new knowledge by producing cognitive structures that are similar to the experiences they are engaged in. They then accommodate themselves to these newly developed knowledge structures and use them within their collection of experiences as they continue to interact with the environment. Knowledge is adaptive, facilitating individual and social efficacy. Knowledge is subjective and self-organized, not objective. Knowledge acquisition involves both sociocultural and individual processes.

In applying constructivism to your design, some key questions to ask yourself are:
- Relevance: How relevant is online learning to students' professional growth in your discipline?
- Reflection: Does online learning stimulate students' critical reflective thinking?
- Interactivity: To what extent do students engage online in rich educative dialogue?
- Faculty Support: How well do I enable students to participate in online learning?
- Peer Support: Is sensitive and encouraging support provided online by fellow students?
- Interpretation: Do students make good sense of each other’s online communications?

Closely aligned with Constructivism is Connectivism. Applying Connectivism to online learning comes from "Connectivism: A Learning Theory for the Digital Age," by George Siemens.

Siemens posits the following principles of connectivism:

- Learning and knowledge rest in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known.
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.

Here at VCU, we use the Blackboard course management system, but the generic course shell you get when you create a course does not meet the criteria above. The shell you get when you create a course carries with it an implied pedagogy as to how you will teach your course. You would not allow others to dictate how you will teach in the physical classroom, so do not accept Blackboard’s "direction" for your online course. We recommend that you customize Blackboard to create a learning environment. We cover this in the next section: Customizing Blackboard As an Infrastructure for Online Teaching and Learning.

**Customizing Blackboard as an Infrastructure for Online Teaching and Learning**

In this section, we will examine steps you might consider taking to customize your Blackboard shell in ways that facilitate teaching and learning. When you create your Blackboard course shell, Blackboard gives you a foundation from which to build, but we suggest that build you must! Your generic Blackboard shell looks like this:

Of course, you can leave it just like this and try to figure out where to put your material (Is this file a "course information" or a "course document"???). We would like to suggest that you not passively accept the set-up given to you by Blackboard (which in and of itself suggests a pedagogy), but rather that you customize Blackboard to take advantage of the design considerations we covered in the earlier section.
Of course, you must first create your course. In order to create a course in Blackboard, you first should have "faculty rights." (The best clue as to whether you do or not is whether you see a box called "My Faculty Tools" when you first log in to Blackboard.) Technology Services provided the following steps to creating a course:

1. Login to Blackboard

2. Under My Faculty Tools, click Create a Course

   ![My Faculty Tools](image)

   Note: If you do not see My Faculty tools, it could be one of two reasons. Either you do not have faculty right (in this case, contact the help desk, 828-2227, and request faculty rights) or you need to customize your page to include the My Faculty Tools module (click Modify Content in the top right-hand corner and check the box).

3. Select the correct Semester and Year

   ![Course Information](image)

4. If you are listed in banner as teaching a course, it can be found in either the Select Course From My Courses dropdown menu or the Select Course From All Courses dropdown menu.

   **Note:** Keep in mind that if you are not officially the instructor of a course through banner (i.e. you are the Teaching Assistant, Course Builder, etc. or you are simply helping another instructor create his course) the course will not show up in the Select Courses From My Courses dropdown menu.

   ![Select Course From My Courses](image)

   **Tip:** When selecting a course from the Select Courses From All Courses dropdown menu, notice the instructor’s name is beside each course he or she is teaching. This is to help prevent instructors from creating the wrong courses.

5. Click Submit

   **Note:** When a course is selected, the Rubric, Number, Section and Title will fill in automatically. You should not change anything in these boxes (except maybe the title) because these changes could prevent the course from populating with your students from Banner.

   ![Course Information](image)
So, now you have created your blank slate in which to begin customizing. To highlight the differences, here is a Blackboard class shell that has been customized. The menu has been customized to specifically address items that will be used in the class (including links to external sites like wikis and blogs). A picture has been added as a banner to graphically note what was being covered that particular week.

The menu provides clear terms such as “syllabus”, “lessons”, a link so students can check their grades (always of interest to them!), and special links for networking and collaboration inside the class through homepages and group pages. In this customized class, the assignments are folded in to the lessons along with the course material and the discussion topics, so there is no need for a menu item called “Assignments”.

This customization continues inside the class. Folders are used to organize both material and flow in the class. Each weekly lesson has a consistent look and feel, in this case – overview, readings, discussions, and assignments, with key due dates clearly indicated.

The menu link to the Syllabus in this example includes more than just the standard document. In the Syllabus area are course calendars, policies, as well as tutorials on web tools that will be used by the students.

Screencasts are available inside “Institutional Content” in the Content System tab of Blackboard that cover how to customize your class, as well as customizing the settings inside Blackboard.

Why is this important? Let’s return to the University of California – Chico criteria describing what a high quality online course looks like:

1. **Course is well-organized and easy to navigate. Students can clearly understand all components and structure of the course.**
   Customizing the menu and setting up a consistent folder organization helps with this.
2. **Course syllabus identifies and clearly delineates the role the online environment will play in the total course.**
   Using a syllabus with hyperlinks and adding supplemental information on schedules, tutorials, etc. takes advantage of the affordances an online environment brings to a class. Additionally, the syllabus is an excellent place to spell out your expectations on “attendance” and classroom performance.

3. **Aesthetic design presents and communicates course information clearly throughout the course.**
   The banner and pictures inside announcements and course items can be used to add interest and color to your class, and clearly communicates the topic of the week to your students.

4. **All web pages are visually and functionally consistent throughout the course.**
   Using a consistent set-up inside each of the weekly folders cuts down on student anxiety regarding their knowing what is expected of them.

5. **Accessibility issues are addressed throughout the course.**
   The web allows you to provide course material in a variety of manners, from text-based to podcasts for auditory learners to videos and graphics for visual learners. Providing materials in multiple ways can address accommodations for students with special needs.

**Designing Your Class to Achieve Goals and Objectives**

After you develop your goals and learning objectives, you then have to craft activities that help meet these goals and objectives. The web has numerous resources that can be adapted for use in your class.

One of the better sources of online activities is **MERLOT** (Multimedia Educational Resources for Learning and Online Teaching). MERLOT is a user-centered, searchable collection of peer reviewed and selected higher education, online learning materials, catalogued in a variety of ways by registered members and a set of faculty development support services. The material in MERLOT is licensed under the Creative Commons to encourage the sharing of resources. MERLOT's vision is to be a premiere online community where faculty, staff, and students from around the world share their learning materials and pedagogy.

MERLOT members work to improve the effectiveness of teaching and learning by increasing the quantity and quality of peer reviewed online learning materials that can be easily incorporated into faculty designed courses. The MERLOT repository is not only learning materials, but assignments, comments, personal collections and snapshots, all designed to enhance the teaching experience of an learning material. The learning materials are categorized into 14 different learning material types. A large selection of materials in MERLOT also have assignments and comments attached to them.

The materials in MERLOT are categorized as follows:

- **Simulation**: Approximates a real or imaginary experience where users' actions affect their outcomes. Users determine and input initial conditions that generate output that is different from and changed by the initial conditions.
Online Teaching and Learning Resource Guide

- **Animation**: Allows users to view the dynamic and visual representation of concepts, models, processes, and/or phenomena in space or time. Users can control their pace and movement through the material, but they cannot determine and/or influence the initial conditions or their outcomes/results.
- **Tutorial**: Users navigate through electronic workbooks designed to meet stated learning objectives, structured to impart specific concepts or skills, and organized sequentially to integrate conceptual presentation, demonstration, practice, and testing.
- **Drill and Practice**: Requires users to respond repeatedly to questions or stimuli presented in a variety of sequences. Users practice on their own, at their own pace, to develop their ability to reliably perform and demonstrate the target knowledge and skills.
- **Quiz/Test**: Any assessment device intended to serve as a test or quiz.
- **Lecture/Presentation**: Any material intended for use in support of in-class lectures/presentations. Lecture notes, audio visual materials, and presentation graphics such as PowerPoint slide shows that do not stand alone are examples.
- **Case Study**: Illustrates a concept or problem by using an example that can be explored in depth.
- **Collection**: Any collection of learning materials such as web sites or subject specific applets.
- **Reference Material**: Material with no specific instructional objectives and similar to that found in the reference area of a library. Subject specific directories to other sites, texts, or general information are examples.
- **Learning Object Repository**: A searchable database of at least 100 online resources that is available on the Internet and whose search result displays an ordered hit list of items with a minimum of title metadata. What is not a LOR: a webpage with a list of links.
- **Online Course**: A material that is designed to be used in an online course.
- **Workshop and Training Material**: Materials best used in a workshop or tutorial for the purpose of teaching others about learning and teaching online.
- **3D Learning Object**: Open Textbook

The learning materials in MERLOT are organized into discipline "communities":

- Biology
- Business
- Chemistry
- Criminal Justice
- Engineering
- English
- Faculty Development
- Health Science
- History
- Information Technology
- Library and Information Services
- Mathematics
- Music
- Physics
- Psychology
There are many other sources of activities for online classes. *E-tivities* (2002) by Gilly Salmon provides numerous examples. She suggested that in building e-tivities, you consider the following key principles (from her Chapter 4):

**The E-tivity Process:**

1. Decide in advance of the participants logging on what you expect them to do and what the e-moderators will do.
2. Ensure the participants are clear about your intended objectives for an e-tivity. Start with the end in mind.
3. Ensure that your planned evaluation or assessment meets the purpose(s) of the e-tivity. If assessment is involved, look for alignment with tasks. Attempts to forcefully create participation through direct assessment are rarely successful.
4. Build in motivation as part of the process of undertaking the e-tivity itself and not as something separate from it. Motivation occurs because of the learning activities. Avoid trying to motivate people to simply log-on, and ‘discuss’, instead provide an e-tivity that makes taking part worthwhile.
5. Create an experience that is complete and worthwhile in itself. This includes setting short-term goals but ensuring there is a satisfying process and ‘flow’ of actions. In practice, e-moderators need to exercise judgement about when to go with the flow and when to guide participants towards expected outcomes.
6. Be highly sensitive to timing and pacing. Divide the e-tivity up into bite sized chunks – no more than 2 or 3 weeks’ work for a complete e-tivity, less if you can.
7. If you offer more than one e-tivity at a time, build them together in a coherent way to create a ‘program’. Use the 5-stage model.
8. Ensure that the e-tivities are in some way focussed on sharing, shaping, elaborating or deepening understanding.
9. Ensure that participants need to work together in some way to achieve the learning outcomes. If you cannot see the way to make working together worthwhile, maybe using e-tivities is not the best approach?
10. Be generous in allocating e-moderator time, especially if the e-tivity is geared towards stages 1-3.
11. Be ready, be prepared, and don’t be surprised at serendipitous events.
12. Aim to provide just one instructional message, which contains everything needed to take part. Each instructional message e-tivity should include:

- The purpose of the e-tivity (why the participants are doing it). If the e-tivities is assessed, indicate what might indicate success and how they can achieve it.
- What participants should do and how they can go about doing it.
- How long it should or could take. An idea of when the e-tivity starts and when it should finish.
- How the participants should work together.

Of course, your activities need to be organized. In online courses, it is recommended that you develop weekly lessons or modules based on a curriculum schedule. Within these lessons, you can have:

- **Assignments**: such as a list of reading assignments, writing assignments, research, and other activities. Students can complete assignments at the time they choose so long as they turn in assignments before their deadline.
- **Lectures**: online lecture materials can be provided to extend learning beyond the textbook. “Lecture” might also include readings, PowerPoint presentations, podcasts, or videos.
- **Discussions**: discussions (either synchronous or asynchronous) provide an excellent way to engage students in the learning process, particularly when they are linked to other activities such as readings or research. The key to good discussions is well-crafted questions and rubrics for evaluation.
- **Questions**: in an online class, your students do not raise their hand to ask a question. Instead, you should provide avenues for questions, such as an “Office Forum” in the Discussion Board, criteria for email questions, or other forums such as instant messaging or microblogging. Take advantage of the collective crowd wisdom and encourage your students to feel free to respond to each others’ questions.
- **Quizzes and Tests**: along with other assignments, you may test student understanding of content and skills through quizzes and exams. Given that any online student will have access to the textbook or websites, one should craft quizzes that engage critical thinking. Use of timed tests and random question pools can mitigate against concerns regarding cheating. The online assessment process also allows for formative practice quizzes and knowledge games.
- **Group Work**: new tools expand the options for student collaboration and group work. As with face-to-face classes, rubrics and expectations on participation and process can be very helpful.
- **Presentations and Projects**: Student generated presentations shared with the rest of the class are excellent learning opportunities. This might be an online blog site or journal, a PowerPoint presentation, a podcast, a paper, or a YouTube video.

**Using Blackboard as a Portal to the Larger World Wide Web**

These are exciting times to be teaching online. The internet has literally and figuratively eroded the walls of the classroom. In addition to providing flexibility for time and space to both you and your students, it has also provided an on-ramp to the collaboration occurring in many places in the networked world.

Blackboard is excellent for the administrative areas where security is vital, such as managing who is in your class, who has access to grade information, and who can confidentially contact you with class issues. Research
has shown that students like to use course management systems...but more for the convenience factor than for learning. Our job as faculty is to shift this emphasis so that Blackboard opens up avenues for learning.

To do that, in many cases, we need to move outside of Blackboard. Most of us teach in areas where it would enhance the class to bring in outside discipline experts...without physically bringing them to our campus. Webconferencing and microblogging make this easy!

More importantly, we no longer as faculty have to gather the course material and present it to the students. Rather, we can take advantage of the varied array of excellent material on the web and provide for a rich learning process by co-opting our students as fellow researchers.

There are literally thousands of web applications that can be used to engage your students in the learning process. The key is not see Blackboard as a closed system but rather as a portal to the wider world wide web.

In Online Teaching Toolbox, we discuss various web-based tools for connecting and collaborating, such as blogs, wikis, and Google applications.

As an example of one use, we wanted to bring some national speakers in to our online class. We used the built-in Wimba Classroom to set up a website for this interaction. Wimba allows for guest access, so we did not have to get a VCU eID for our guests. We were not only able to have a synchronous online verbal discussion with them and our students, but we were able to open the session up to interested people in the field through an invitation sent out on Twitter. On the night of the discussion, we had nine people from around the country join our five guest speakers and our students for a lively and very relevant discussion.

So check out Online Teaching Toolbox for more information on:

- Blogs
- Wikis
- RSS Feeds
- Google Applications
- Social Bookmarking
- Web Conferencing
- Podcasting
- Microblogging
Considerations Regarding Synchronous versus Asynchronous Delivery (or Both)

When teaching online, you have the option of using an asynchronous delivery method, a synchronous method of delivery, or both. Making decisions on how you deliver instruction impacts your design, as well as your teaching practice.

Asynchronous discussions are those that take place without participants being together physically or virtually at the same time. Synchronous discussions require all participants to be connected at the same time, either physically or via a communication channel. Research has shown that while both synchronous and asynchronous communications have their places in the online classroom, adult learners prefer asynchronous communication for its flexibility and the perception that asynchronous communication allows more time for reflective thinking.

However, do not discount synchronous discussions using web conferencing. Research has found that students indicated a preference for instructor-led discussion (over asynchronous peer discussions) because:

- Students would stay on task better
- Faculty would have deeper insights and more knowledge about the cases
- Faculty were more experienced at facilitating discussions.

In an online class, you will have one issue that never crops up in physical classes - time zones! It is common for online students to be spread across multiple time zones, so this has to be considered when establishing schedules for synchronous classes.

The beauty of synchronous communications is that it is somewhat easier to build community with the participants. The establishment of an asynchronous community takes time and effort and tends to follow a projected course of five stages, as described by Waltonen-Moore et al.:

1. Introductions- This might include a full biography or a short "getting-to-know-you" series of questions. Through this step, community members begin to see one another as human beings and begin to make a preliminary, emotive connection with the other members of the community. This step is often characterized by emotive or extravagant language and represents group members' attempts to make themselves known as living individuals behind the emotionless technology medium.

2. Identify with the group- Members begin to communicate with one another by reference to their commonalities as group members and seek to either establish or make known norms for successful membership. If this sense of group identity is not established, the likelihood of poor participation or attrition increases.

3. Interact- Members will start interacting with one another in reference to the community's established focus and begin to share information with one another. This is where students really begin to discuss course content.

4. Group cohesion and individual reflection- members of the group will begin to validate one another's ideas and opinions while, at the same time, being reflective of their own.
5. Expansive questioning - Now feeling completely comfortable within the environment, focused upon the content, and respectful of other group members’ thoughts and experiences, members will begin to not only post facts and deeply-held beliefs, but will actually start to ‘think out loud,’ allowing other group members to take part in their personal meaning-making and self-directed inquiry.

Asynchronous communities that progress efficiently through these stages tend to share at least three common attributes:

1. First, the community has an active facilitator who monitors, guides, and nurtures the discourse. Unguided communities tend to have difficulty progressing beyond the second stage of development, because group members can become distracted from the community's intended purpose.

2. Second, rather than seeking to take on the role of an instructor or disseminator of knowledge, the facilitator recognizes that knowledge is an individual construct that is developed through interaction with other group members. Thus, facilitators within successful communities tend not to be pedantic, but supportive.

3. And third, successful asynchronous communities permit a certain amount of leniency for play within their discourse. That is, communities that insist upon being overly stringent on etiquette and make no room for the social development that comes from play seem to drive away participants. Rather than enriching discourse on the targeted topic, such attitudes have a negative impact on group identity development and individual comfort levels which will, in turn, decrease overall involvement.

<table>
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<th>When, Why, and How to Use Asynchronous vs. Synchronous E-Learning</th>
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<td><strong>Asynchronous E-Learning</strong></td>
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<td><strong>When?</strong></td>
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<tr>
<td>■ Reflecting on complex issues</td>
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<td><strong>Why?</strong></td>
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<td>■ Students have more time to reflect because the sender does not expect an immediate answer.</td>
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<td>■ Use asynchronous means such as e-mail, discussion boards, and blogs.</td>
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<td><strong>Examples</strong></td>
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<td>■ Students expected to reflect individually on course topics may be asked to maintain a blog.</td>
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</tbody>
</table>

In an Educause article entitled “Asynchronous & Synchronous E-Learning”, Stefan Hrastinski (2008) suggests that asynchronous learning improves cognitive participation (increased ability to reflect and process information) while synchronous learning increases personal participation (increased arousal, motivation, and convergence on meaning). He summarizes in the table above when, why and how to use each communication method.

A case can therefore be made that both methods have a place in online classes. The specific learning objectives will drive particular usage.
Teaching Practices

You enjoy the interaction in a regular classroom and are now wondering – How is teaching online different? You have a notion that things will be different, but are not sure how to take your course that you have developed and actually begin to teach online using it. We will work on that in this section.

We also differentiate between practices associated with “teaching” and practices associated with “managing” your online class. We will focus on teaching in this section, and focus on classroom management in Managing Your Online Class

Some key questions in this section:

- What does the research suggest about how practices should change when teaching online?
- Why is your presence an important component of an online learning community?
- Do the time-tested Seven Principles of Good Practice change when teaching online?

Social Presence / Cognitive Presence / Teaching Presence

Several studies have reinforced the importance of the faculty member’s social presence in an online learning environment (Tu, 2000; Richardson and Swan, 2003; Rovai and Barnum, 2003; Palloff and Pratt, 2007). Whereas face-to-face communication has the most social presence and text on a page has the least, online courses fall in between. It takes conscious thought and action for students to see the faculty (and each other) as “real” people in their online class. Palloff and Pratt note:

There is one important element, however, that sets online distance learning apart from the traditional classroom setting: Key to the learning processes are the interactions among students themselves, the interactions between faculty and students, and the collaboration in learning that results from these interactions (p. 4).

Student-faculty contact does not just occur but instead is the result of active participation and interaction by you with your online students. Mupinga, Nora and Yaw (2006) noted that frequent communication with the instructor puts the online students at ease to know they are not missing anything or that they are not alone in cyberspace. Interaction with online instructors has been correlated with increased learning. Students with the highest levels of interaction with the instructor also had the highest levels of learning, according to
Frederickson et al. (2000). Several researchers have noted that teaching presence is a significant determinate of student satisfaction, perceived learning, and sense of community (Akyol & Garrison, 2008; Arbaugh, 2008; Shea et al. 2004, 2005).

Your perceived presence in your online classes is therefore critical.

Many tend to think that online classes are cold, but researchers have found that online communication can be just as personal, if not more, than non-computer mediated communication. The literature on social presence suggests that you and your students can create and maintain a sense of social presence through the following strategies:

- Expression of emotions
- Self-disclosure
- Continuing a thread
- Quoting from other messages
- Referring explicitly to other messages
- Asking questions
- Complimenting, expressing appreciation
- Expressing agreement
- Vocatives (i.e., referring to participants by name)
- Addresses or refers to the group using inclusive pronouns
- Phatics / Salutations (i.e., communication that is purely social)

(Rourke et al., 2001)

For additional reading on social presence, check out:

- **Assessing Teaching Presence in a Computer Conferencing Context**
  Anderson, Rourke, Garrison, and Archer (2001), JALN Volume 5, Issue 2 - September 2001
- **Teaching Presence Online Facilitates Meaningful Learning**
  Lowenthal and Parscal, Regis University The Learning Curve, Spring 2008,
  This article provides some useful strategies for creating teaching and social presence in an online class.
- **Online Teaching Presence and Community of Inquiry**
  Two recent presentations providing an overview of these concepts

### Preparing Students for Online Learning

You are prepared to teach online. Are your students prepared to learn online?

In **Getting Started: Student Readiness to Learn**, we discussed skills and attributes of successful online students. Taking it one step further, there are specific practices that you can do to prepare your students for online learning.

You should recognize that student problems online quickly become your problems as well, so it helps to be proactive. Student problems generally fall into three categories:
• **Technical Problems**
  Students arrive at your online class with a broad range of technical skills. It helps first to be upfront in your expectations and clear in your directions. Our Blackboard learning management system has a TAB called Downloads and Help, with FAQs (Frequently Asked Questions) and links to the HelpDesk. Do not be afraid to act as a referral service and send your students to the HelpDesk!

• **Learning Style Problems**
  Some students expect the teacher-directed lecture and test process they experienced in K-12, and find the self-directed nature of online learning difficult. Providing clear instructions and then following up when those instructions are not followed can help in the long run.

• **Communication Problems**
  Unless you use a form of web conferencing, most online communications lack the visual feedback mechanisms we use in class. There are time delays inherent in online communication. Providing specific expectations - “I will respond to email in 24 hours and return graded assignments in one week” – and of course, following your own guidelines, will mitigate communication issues. Your presence again makes a huge difference. If you positively stroke those communicating in discussion boards and privately email those who are not participating, it will send the signal that you care… and your students will rise to your expectations.

Some of your students will be experienced online learners, while others are new to online learning. A good suggestion is to provide an orientation to your class in the “Syllabus” section of your online class. Ko and Rossen (2007) suggest your orientation include:

• Overview of course schedule
• Expectations on time commitments, assignment due dates, and interaction with other students
• Expectations on communications to and from you as the faculty
• A tutorial on how you will use Blackboard
• Expectations regarding computer, other hardware (such as a headset), and software; as well as expectations on student minimum technical skills required.

For instance, your students should already know these basic technical skills:

1. Use browser (Firefox or Internet Explorer)
2. Use a search engine (Google, Yahoo, etc.)
3. Send and receive email (including attaching files)
4. Save files to a hard drive or flash drive
5. Find files on a hard drive or flash drive (navigate folders)
6. Use word processing software that can save files in the MS Word format.
7. Update computer with anti-virus software

• An initial assignment that tests their technical skills

Remember that an orientation does not have to be text-based. Effective orientations can be built using LessonBuilder or screencasts using products like Camtasia or Jing.

You might expect that there would be some technical issues, given the online environment, but do not overlook the typical behavioral or motivational problems that you might have experienced in your face-to-face classes. Some students will drop online classes earlier in the semester than you are used to, as they quickly
decide if online is a good fit for them. Others will try but fall behind and be frustrated. Your design and your practice can help alleviate these motivational issues:

- Provide opportunities for student collaboration and facilitate their collaborative learning processes.
- Provide opportunities for students to collaborate in real-time through online collaboration tools such as Wimba Classroom.
- Choose the right tone of conversation in online communication to make students feel comfortable with the learning environment, to establish trust in communication, and to reduce feelings of isolation and enhance a sense of community.
- Provide meaningful feedback on graded assignments with recognition of good work as well as specific suggestions for improvement.
- Provide a weekly “wrap up” before the next lesson begins.
- Take an active role in helping your students think and learn actively through careful task structuring, questioning, and scaffolding.
- In online discussions, consider:
  - Designing thought-provoking questions to elicit student discussions on the topics of your focus.
  - Providing a weekly summary of discussion topics to demonstrate your participation.
  - Redirecting off-topic discussion through gentle reminders or a recast of the question.
  - Assessing messages by both quantity and quality.
  - In addition, consider providing a social space where students can bond and feel open to discussing topics outside the course bounds. It is also good practice to provide a faculty "office" in the discussion forums.

**Building Community**

While faculty members traditionally work to create a learning community in face-to-face classes, a common mistake in translating educational work online is to see the process as individualistic. Earlier in this decade, nearly 80 percent of elearning was designed for solo work, which in effect made it little different from correspondence courses (Galvin, 2001). Research has shown that learning:

“...is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one’s own ideas and responding to others’ reactions improves thinking and deepens understanding” (Chickering and Gamson, 1987, p. 1).

We tend to agree with Palloff and Pratt (2007), who suggest that community is the central feature of online courses. They noted that the interaction and presence of the people in a community, coupled with processes that are reflective, constructivist, and social, and guided by articulated purpose, leads to the types of outcomes one desires in education – co-created knowledge, increased self-direction and transformed self-learning.

Palloff and Pratt (2007) go on to suggest that community is developed online by:

- Active interaction involving both course content and personal communication.
- Collaborative learning evidenced by comments directed primarily student to student rather than student to faculty.
• Socially constructed meaning evidenced by questioning, reflection and agreement
• Sharing of resources among students
• Expressions of support and encouragement exchanged between students as well as from faculty, including willingness to critically evaluate the work of others

For community to develop, your students need to sense the presence of you and each other in order to begin to build trust. Palloff and Pratt suggest that the keys to creating a successful learning community revolve around “honesty, responsiveness, relevance, respect, openness, and empowerment” (p. 22).

Building this community starts in the first week of an online course. We have used online ice breakers during the first week to humanize the individuals in the community, illustrating both the similarities of the members and their individual uniquenesses. E-Tivities by Gilly Salmon (2001) has a variety of activities that can be used online to build community. Additional suggestions from practitioners are exchanged in a social networking site run by and for faculty – College 2.0.

**Book Review of Building Online Learning Communities, Palloff and Pratt (2007)**

### 7 Principles of Good Practice in Online Teaching

Arthur Chickering and Zelda Gamson published their Seven Principles in 1987, synthesizing fifty years of research to develop [seven principles](#) that they viewed as core to effective teaching:

1. Good Practice Encourages Student-Faculty Contact
2. Good Practice Encourages Cooperation among Students
3. Good Practice Encourages Active Learning
4. Good Practice Gives Prompt Feedback
5. Good Practice Emphasizes Time on Task
6. Good Practice Communicates High Expectations
7. Good Practice Respects Diverse Talents and Ways of Learning

You will undoubtedly recognize these as core to your own face-to-face teaching. As you beginning to explore online delivery of your courses, a natural question is how do you translate what you currently are doing as you transition your course online?

In reviewing the literature, many suggest that the while the content and the learning outcomes are the same, the manner in which that content is delivered and the interactions with students are quite different. Ko and Rosen (2008) suggest that developing an online course starts at the same place where you develop a face-to-face course. You set the goals for the course, describes the specific learning objectives, defines the tasks necessary to meet those objectives, and then creates applicable assignments around these tasks. The fundamentals are the same, the technique is very different. So in many ways, the design of an online course mirrors the design of a face-to-face course. Both have clear learning objectives. Assessment of learning is critical in both. Yet the fundamental practices for delivering the instruction and facilitating learner interaction are quite different.
What is different in our view flows from our observation that the web has become social. Online courses require your social presence in order for the course to be effective. Several studies have reinforced the importance of the faculty member’s social presence in an online learning environment (Tu, 2000; Richardson and Swan, 2003; Rovai and Barnum, 2003; Palloff and Pratt, 2007). Social presence supports the notion that students see you (and each other) as “real” people in their online class.

This social presence of students leads to our second difference. Students need to form a learning community in order for the course to be effective. While you have traditionally worked to create a learning community in your face-to-face classes, a common mistake in translating educational work online is to see the process as individualistic. Earlier in this decade, nearly 80 percent of elearning was designed for solo work, which in effect made it little different from correspondence courses (Galvin, 2001). Research has shown that learning:

“is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one’s own ideas and responding to others’ reactions improves thinking and deepens understanding” (Chickering and Gamson, 1987, p. 1).

Finally, active engaged learning activities are required for the course to be effective. This is where the Seven Principles come in.

Good teaching online is no different than good teaching face-to-face, in that effective teaching incorporates each of these practices. Chickering and Ehrmann (1996) expanded on these principles to illustrate that technology can be a lever to implementing these principles. The Task Force on Quality in Distance Education for the University System of Ohio has also adopted these seven principles as foundational to e-learning (Ohio Learning Network, 2003).

Therefore, to explore how you could translate your face-to-face experience to online teaching, it is helpful to see how other have translated these principles in an online environment (TLT Group, 2004; Graham et al, 2001). In the web pages that follow, we outline a series of vignettes, supporting material and links to online tools meant to articulate how the seven principles can be applied as a means of supporting the transition to online teaching and learning.
Managing Your Online Class

Your role as a faculty member changes as you move online, as does the role of students. The online environment gives them access to much information, but has the potential to overwhelm them. As you guide the class and facilitate their learning, you are using new practices yourself.

As we noted in the last section, we are differentiating between "teaching practices" and "management practices."

With that in mind, some key questions in this section are:

- How can you make your expectations clear to students who you never see physically?
- How can you manage the increased amount of reading you will do in an online classes?
- How can you get your students to see you (and their fellow students) as a real person?
- In a cut and paste world, how is copyright and a concept such as Creative Commons altering how academic integrity is viewed?
- How do you ensure that students with special needs are accommodated in your class?
- Who should you refer students to if they have technical issues in your online class?
- How can VCU Libraries assist online students in their learning?

Setting and Reviewing Expectations

As we noted in Teaching Practices, one of the Seven Principles was Communicating High Expectations. Chickering and Gamson noted that faculty members should expect:

“more and you will get it. High Expectations are important for everyone - for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations of them and make extra efforts”

Here is a good example of an online professor at MiraCosta College who uses a Q&A webpage to set expectations for her class. She answers questions that students typically have on how much time the class will take, whether the class is hard, what the course covers, etc.

Of course, you do not have to set up your own website. You could achieve the same goal within Blackboard. The key is to communicate your expectations.

Lisa Ford, an elearning consultant with SkillSoft, suggested communicating the following expectations to students:

1. **Make time for e-Learning.** Set aside specific times to work on your courses and stick to your schedule. Internet based courses do not have the regular meeting times and terms that instructor-led courses have, so you can set your own time schedule.
2. **Pace yourself.** Deciding your own hours is great, but make sure you do not fall behind in your schedule. Catching up is difficult. Create milestones or check points to help you stay on track.

3. **Prepare for the course by reviewing its organization, navigation, tools and resources.** Read the introductory materials in the course before getting started. Exploring the materials will clarify the course structure and help you work efficiently once you begin.

4. **Be a strategic learner.** Look at the learning outcomes and scan the assignments prior to starting the course. Keep the outcomes and tasks in mind as you work through sections of the course.

5. **Don’t feel that you need to read everything.** Students have different learning styles and some don’t need to read everything to succeed.

6. **Maintain a positive attitude.** Don’t become discouraged if you run into difficulties. Developing new skills and knowledge is sometimes difficult, but the gain is worth the pain. Moreover, it may take some adjustment to get comfortable working remotely.

7. **Take the initiative.** Learning is a process and there is not necessarily one right answer to most questions. Online learning allows you to balance independent learning with mentoring.

8. **Collaborate.** Helping others and sharing your view will enhance your learning and make it more fun.

9. **Share your experiences.** Ask yourself whether the material in the course is consistent with your experience, and analyze why or why not. Share these ideas with others to challenge your own thinking and learn from the ideas of your colleagues.

Keep in mind that expectations can be a double-edged sword. You obviously will want to stick to the same standards you are requiring of your students!

**Time Management**

Like many faculty members, you may enjoy the time flexibility and time-shifting that can occur when teaching online, but there are definitely time considerations. Teaching online carries with it time adjustments that you should recognize and factor in to your professional (and sometimes personal) life.

Connecting and communicating with students online takes time. Discussion forums will extend and strengthen the social interaction that occurs naturally in a face to face class. Students who were otherwise shy, or at least not participative in the live discussion in a f2f class, will often come out of their shells and spend a great deal of time participating in the online discussion. Students who tend to dominate live discussions will still participate in the online discussion, but others will have a chance to respond because the discussion is asynchronous and extended over time.

However, these benefits come at a price. Time requirements need to be carefully considered for both students and faculty. Managing time is critical in order to prevent students from leaving because of lack of interaction and to make sure faculty do not over-or under-do the time on task in an online course. Over-doing it could
result in faculty burnout and under-doing it could result in lower student retention. A balance needs to be found that will work for everyone involved.

Janie Sullivan, an educator from Arizona with nearly twenty years experience teaching in higher education, provided the following Time Management Tips for Online Teachers

**Web Learning Curve**

Part of your time management process will be the learning curve in the use of the Blackboard learning management system or other online website you use, such as a wiki. Not only do you need to know how to use these sites, but you must be prepared for upgrades and new releases of the software, something which always seems to add challenges.

**Take the Focus off the Technology**

Just as you need to learn how to use Blackboard, your students will also require some time. Here are some strategies that you can use to help the students right away, saving time and taking the focus off the technology and putting it on the content.

- Structure the course carefully
- Use the discussion forums extensively
- Do not overload the students the first two weeks
- Publish the course schedule in several places in the CMS
- Let the students help each other

**Developing a Routine and Schedule for Online Classes**

Online classes certainly give both you and your students time flexibility, but that flexibility can be a trap for both you and your students.

One of the mistakes new online faculty members sometimes make is to not structure the class and give deadlines. One faculty member new to teaching online put in his syllabus that he recognized that many of his students were working individuals...and so there would be no deadlines in his class. He then found that 80% of his students waited until the last week of class to submit all assignments! He was hard-pushed to grade that volume of material by grade submission deadline...and he certainly was unable to provide quality feedback to his students.

Online students need to be more self-motivated and self-sufficient than classroom students, but that motivation can be built in to the schedule. Tips we have used:

1. **Divide your content into weekly modules or lessons.**
   This is really no different than if you were meeting with your students once or twice a week. It simply helps to chunk your content, interactions, discussions, and assessments; dividing your material into weekly segments. However, go easy on the first week. Some of your students are both trying to learn their way around both Blackboard and your material. Make the first assignment one that helps your
students get comfortable with the online learning environment. (See our section on Icebreakers for some ideas.)

In dividing your class up, think about your target audience and their schedules. Just because the semester starts on a Wednesday or Thursday does not necessarily mean your “week” does as well. If you recognize that the majority of students will be working on your class on weekend, have your “week” run from Monday through Sunday. In fact, having your first lesson run for 9-10 days gives you time to work through the growing pains new students have with Blackboard and online communications. (And check what a "week" might be if you are teaching students in another country...and be adaptable to that as well.)

2. **Use a consistent format in your weekly lessons.**

   Nothing confuses students more than a constantly changing format to your class. Find a format that works for you and them and stick to it. In customizing your class, you can set up a Menu category called LESSONS, and then place a folder for each weekly lesson in that content area. Inside each weekly lesson folder, you can then place a consistent series of folders, such as Readings, Discussions, Assignments, etc.

3. **Have graded assignments each week, including discussions.**

   Grades are a pretty powerful motivator for students. Providing weekly grades also increases the frequency in which you can give students feedback on their progress.

4. **Separate deadlines for discussions and for written work.**

   Managing asynchronous discussions can be time consuming, but it helps if there is a consistent flow to discussions. One method of improving discussions is to have a deadline for initial comments and a second deadline for comments and responses. It also helps to provide a rubric on your expectations regarding discussions. For instance, letting students know that comments such as “I agree” are considered “C-level work” will set the bar higher.

5. **Do not use midnight as a deadline.**

   Midnight is an arbitrary time and ignores the reality that many of your students work late into the night when online. In reviewing course statistics after a few weeks of your course, it is not unusual to find that someone in your class has been online in the class every hour of the day. Additionally, many
students (and some faculty) have trouble conceptualizing exactly when “midnight” is. For instance, if September 9th is a Wednesday, and you designate that a paper is due by midnight, September 9th, in reality, you have just set the deadline for Tuesday night, since midnight (or 0000 on a world clock) is the start of September 9th. If you meant for students to turn something in Wednesday night, setting a deadline of midnight September 10th is just as confusing. Something that has worked for us is simply to state that papers are due September 9th without specifying a time.

6. **Be proactive in contacting students who miss deadlines.**
   If you rigorously check and follow-up the first couple of weeks on deadlines, in many cases you will “train” your students as to acceptable behavior, which then becomes the routine for the remainder of the class. Take advantage of some of the technology tools such as discussion board subscription or RSS feeds to stay abreast of student activity.

### The First Week – Icebreakers Online

As Palloff and Pratt noted in their 2007 book Building Online Learning Communities that building a learning community begins in the first week of class. One way to kick start this is to have a fun icebreaker online before diving in to the course content. Just as in a face-to-face class, an icebreaker tends to establish the presence of each individual and open those critical lines of communication.

Icebreakers are a great way of establishing social presence – for both students and you as the professor. Conrad and Donaldson, in Engaging the Online Learner (2003), suggested that online icebreakers should be fun, creative, expressive, and focused more on the personal life than the academic life. For them, an effective icebreaker:

- Is fun and non-threatening
- Is person-focused and not content-focused
- Requires learners to read and respond to each others’ entries
- Requires learners to find commonalities with others in the class
- Requires a learner to be imaginative or express genuine openness

**Some examples of icebreakers:**

- **Teaching With Technology Icebreaker Ideas**
  This wiki contains a variety of icebreakers that can be used with online classes. We have used the what superhero are you, three websites you visit, books your are reading, and find things in common between yourselves techniques.

- **Name that Movie**
  If you were to write the musical score to your life, what two songs would you pick...and why? For others, based on these two songs, what title would you give the movie made about this person’s life? Have fun with this!
• **Truth and Lies**
  Enter two truthful statements and one falsehood about yourself into the discussion board. Other students then try to distinguish the truths from the lie. If you are as outrageous with your truths as your lies, this can be a fun exercise in which we learn a great deal about each other.

• **If I Were an Appliance**
  Which kitchen appliance best describes you? And why? Then comment on the other appliances with which you would like to hang out.

• **Snowball**
  Introduce yourself as faculty, including personal interest items. The next person should not only enter basic information about her or himself, but should find one thing in common with the first entry. This continues with each student entering an introduction and noting three people where they find they have something in common. In turn, students should begin responding to others with whom they found they had something in common.

For additional ideas, see what Southern New Hampshire University faculty shared as icebreaker ideas.

**Filtering and Preventing Information Overload**

Alvin Toffler coined the term “information overload” in the 1970’s, referring to an excess amount of information being provide which made processing difficult. Many have suggested that the internet has increased information overload for both students and faculty. However, Clay Shirkey gave a presentation with the title "It's Not Information Overload. It's Filter Failure" at the Web 2.0 Expo. He argued that information abundance has been a problem since Gutenberg’s invention of the printing press.

People have studied information overload for decades. Miller (1960) identified six strategies for dealing with information overload:

- The strategy of omission, or the temporary non-processing of information.
- Processing information readily at hand, even if it is bad or incorrect information.
- Queuing or delaying the processing of some information with the hope of catching up later.
- Information filtering or looking at information at a higher level and saying, "I will go through this and I won't go through that."
- Simply walking away from the task.
- Generalizing, using minimal information to draw broad conclusions.

None of these are really sustainable in a digital age. There is no single cookie cutter approach to information management. However, there are emerging trends that suggest you and your students can develop personal approaches to information management.

Technologies can help learners take control of and manage their own learning. Johnson and Liber (2008) noted that in using technology to shift the locus of control over learning to the learner, the ways in which learners exercise that control becomes an important educational issue. Tools such as RSS feeds, wikis, social bookmarking, and blogs potentially set up an environment that allows learners to:
- set their own learning goals
- manage their learning;
- managing both content and process
- communicate with others in the process of learning

...and thereby achieve their learning goals. These tools can be multi-layers or simple, and may include a desktop application with one or more web-based services. For instance, a fairly mature personal learning system illustrated below uses multiple systems for collecting information, creating and sharing information, collaborating with others, and communicating with a fellow network of learners:

Taking the time to develop your own process for filtering information (and helping your students build that skill) is an investment that pays off over time. Using web tools for collection and filtering can integrate both the formal and informal learning episodes into a single experience. Social networks can be used to cross institutional boundaries, connecting a range of resources and systems within a personally-managed space.

In developing this personal space:

- Clarify your information needs for each situation. Information needs are dynamic, varying according to the decisions you need to make, the projects you are engaged in and your role in those projects.
- Identify potential sources (books, articles, Web sites, databases) and common keywords that describe the concepts you are researching.
- When using search engines, use advanced search options in lieu of simple search options.
- Rather than trying to follow everyone, pick the three to four "thought leaders" and just follow them.
- Use RSS feeds to pull in the information you need.
- Use filters to pre-sort incoming mail and selectively participate in aggregators, listservs, chat rooms.
- Adopt naming conventions for tags and stick to them.
- When working in a team, agree upon naming conventions at the outset. For example, add draft numbers to file names as revisions are made.
- Set criteria for what you want to save or delete.
• Work out how and when to process information.
• Review your information periodically. Prune ruthlessly based on use. If you don't access a file within a specified time limit, then don't keep it.

Creative Commons and Copyright
The Association of Research Libraries provides useful tips in Know Your Copy Rights, from which the following is provided.

In your teaching, you often would like to share legitimately with your students articles, video, music, images, and other intellectual property created by others. Sorting out what you can or can’t do is often confusing, and things are not clear cut on the web. Lack of clear-cut answers may translate into delays, doubts, fear of liability, and decisions to err on the side of caution and non-use. But frequently you do not need to get permission or pay a fee. Use rights may have been licensed by your library or reserved under law. Or you can choose to use material available under Creative Commons.

In many cases, you can eliminate the need for permission or fee by simply giving your students a link to the work instead of making copies of it. For example:

• The VCU Library already may have paid for a subscription license that entitles you and your students to online access. Simply link to these resources.
• Even if the library hasn’t purchased access, the work may be available for free on a legitimate Web site, such as your institutional repository or another online open archive, the author’s homepage, or an open access journal.

Fair Use
To ensure a balance of the rights of copyright owners and the public interest, the law allows you to use copyrighted works without permission — regardless of medium — when evaluation of the circumstances suggests the use is fair.

This “fair use” provision of copyright law doesn’t provide hard and fast rules to tell you whether a use qualifies as fair. Instead, the unique facts regarding a use lead you to a reasoned conclusion. Your evaluation should weigh four factors:

1. Purpose and character: If your use is for teaching at a nonprofit educational institution, this is a factor favoring fair use. The scale tips further in favor of fair use if access is restricted to your students.
2. Nature of copyrighted work: Is the work fact-based, published, or out-of-print? These factors weigh in favor of fair use.
3. Amount used: Using a small portion of a whole work would weigh toward fairness. But sometimes it may be fair to use an entire work (such as an image) if it is needed for your instructional purpose.
4. Market effect: A use is more likely to be fair if it does not harm the potential market for or value of the copyrighted work. But if it does, this could weigh more heavily against fair use than the other factors.

Consider each of these factors, but all of them do not have to be favorable to make your use a fair one. When the factors in the aggregate weigh toward fairness, your use is better justified. When the factors tip the scales
in the other direction, your need to obtain permission from the copyright holder increases. Don’t worry that the answer isn’t crystal clear. Just decide whether the factors weigh enough toward fairness so that you are comfortable not seeking permission. Some suggest reliance on the “golden rule” — if you were the copyright holder, would you see the use as fair and not expect to be asked for permission?

Video is the murkiest area of copyright. While one could show a video they had purchased in a classroom as fair use, streaming it over the internet is considered “distribution” and therefore a violation of copyright, even if you had purchased a single copy. It therefore is best to find the video already online and link to it.

Creative Commons is an organization set up to expand the range of creative works available for others to build upon legally and to share. The organization has released several copyright licenses known as Creative Commons licenses. These licenses allow creators to communicate which rights they reserve, and which rights they waive for the benefit of recipients or other creators.

Creative Commons defines the spectrum of possibilities between full copyright and the public domain - from all rights reserved to no rights reserved. Their licenses help you keep your copyright while allowing certain uses of your work — a “some rights reserved” copyright.

When published to the web, the author of the text, image, video, or audio file will choose from a set of conditions they wish to apply to their work:

You (and your students) can therefore use works you and they find online in your course as long as you follow their licensing condition (attribution)

Creative Commons
VCU Libraries Copyright Resource Website

**Academic Integrity**

Academic integrity is a fundamental value in higher education. Students and faculty build their learning communities based on honesty, trust, fairness, respect and responsibility.

“**Best Practice Strategies to Promote Academic Integrity in Online Education**,” Version 2.0, June 2009, is based on “Institutional Policies/Practices and Course Design Strategies to Promote Academic Integrity in Online Education,” produced by the Western Cooperative for Educational Telecommunication’s (WCET) Study Group on Academic Integrity and Student Authentication. Later, the Instructional Technology Council (ITC) surveyed
its membership to invite feedback and additional strategies to enhance the WCET work. This June 2009 document reflects the combined contributions of WCET, the UT TeleCampus of the University of Texas System, and ITC. It is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 United State license, and is repeated here:

Institutional Context and Commitment

1. Establish a campus-wide policy on academic integrity that articulates faculty and student responsibilities.
2. Demonstrate an institutional commitment to enforcing the policy and in supporting faculty and staff in the handling of academic integrity matters.
3. Make information on academic integrity easy to find on the campus Web site, library Web site, department Web site, course, within the syllabus and within specific assignments.
4. Include ethics instruction within the core curriculum and/or area-specific within degree plans.
5. Address academic integrity at student orientation programs and events.
6. Encourage faculty to report every suspected violation and act upon it.
7. Secure student logins and password to access online courses and related resources, discussions, assignments and assessments.

Curriculum and Instruction

1. State the academic integrity/academic honesty policy within the online learning environment and discuss it early in the course.
2. Require student engagement with the academic integrity policy. For example:
   o Ask students for their input on how to create a community of integrity at the start of the course. This establishes the students as stakeholders in the community and the process of its formation.
   o Develop and ask students to commit to a class honor code.
   o Require students to read and sign an agreement to the campus academic integrity policy.
   o Write a letter to students about integrity and post it in the course.
   o Ask students to restate the academic integrity policy (this can also be used as a writing sample to use when grading and reviewing student work).
   o Ask students to reflect on the academic integrity policy in the discussion board.
   o Include a lesson on avoiding plagiarism.
3. Have assignments and activities in which appropriate sharing and collaboration is essential to successful completion. Foster a community of integrity by choosing authentic learning tasks that require group cohesiveness and effort. For example, focus assignments on distinctive, individual, and non-duplicative tasks or on what individual students self-identify as their personal learning needs.
4. Provide students with a course or course lesson on research and/or study skills. Work with library staff to design assignments and prepare materials on plagiarism and research techniques.
5. Include a statement that the instructor reserves the right to require alternative forms and/or locations of assessments (e.g., proctoring).
6. Ask students follow-up questions to assignments such as, “expand upon this statement you made,” “tell me why you chose this phrase, description or reference,” and “expand upon the ideas behind this reference.”
7. Select one or two difficult concepts from the paper and ask the student to restate/rewrite the information.
8. Require students to share key learning from references for a paper or self-reflection on an assignment in the discussion board.
9. Include an ethical decision-making case study within the course.

Faculty Support

1. Incorporate academic integrity strategies into professional development and faculty training offerings.
2. Publish academic integrity strategies and policies in faculty handbook and Web-based faculty resources.
3. Publish guidelines for handling/reporting individual student infractions.
4. Assign a department academic integrity liaison to support faculty.
5. Use SafeAssign.
6. Use Google to search for a unique text string or unique phrase from the paper.
7. Keep student papers filed in the department by topic for reference.

Student Support

1. Define academic integrity and cheating and clearly explain what is considered dishonest and unacceptable behavior.
2. Provide information and examples to help students understand the difference between collaboration on assignments and cheating, and identify plagiarism. Teach the proper use of citations.
3. State how much collaboration is permissible on each assignment.
4. State what the instructor’s expectations are for the students and explain what they should expect from the instructor. For example:
   - Include a statement in the syllabus encouraging honest work.
   - Repeat the campus academic integrity statement and provide a link to campus policies.
   - Describe academic dishonesty.
   - Describe the repercussions for academic dishonesty.
   - Describe permissible and impermissible collaboration.
   - Include outside links to information on plagiarism, self-tests and examples.
   - Include information on acceptable sources.
   - Include information about the college’s writing center, library or other support.
5. Provide a writing style sheet or handbook with information on plagiarism and campus policies.
6. Indicate assessments may require follow-up documentation, questions or assignments.
7. State expectations for the time needed to complete coursework.
8. State whether you will use a plagiarism detection service.

Assessment

1. Provide rubrics, or detailed grading criteria, for every assignment at the beginning of the course so students understand how they will be graded.
2. Train faculty on ways to use the settings on the learning management system to reduce cheating:
   - Use a test bank with more questions than will be used on any particular test and have the learning management system pull a smaller number of questions from the test bank.
o Randomize the order of answers for multiple test questions so for example, the correct answer for a particular question might be “a” for one student and “b” for another.

o Require forced completion on exams so students cannot re-enter a test.

o Set a short window for testing completion, i.e. one or two days to take an exam rather than a whole week. Setting a completion time reduces a student’s ability to access the test, look up the answer, and re-enter the test. Most test-taking software applications keep track of time on the server, not on the student’s computer.

o Password protect exams.

o Show questions one at a time (makes more difficult for students to copy and paste the test in order to give it to someone else).

o Use a Web browser lock-down service during testing.

o Check the computer “properties” for the “creation date” and “author” for essay or term paper submissions if students are suspected of submitting work created by someone else.

3. Clarify that students with disabilities and requesting testing accommodations (extended time for completion of examinations and quizzes) must identify themselves to the college’s office of disabilities and provide appropriate documentation.

4. Change test items and assignment topics each semester.

5. Emphasize assignments that require written work and problem solving (e.g., essays, papers, online discussions).

6. Use a variety of assessment strategies (quizzes, short and long papers, test questions that require the application of a theory or concept).

7. Adopt the following practices to encourage authentic written work:
   o Require students to turn in copies of reference articles with cited text highlighted.
   o Require annotated bibliographies.
   o Do not allow last minute changes in assignment topics.
   o Require specific references be used (this might be the course text).
   o Require an abstract.
   o Give narrow assignment topics (tied into class experience) and require thesis statements prior to topic approval.
   o Require students to turn in a draft, and their bibliography or references prior to the paper’s due date.
   o Require students to write a concept paper and project plan prior to completing an assignment.

8. Evaluate the research process and the product.

9. After an assignment is due, have students post in the discussion board, describing the assignment and the research method used, a summary of conclusions and an abstract (a meta-learning essay).

10. When evaluating student written work, consider following these practices:
    o Be wary of student writing that reads like an encyclopedia, newspaper article or expert in the field.
    o Look for whether a paper reflects the assignment, has changes in tense, includes odd sentences within a well-written paper, is based on references older than three years, refers to past events as current, or uses jargon.
    o Compare student writing on the discussion board with that on assignments and papers. A writing sample collected at the start of the semester can be helpful.
Compare the writing at the beginning and end of the paper with that in the middle of the paper -- language, sentence length and reading level.

Check references; compare quotations with cited sources; look for the same author in multiple references.

Read all papers on the same topic together.

11. Make assignments cumulative (students turn in parts of a project or paper throughout the semester).
13. Other than grades, do not provide students feedback on tests until all of the students in the class have completed them.
14. Use proctored test sites where appropriate.
15. Faculty should use a robust user name and password to protect their computer-based grade book and keep a printed copy in a secure place in case students are able to hack into the computer system.

Best Practice Strategies to Promote Academic Integrity in Online Education
Version 2.0, June 2009

After researching a wide variety of online resources that other universities make available to their respective student and faculty bodies, we have compiled here some of the better resources for the VCU academic community. These links provide general advice and strategies. None of the specific policies and procedures that are mentioned on these sites pertain to VCU. For information on the policies and procedures for plagiarism at VCU please refer to the VCU Honor System in the Resource Guide. Most of these links provide the following general information on plagiarism:

- What is plagiarism?
- How can we recognize or detect plagiarism?
- How can we avoid plagiarism?
- Examples of proper and improper citations

Resources for Faculty

Most of the following links provide faculty with information and resources that help them to reduce the structural conduciveness behind plagiarism (i.e. how to create assignments that do not lend themselves to cheating, how to help students learn how to site sources properly, etc.). In addition to these preventative strategies, many of these links also offer detection strategies.

- VCU
- Carnegie Mellon University
- University of Maryland University College
- University of Melbourne
- VirtualSalt: Anti-Plagiarism Strategies
- 4 Reasons to be Happy About Internet Plagiarism

Resources for Students
Most of the links below provide students with information and resources that will help them to avoid accidental plagiarism. Some of the more typical issues addressed here are: what is plagiarism; how to cite sources properly (including internet or electronic sources); and when to use quotes, paraphrasing, and "common knowledge".

- VCU
- University of Maryland University College
- Indiana University
- Duke University
- California State University at Fullerton
- University of Melbourne
- Dartmouth College
- Drew University

SafeAssign is a plagiarism prevention tool integrated with VCU’s Blackboard system. While plagiarism is a perennial academic issue, reports in recent years have suggested that incidents are on the rise, particularly cases involving electronic source material. Tools like SafeAssign offer one avenue for formatively teaching plagiarism prevention, but they are not foolproof. The materials provided here from VCU’s Writing Center address some of the theoretical and practical issues associated with tools like SafeAssign and suggest ways such programs might be successfully incorporated into the classroom.

- Using SafeAssign
  - The View From the Writing Center
  - General Guidelines for Using SafeAssign
  - Issues Associated with SafeAssign
    - Intellectual Property Rights
    - Comprehensiveness
    - Intellectual Property V Common Phrases
- Blackboard's SafeAssign
  - What is SafeAssign?
  - Interpreting SafeAssign scores
    - For students
    - For instructors
- SafeAssign's Potential as a Learning Tool
  - Incorporating SafeAssign into the Classroom
  - Using SafeAssign to Teach Paraphrasing
  - Using SafeAssign to Teach Direct Quoting
  - Using SafeAssign to Teach Student-to-Source Ratio
- A Closer Look at Plagiarism
  - Policing v Prevention
  - Intentional v Unintentional Plagiarism
  - Culture: a Complicating Factor
- Assignments That Discourage Plagiarism
  - Characteristics of Effective Assignments
  - Designing Effective Assignments
Accessibility

When providing instruction online, it is important to consider whether the material we provide is accessible to all of our students. As the VCU Disability Support Services website points out:

“Greater numbers of students with disabilities are attending colleges and universities due to increased medical advances, growth in adaptive technology, a changing job market and greater student and family awareness regarding legislative protection. Over half of students with disabilities in colleges and universities have hidden disabilities. A growing percentage of students with hidden disabilities are first diagnosed in college.”

As faculty, you already are not physically seeing your students, so you may not be aware of a student’s disability. Students seeking accommodations are required to register with Disability Support Services, but you can be proactive to help avoid unpleasant surprises and make it easier to re-use existing material.

Universal Design for Learning

Universal Design for Learning (UDL) is a framework for designing educational environments that enable all learners to gain knowledge, skills, and enthusiasm for learning. This is accomplished by simultaneously reducing barriers to the curriculum and providing rich supports for learning.

Students come to your class with a variety of needs, skills, talents, and interests. The issue is whether your curriculum and instructional processes provide ease of access or barriers and roadblocks. UDL attempts to address this issue by focusing in both curriculum and learning processes.

To improve educational outcomes for diverse learners, the National Universal Design for Learning Task Force suggest applying the following principles to the development of goals, instructional methods, classroom materials and assessments.

- Provide multiple and flexible methods of presentation to give students with diverse learning styles various ways of acquiring information and knowledge.
- Provide multiple and flexible means of expression to provide diverse students with alternatives for demonstrating what they have learned, and
- Provide multiple and flexible means of engagement to tap into diverse learners' interests, challenge them appropriately, and motivate them to learn.

The term “universal design” is borrowed from the movement in architecture and product development that calls for curb cuts, automatic doors, video captioning, speakerphones, and other features to accommodate a vast variety of users, including those with disabilities. The National Task Force noted that all such flexible designs are less expensive and cumbersome than costly retrofits, and that, in fact, everyone benefits from universal design features, as anyone who has watched video with captions in a busy gym or airport can attest.

Students differ from one another in many ways and present unique learning needs in the classroom setting, yet high standards are important for all students. By incorporating supports for particular students, it is possible to improve learning experiences for everyone, without the need for specialized adaptations down the
line. For example, captioned video is of great help to Deaf students—but is also beneficial to students who are learning English, students who are struggling readers, students with attention deficits, and even students working in a noisy classroom.

The advent of digital multimedia, adaptive technologies, the Read-Write-Web, and other advancements make it possible on a broad scale to individualize education for individual students. Developers and practitioners of UDL apply the inherent flexibility of digital media to individualize educational goals, classroom materials, instructional methods and assessments. Thus, each student has an appropriate point-of-entry into the curriculum—and a pathway towards attainment of educational goals.

**Accessibility in Distance Education: A Resource for Faculty in Online Teaching**

[http://www.umuc.edu/ade/](http://www.umuc.edu/ade/)

This University of Maryland web site focuses on helping faculty develop accessible online learning materials for people with disabilities. It is divided into five major sections, targeting common accessibility questions:

- What does the word "accessibility" mean? ([What is Accessibility?](http://www.umuc.edu/ade/What_is_Accessibility))
- What disability laws should I know about if I teach online? ([Legal Issues](http://www.umuc.edu/ade/Legal_Issues))
- What do I need to consider if I have a student with a disability in my online course? ([Understanding Disabilities](http://www.umuc.edu/ade/Understanding_Disabilities))
- How do I make my Web site accessible to everyone, including students with disabilities? ([How-To](http://www.umuc.edu/ade/How-To))
- What does an accessible Web site look like? Does it have to be text based? ([Best Practices](http://www.umuc.edu/ade/Best_Practices))

The University of Maryland also provides some excellent tips in *[Effective Practices in Online Teaching: Accessibility]*. Of particular note is its coverage of the use of color in web material.

**FERPA Implications in Teaching Online**

*[The Family Educational Rights and Privacy Act]* (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools and institutions of higher education that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's education records. These rights transfer to the student when he or she reaches the age of 18 or attends a school beyond the high school level. College students are considered responsible adults and are allowed to determine who will receive information about them.

- College students have the right to inspect and review their own student's education records maintained by the school. Schools are not required to provide copies of records unless, for reasons such as great distance, it is impossible for students to review the records. Schools may charge a fee for copies.
- College students have the right to request that a school correct records which they believe to be inaccurate or misleading. If the school decides not to amend the record, the student then has the right to a formal hearing. After the hearing, if the school still decides not to amend the record, the student
has the right to place a statement with the record setting forth his or her view about the contested information.

- Generally, schools must have written permission from the college student in order to release any information from a student's education record. However, FERPA allows schools to disclose those records, without consent, to the following parties or under the following conditions (34 CFR § 99.31):
  - School officials with legitimate educational interest;
  - Other schools to which a student is transferring;
  - Specified officials for audit or evaluation purposes;
  - Appropriate parties in connection with financial aid to a student;
  - Organizations conducting certain studies for or on behalf of the school;
  - Accrediting organizations;
  - To comply with a judicial order or lawfully issued subpoena;
  - Appropriate officials in cases of health and safety emergencies; and
  - State and local authorities, pursuant to specific State law.

Schools may disclose, without consent, "directory" information. VCU defines directory information as:

- student name
- date admitted
- birthdate
- mailing address and telephone number
- local address and telephone number
- university e-mail address
- semesters of attendance
- major(s)
- minor
- specialization
- school
- full- or part-time status
- classification (freshman, sophomore, etc)
- degree sought
- honors and awards
- degrees and dates received
- participation in officially recognized intercollegiate sports, weight, height, hometown, parents' names and previous school(s) attended (for members of athletic teams)
- ID photograph
- Emergency Contact Information

FERPA directs that schools must tell students about directory information and allow students a reasonable amount of time to request that the school not disclose directory information about them. Schools must notify students annually of their rights under FERPA. The actual means of notification (special letter, inclusion in a bulletin, student handbook, or newspaper article) is left to the discretion of each school. VCU provides this information on our webpage.
Those students who request a FERPA block should be aware that this request does not restrict administrative access to their information where there is a legitimate educational interest, but does restrict other sharing of this information. For example, a FERPA block will not keep advisors or tutors from seeing the student’s information, or prevent the student from being listed on a class list where access to the list is limited to members of the class, or from being shown in online class tools as long as use of such tools is restricted to members of the class.

Online classes are covered by FERPA in the same way that face-to-face classes are covered. By the above rules, it is acceptable for students to see each other's name and email addresses in Blackboard class rosters but it would be unacceptable for you to scan in your BANNER roster which contains student ID numbers. It is acceptable to use the Blackboard gradebook and let students check their own grades, but unacceptable to post a list of grades, even if you used last 4 digits of a SSN as an identifier. It is acceptable to allow outside guest speakers to talk to your class in Wimba Classroom, but not acceptable to send your guest speaker an advance copy of the class roster (unless you had the permission of all students).

Southern Methodist University had good advice for its faculty members:

If in doubt, don’t give out!

Technical Support For Students

De facto, you as the person teaching online will be considered the technical support person for your course. If that scares you, do not be alarmed. Instead, be proactive and provide your students with referrals to where they can get help.

You and your students have a TAB in Blackboard called “Downloads & Help.” It contains:

The Technology Services Help Desk provides quick, courteous, and comprehensive computing support on the Monroe Park and MCV campuses. Self-service support is available online 24 hours a day and walk-in and live phone support during posted hours.

Phone: (804) 828-2227
Email: help@vcu.edu
Address:
TS Help Desk
Cabell Library Rm B-30
901 Park Ave.
P.O. Box 843059
Richmond, VA 23298

List this service in your syllabus and in your Blackboard site.
Managing Student Behavior Online

The range of students in an online class is typically much like the range you would have in a face-to-face class. There are quiet ones, noisy ones, take-charge types and those needing hand-holding. You can have class clowns and disruptors, as well as procrastinators. In other words, typical students!

**Noisy Students**

Much like their traditional counterpart, noisy online students expend a lot of energy raising issues that are only tangentially related to the topics under discussion. The nice thing is that in asynchronous situations online, this is not as disruptive as face-to-face. Other students learn and just ignore threads from this individual. But in synchronous web conferences, this can be disruptive. The key is to respectfully channel this conversation offline. You can give this person the attention they desire by email, and you can control the flow of conversation in a web conference by disenabling all microphones and then controlling who can speak.

**Quiet Students**

These are sometimes even more problematic, in that you may not notice the lack of participation. This suggest that it is a good idea to actively use Course Statistics to keep track of course hits and postings, and to use private emails to contact a student if they are not participating.

**Disruptive Students**

On rare occasions, a student will display behavior online that is offensive to you or others in the class. It helps to provide a policy in your class on behavior, such as a Netiquette guide, like the one below. If this occurs, deal with it immediately and professionally. Make their posting in the discussion board unavailable to the public until you discuss the situation with this student. In many cases, you can turn around negative behavior into a positive teaching moment.

**What is Netiquette?**

It is important to use the Internet and email responsibly. Respectful communication with others and a cooperative attitude when taking advantage of the many resources available on the Internet are indispensable. This is why the essential practice of Netiquette (net etiquette) has developed over time.

Netiquette is a set of behaviors that should be adhered to when you travel down the Information super-highway. It is also termed as a professional code of behavior for electronic communication. Generally speaking, there are very few actual “Net Laws”, and the Internet community itself generally devises those that exist. Therefore, the job of policing the Net is up to those who use it.

Here are five guidelines some faculty have used to explain to their students how to become a welcomed member of the electronic community:

- **Remember that you’re communicating with another human being**
  Because of the lack of non-verbal clues, it’s easy to misinterpret the other person’s meaning. Remember that the recipient has feelings more or less like your own. Stand up for yourself and your beliefs but be sensitive to other people’s feelings. Never write something to someone on email or in a discussion group that you would not say to those persons in a face-to-face encounter. Avoid sending
heated messages (called “flaming”) even if you’re provoked. As many users have learned to their
dismay, email can be misaddressed or forwarded, sometimes with devastating consequences.

Also bear in mind that even thought you may delete a message from your computer system, chances
are that the message remains, perhaps for years, on your computer network’s backup tape.

- **Behave ethically**
  Standards of online behavior are simply different from, but not lower than, those for personal
  behavior.
  - Do not use a computer to steal.
  - Do not use a computer to bear false witness.
  - Do not use or copy software for which you have not paid.
  - Do not use other people’s computer resources without authorization.
  - Do not appropriate other people’s intellectual output.

- **Lurk before you leap**
  When you enter a discussion group that’s new to you, take time to look around. Read messages for a
  few days to get a sense of how the people who are already there act. The go ahead and participate.
  Bad information spreads like wildfire on the Internet.

- **Respect other people’s time and bandwidth**
  When you send a message via email or a discussion group, you’re taking up other people’s time.
  Therefore, make sure the time they spend reading your message is time well spent. You’re also taking
  up bandwidth, the information-carrying capacity of the telephone lines or networks used to transmit
  your message. Don’t copy more people than necessary in an email note, don’t include a copy of the
  original message in your reply unless necessary, and be careful about posting the same message
  to more than one newsgroup.

- **Finally, be tolerant of other people’s**
  Electronic communication can be a scary place for novices, and we were all network newbies once. So
  when someone makes a mistake, whether it’s a spelling error, a stupid question, an irrelevant
  comment, or an unnecessarily long answer, be kind. If you want to be helpful, point out errors by a
  private email message, not by public posting to a newsgroup. Give people the benefit of the doubt.

**Other Hints**

The written word is a powerful tool in terms of communication, so caution should be taken in how it is used on
the Internet. Remember: the email message will almost always be taken at face value. Keep sarcasm to a
minimum or delete it altogether.

Some E-Mail Netiquette Hints and Tips:

- Using all capital letters gives a word very strong emphasis. It can also have the effect of **SHOUTING**!
- Enclosing a word with asterisks has a different effect. Asterisks indicate a mild emphasis and serve the
  same purpose as italics.
- Signature “smileys” can help to indicate mood or tone of voice:
  - :-) I’m happy.
  - ;-) Just Joking.
  - :-( I’m unhappy.
• Be careful when replying to a message. If your reply is to be automatically sent back to the originating address, verify that the address is not connected to a list or groups. As personal response intended for a specific person may end up in the hands of many.

• Common Net acronyms include:
  - FAQ  Frequently asked questions
  - FYI  For Your Information
  - BTW  By the way
  - IMHO  In my humble/honest opinion
  - RTM  Read the Manual
  - LOL  Laughed out loud
  - YMMV  Your Mileage May Vary

• Electronic mail is not protected and not private. Your message can be forwarded or copied to anyone, anywhere.

• Never send chain letters over the Internet. They are annoying and forbidden by some ISP’s and have no place in a class.

• Angry or heated messages are called “flames”. They are childish and never necessary.

• Use the subject RE: line to clearly state the topic of your message.

• Keep messages concise. Message should have lines that are not more than 65-70 characters in length and generally no more than 12 lines.

• If you send a long message, it is a good idea to tell the recipient at the beginning of the message so that they have the option of downloading it to read later.

VCU Libraries Support for Online Classes

The VCU Libraries provide comprehensive services to students enrolled in online programs (and faculty teaching online who are out of area).

Interlibrary Loan Service

ILLIAD (Interlibrary Loan and Document Delivery) can get resources for students when:

• the item they want is at the bindery, checked out, in storage, lost, missing, not owned by VCU Libraries, not on the shelf, on order (not available)
• they want a digitized copy of a journal article or book chapter that is not online;
• their schedule will not allow them to make copies of a journal articles, book chapters, patent, etc, that are available in the VCU collection;
• the article they want is on the other campus; or
• they are unable to retrieve books and media from VCU Libraries collections (distance education faculty, staff and students only).

Interlibrary Loan and Document Delivery Services are extended to VCU employees or students who are currently enrolled in or employed by a VCU distance education program. VCU employees or students currently enrolled in or employed by a VCU distance education program are eligible for the same services and subject to the same fees as other VCU faculty, staff, and students. Users affiliated with a distance education program
who register for ILLiad with a ZIP code outside Metro Richmond are eligible for Enhanced Services with reduced fees. Enhanced services are provided to VCU employees and students residing outside Metro Richmond. Below is a list of services provided.

- For users in the United States, use Interlibrary Loan Services to request materials (articles, books, dissertations, patents, etc.) not available in VCU Libraries' collections. Allow 1 to 4 weeks for delivery of books and other returnables. Allow 1 - 7 business days for delivery of copies such as articles and book chapters.
- For users outside the United States, use Interlibrary Loan Services to request copies of materials (articles, book chapters, etc.) not available in VCU Libraries' collections. Allow 1 - 7 business days for delivery of copies.
- To request Interlibrary Loan Services, use ILLiad.
- There are no fees nor delivery charges.

Copy Service

- Library staff will retrieve, copy and deliver copies of articles from journals or chapters from books owned by VCU Libraries, or patents. Allow 48 business hours from the time of receipt by staff for processing your request.
- To request this service, complete the appropriate ILLiad request form.
- There are no fees nor delivery charges.

Book and Media Delivery

- Library staff will retrieve and deliver circulating copies of materials held in VCU Libraries. Allow 2 business days from the time of receipt by staff for processing your request. More time may be required to fill your request depending upon the availability of the item. For example, the item may be in use by another patron or may not be on the shelf.
- For users in the United States, materials are mailed via UPS Ground Services. UPS Ground return labels are supplied. Users residing outside the United States will be responsible for the cost to return materials back to VCU Libraries.
- To request this service, complete the appropriate ILLiad request form.
- There are no fees nor delivery charges.

Students can log in to ILLIAD at https://illiad.library.vcu.edu/illiad/
Teaching Online Toolbox

Technology is obviously an important consideration in teaching online. The key question is – which of the myriad of available technologies would most meaningfully impact learning in my online class? There is not a one-size-fits-all response to this question. Equally important, the technology is of little use if it is not coupled with an associated practice that makes it compelling to use a particular tool in your online class.

Technology is a loose term we are using here to indicate a web application for your class. In the past few years, the web has evolved from a destination to a place for social interaction. The combination of unlimited access to information coupled with the unprecedented ability to publish to the web creates new opportunities for teaching and learning in online classes.

Some key questions in this section:

- What does research suggest about integrating technology into your teaching?
- How do new social media tools open up opportunities for connecting and collaborating with online students?
- How can content be provided in new and engaging ways?
- What practices online support learning-centeredness?
- What role can mobile devices such as smart phones play in online learning?
- How might students collect their work as part of a college ePortfolio?

Theory Behind Integrating Technology with Learning - TPACK

TPACK - Technological Pedagogical Content Knowledge
While the same could be said of face-to-face instruction, the application and integration of content knowledge, pedagogical knowledge, and technological knowledge is at the heart of an online class.

As the professor, you certainly have very specific content knowledge. You also have a sense of how this content should be taught – pedagogical knowledge. You are teaching this content in the context of an online environment using specific technical applications and practices. Your online class is therefore where the intersection of content knowledge, pedagogical knowledge, and technological knowledge occur. This has implications for course design. It also suggests that someone teaching math online will use different practices and processes from someone teaching writing or teaching health practices.

Koehler and Mishra (2005) stated, “We view technology as a knowledge system that comes with its own biases, and affordances that make some technologies more applicable in some situations than others” (p. 132). It therefore makes sense that you consider the context in which you will be teaching and the best applications to use in that context when you teach online. A recent study of K-12 online teachers found that they were confident in their ability to deal with issues associated with content or pedagogy, but less confident in dealing with issues associated with technology. We would expect similar results here at VCU. Our reason for providing you with this “toolbox” is to remove some of the uncertainty associated with technology and give you our take on a variety of tools and their associated application to learning, which you can then integrate into your content and teaching practice.

- **TPACK – Technological Pedagogical Content Knowledge**
  This wiki linked below by Mishra and Koehler addresses the concept of TPACK - Technological Pedagogical Content Knowledge. At the heart of the TPACK framework, is the complex interplay of three primary forms of knowledge: Content (CK), Pedagogy (PK), and Technology (TK). In using technology to teach (an inherent component of online classes), one needs to consider the RIGHT technology for the RIGHT pedagogy associated with your SPECIFIC content.
  [Link](#)

- **Models for Collaborative Online Learning: Pedagogy, Design, and Epistemology**
  This 2007 Educause Conference session examines models for collaborative learning evidenced within the context of an online Master of Educational Technology program. This session will examine models of online learning from pedagogical and instructional design perspectives and consider the epistemological implications of collaborative spaces for learning and knowledge production
  [Link](#)

- **The Future of Online Teaching and Learning in Higher Education: The Survey Says...**
  EDUCAUSE Quarterly, Vol. 29(4), 2006. The study described here surveyed instructors and administrators in postsecondary institutions, mainly in the United States, to explore future trends of online education. In particular, the study makes predictions regarding the changing roles of online instructors, student expectations and needs related to online learning, pedagogical innovation, and projected technology use in online teaching and learning.
  [Link](#)
Emerging Practices Associated With The Use of Online Tools

In the past decade, how we tended to use the internet has significantly changed. The early web was a destination - you went to the web to search, find and read information. Most individuals did not have the HTML coding skills to actually publish their own content on the web.

Look at how that has changed! We live in an era where the vast storehouse of human knowledge is readily available and easily accessible - quite literally at our fingertips. Using devices from laptops to mobile phones, we can connect to the Internet from anywhere and in moments search for and find information that not only helps us answer questions, solve problems and complete tasks, but also entertains, inspires and confounds us. At the same time, the web has become a place where anyone with a computer and a connection to the Internet can readily publish text, images, audio and video. The web has become a space where human knowledge is stored, reshaped, accessed and redistributed. Information is abundant and knowledge has been set free.

In this new era, new practices have emerged in which anyone can engage:

- Building Personal Profiles
- Publishing Content
- Commenting
- Tagging
- Sharing / Redistributing

Web sites are no longer static, many now give you and your students options for creating accounts and building an online identity. Your students may already have an online profile created in Facebook or other social media websites. There is now an expectation that you should be able to see a picture of the person with whom you are interacting, even though that picture might be an avatar or caricature. This has implications for your online class. First is how (or whether) you provide a profile of yourself to your students. The Staff Information area of Blackboard makes this easy. You can also add your own profile to social media sites that you use with your class. The key is to be aware of the digital image you are placing on the web for your students to see. Have you "Googled" your own name to see what students will see? You can be sure that your students have googled you!

From modeling your own profile, it is a short step to having your students create their own profiles in Blackboard using the Homepage feature. This opens up a creative opportunity for students and helps with building community.
The web has shifted from a "Read-Only" model to a "Read-Write" model. Data from the EDUCAUSE ECAR study suggest that many students have established pages on social networking sites like Facebook, but do not see this as "publishing to the web." Yet, that in fact is precisely what they are doing. Having your students build on that by creating homepages in their classes and adding profiles to their wikis or blogs will sharpen this skill.

Many websites offer the option of adding comments to pages. Whether you are viewing a blog, a newspaper webpage, pictures on Flickr, YouTube videos, powerpoints in Slideshare, or social networking sites like Facebook, Twitter, or LinkedIn, you will find that not only is there the ability to comment but that many are actively doing so. This has increased the social aspects of the web, as networks of like-minded individuals congregate together via loose social connections.

Tagging is another practice that has emerged. Rather than following an established method of cataloging pictures, files, websites, or documents, individuals have begun applying their own tags to manage and categorize information. Tags are chosen informally and help describe a website, image, video, blog, or any file so that the person applying the tag can search for and find this item sometime in the future. By not using an established taxonomy, a folksonomy emerges - a term Thomas Vander Wal used to describe a people's taxonomy (Pink, 2005).

Pink noted that a folksonomy begins with tagging:

"On the Web site Flickr, for example, users post their photos and label them with descriptive words. You might tag the picture of your cat, "cat," "Sparky" and "living room." Then you'll be able to retrieve that photo when you're searching for the cute shot of Sparky lounging on the couch. If you open your photos and tags to others, as many Flickr devotees do, other people can examine and label your photos. A furniture aficionado might add the tag "Mitchell Gold sofa," which means that he and others looking for images of this particular kind of couch could find your photo. "People aren't really categorizing information," Vander Wal says. "They're throwing words out there for their own use." But the cumulative force of all the individual tags can produce a bottom-up, self-organized system for classifying mountains of digital material."

Some websites aggregate the tags people are using and display them as a tag cloud, such as this one from Flickr:

A recent report of an independent committee of inquiry into the impact on higher education of students’ widespread use of Web 2.0 technologies, Higher Education in a Web 2.0 World, noted that the social web has had a profound effect on behaviors, particularly those of young people. The younger students inhabit it with ease and it has led them to a strong sense of communities of interest linked in their own web spaces, and to a disposition to share and participate.

This propensity to share is not without issues. The ECAR study found that students' perceptions about their digital literacy were questionable, because students tended to not be aware of the complexities involved in
technology. The study suggested that the potential gap between actual and perceived skills and literacy is important to understand and factor into strategies for teaching and learning.

These emerging practices, if guided, can be useful in developing higher order thinking skills in our students.

In the pages that follow in the Teaching Online Toolbox, we will explore specific tools that reinforce these emerging practices:

<table>
<thead>
<tr>
<th>Profiles</th>
<th>Publishing</th>
<th>Commenting</th>
<th>Tagging</th>
<th>Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blogs</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wikis</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Google Docs</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flickr</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion boards are the scene of much of the interaction that occurs between student-to-student and student-to-faculty. It is where the social presence of both faculty and students is most evident. Palloff and Pratt (2007) stated, “Given that the discussion board is the heart and soul of the online course, constructing it in a well-organized fashion is critical.”

Discussions should mirror the organization of the syllabus. Typically, a course has some sequencing of units or lessons, either by week or by chapter in the textbook or by topics. Discussion forums flow from this organization. To achieve the deeper learning desired in any course, many factors have to be considered in constructing your discussion forums.
Discussion forums can serve many roles. In addition to forums for specific lessons and topics, many typically add two additional forums:

- **Faculty Office**
  - Given that online classes are 24/7, the concept of “office hours” becomes somewhat moot. Students need a safe place to ask questions, and if one student has a question, chances are others have the same question. Answering a question in a public forum covers both the questioner and those who wondered the same thing. It is a good idea to empower your students that if they see the question first and know the answer, they should feel free to respond. This is the one forum where it makes good sense to allow “anonymous” threads. There is no such thing as a dumb question, but some students are reluctant to ask, so this gives them a safety net.

- **Student Center**
  - In a face-to-face class, students have the option of stopping by the student center enroute to or after class, and during breaks, students typically congregate outside the class. Discussions
in these settings can be on any topic. It is therefore a good practice to provide this same outlet to your online students.

A good deal of the learning in online classes occurs with the interaction in discussions, so crafting the questions is critical. Students respond to engaging questions. Note the difference between these two:

- Any questions about Chapter Two?
- Chapter Two discusses the historical roots of management. What do you see as the change which had the most impact in the past 100 years (and why)?

You will get out of discussion boards what you articulate and model. You should set expectations on participation, grade both participation and the quality of participation, and provide rubrics that give students the standards by which they will be judged.

Here are some sample rubrics others have used:

### Sample #1 Grading Discussion Boards

A Weekly Scoring Rubric For Online Discussions

<table>
<thead>
<tr>
<th>Unsatisfactory</th>
<th>Needs Work</th>
<th>Satisfactory</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Points</td>
<td>14 Points</td>
<td>18 Points</td>
<td>20 Points</td>
</tr>
</tbody>
</table>

Less than 3 postings are made in the discussion board area.

<table>
<thead>
<tr>
<th>Unsatisfactory</th>
<th>Needs Work</th>
<th>Satisfactory</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Points</td>
<td>14 Points</td>
<td>18 Points</td>
<td>20 Points</td>
</tr>
</tbody>
</table>

3-5 entries are posted. **HOWEVER**

- Each entry is posted but is brief (less than 2 sentences).
- Each entry has little in the way of thoughtful, substantive ideas concerning the assignment or course content related to it.
- No entries respond to fellow student(s) or response to fellow student just a personal remark, not a substantive reply (e.g., “Good, I really liked your comment.”)

3-5 entries, 150-200 words total are posted. **PLUS**

- Each entry has 3 or more sentences.
- **PLUS (a or b)**
  - a) Each contains thoughtful, substantive ideas concerning the assignment or course content related to it.
  - OR
  - b) The entries are responsive to at least two other classmates, with detailed remarks about their writing or discussion response.

3-5 entries, 150-200 words total are posted. **PLUS**

- Each entry has 3 or more sentences.
- **PLUS (a or b)**
  - a) Each contains thoughtful, substantive ideas concerning the assignment or course content related to it.
  - OR
  - b) The entries are responsive to at least two other classmates, with detailed remarks about their writing or discussion response.
- **PLUS (c or d)**
  - c) Entries include an outside resource or relevant, specific application.
  - OR
  - d) Your response clearly
Sample #2 Grading Discussion Boards
Assignment-Based Discussion Board Rubric

The following points are what is looked for in your original postings to the Discussion Board and your replies to others postings (Total of 10 points for each Discussion Board assignment).

Original Posting (7 points):

1. Mentions at least 2 specific points from the article or reading. (1 point)
2. Relation of new information to old information learned in the course to date. (1 point)
3. Relation of information in article or reading to personal experience. (1 point)
4. Discussion at a critical level, not just recitation of facts from the article. (3 points)
5. Length of posting approximately 1 word processing page. (1 point)

Note: Discussion at a critical level means discussing things such as your opinion of the point mentioned, why you hold that opinion, what you see wrong with the point mentioned, how you see the point consistent/inconsistent with what you have learned so far, implications for the future, consistencies/inconsistencies within the article or reading itself, and so forth. In other words, critiquing an article means analyzing the good and/or bad aspects of the article and justifying your analysis. Do not just tell me what the article or reading states...I already know this.

Reply to Others' Postings (3 points):

1. Discuss one point you like/agree with, and one point you dislike/disagree with, and why. (2 points)
2. Length should be about 1/2 page in length (approximately 100 words).

Sample #3 Grading Discussion Boards
Global or Weekly Discussion Rubric

A Discussion (90-100): Distinguished/Outstanding

Students earning an “A” for discussion activities have participated 3 or more times during the week and have posted outstanding information.

“A” discussion postings

- are made in time for others to read and respond
- deliver information that is full of thought, insight, and analysis
- make connections to previous or current content or to real-life situations
- contain rich and fully developed new ideas, connections, or applications

B Discussion (80-89): Proficient
Students earning a “B” for discussion activities have participated at least 2 times during the week and have posted proficient information.

“B” discussion postings

- are made in time for others to read and respond
- deliver information that shows that thought, insight, and analysis have take place
- make connections to previous or current content or to real-life situations, but the connections are not really clear or are too obvious
- contain new ideas, connections, or applications, but they may lack depth and/or detail

C Discussion (70-79): Basic

Students earning a “C” for discussion activities have participated at least 1 time during the week and have posted basic information.

“C” discussion postings

- may not all be made in time for others to read and respond
- are generally competent, but the actual information they deliver seems thin and commonplace
- make limited, if any, connections, and those are often cast in the form of vague generalities
- contain few, if any, new ideas or applications; often are a rehashing or summary of other comments

D-F Discussion (10-69): Below Expectations

Students earning a “D-F” for discussion activities have participated at least 1 time during the week and have posted information that was below expectations.

“D-F” discussion postings

- may not all be made in time for others to read and respond
- are rudimentary and superficial; there is no evidence of insight or analysis
- contribute no new ideas, connections, or applications
- may be completely off topic

No participation in a discussion board activity will result in a zero for that activity.

Using Webconferencing in Online Classes

Synchronous communication in an online class can be beneficial in community building and development of critical thinking, but it does have drawbacks.
Finding a common time for “class discussions”, particularly if students are spread over multiple time zones.

Ensuring the availability of faculty and student hardware requirements, including videocams and headsets. Some laptops have built-in cameras and microphones, but they tend to pick up a lot of extraneous noise.

Coordination as the number of participants rise. Conferencing with 15 is a different experience to conferencing with 150.

Nevertheless, there are clear advantages to web conferencing. Faculty can “see” or at least hear their students (and vice versa), adding the richness of vocal inflections and even body language to the discussion. It is an excellent way to brainstorm or hold group activities, and for math or science classes, adds the dimension of the unfolding development of a solution to a math or physics problem. Synchronous communications work well for office hours. It also allows for multiple presenters to connect with a class from multiple locations.

A recent study published in the *Journal of Medical Internet Research* (Vilaitis et al, 2007) found that participants in web conferencing fell into three groups – pragmatists, positive communicators, and shy enthusiasts – but that all three groups valued web conferencing over no meetings and text-based communications alone.

The primary tool for web conferencing built in to our Blackboard LMS is Wimba Classroom. It features a live, virtual class environment in which faculty and students can display and share content, from powerpoints to websites to software such as Excel. It has a built-in “whiteboard” as well as a chat area. Faculty can monitor and control audio and video links from students. For instance, if too many people are trying to talk, faculty can on-the-fly disable all student microphones and then enable selected students as they raise their virtual hands.

Features in Wimba Classroom include:

- Engage in two-way audio (students can use a headset (recommended) or a phone)
- Deliver presentation in PowerPoint and a range of other graphic formats
- Engage in public / private text chat
- Share desktop applications for demonstration and instructional purposes
- Push web pages to participants
- Use a live whiteboard for drawing and annotation
- Conduct real time polls and surveys
- Build lessons to be accessed and delivered directly from Blackboard
- Archive sessions for later review by both those who were present and those absent
Blackboard is used as a front end to build and deliver Wimba Classroom. It can be accessed in the COMMUNICATIONS area of the menu. If it is going to be routinely used, it would be a good idea to add a menu button using the ADD TOOL LINK function in Manage Course Menu in the Control Panel.

Wimba provides frequent online workshops on successfully using Wimba Classroom.

In order to talk online in Live Classroom, you and your students will need a computer headset with microphone. Headsets are available from stores like Office Depot, Best Buy, Target or Wal-Mart. Expect to pay between $15 and $20 for a mini-plug headset or $30 - $90 for a USB headset, which is recommended. We have not found that the more expensive headsets work any better than the less expensive ones, just be sure the headset that you purchase is made for use with your computer – cell phone and radio headsets will not work properly.

Help desk technical support is being provided by our corporate partner, Wimba. You can contact their help desk 24/7 at the following toll free number: (1.866.350.4978)

For smaller groups or for office hours, several other products can be used for web conferencing. The web continues to evolve and add a number of applications for connecting and communicating with colleagues and students. Several that are worth examining:

Skype is a software application that allows for computer-to-computer telephone or video calls over the internet. Calls computer-to-computer are currently free. Skype does charge for calling a cellphone or landline. However, Skype uses a lot of bandwidth, so you may find it easier to use from home than from your office through the VCU network (who may throttle it if heavy usage impacts network reliability.

The nice feature about Skype is that, through videocams, you can see who you are talking to and they can see you.

DimDim is a free web conferencing application. One can share your desktop, show slides, collaborate, chat, talk and broadcast via webcam with absolutely no download required to host or attend meetings. The free version allows for up to 20 participants at a time in a web conference.
Using Screencasting in Online Classes

For faculty online, screencasting gives you new ways to make your material easier to be understood by students.

Here are some tips to do screencast from Canadian Teacher.

Screencast is a digital recording or video of your computer screen (full screens or a screen region), and it usually comes with an audio narration to describe the on-screen actions. The term screencast dates back to 2004 with an interesting story.

In 2004, a columnist Jon Udell invited readers of his blog to propose names for the emerging genre. From all the suggested terms, Udell selected screencast, which was proposed by both Joseph McDonald and Deeje Cooley. His “Heavy metal umlaut” screencast is a well-known example - which explains how Wikipedia works.

Since then, the term screen has been known by more people and the use of screencasts has itself become more popular.

Screencast Types

1. **Product Tutorials:**
   The screencast tells users how to use a software application or service by showing screen introductions. Usually, there is a recorded voice over to walk through the steps.
   Example: Customizing Your Settings Within Your Blackboard Course

2. **Short How-to:**
   This kind of screencast usually is often short and demonstrates a simple guide or gives tips and tricks to solve a small problem or answer a student question (from email or discussion board) where a visual is easier than typing a response.
   Example: Writing Better Syllabus
3. **Conversational Demos:**

   Conversational demos have more focus on the conversation rather than the screens. Usually, there are two voices for the screen. Often one is asking questions about the screen and another gives the answer.

   Example: Michael Wesch and Digital Ethnography

4. **Class “lecture”:**

   Lectures (or more appropriately, mini-lectures) can be developed as an enhancement to your class.

   Example: General Chemistry I Digital Lecture Material

Of course, these are only examples, the sky is the limit.

**Guide Lines of making a screencast**

1. **Know what you want to present**

   First and foremost, you will need to have an idea about what you'll present, and you'll need to figure out which platform to use. Knowing your purposes of making a screencast is the first to come.

2. **Make it real**

   Keep the screencast real and substantial. For example, if it is for software demonstration or a network monitor, then work with the actual software or live network.

   Of course, for reasons of logistics or security, this isn't always possible. But the more real we can make it, the better.

3. **Interactivity is important**

   Interactivity engages viewers through the demo. If your screencast is just screen by screen, your viewers will leave soon. You can and I’d argue you should record narration or insert background music to the screencast. Usually, some screencasting tools like Camtasia enable you to add some visual aids to the captured screens like callouts, shapes, annotation buttons and animated images. Note that when a screencast is interactive it will engage the viewers in a conversation that steers it into unexpected areas.

**Screencasting Software**

**Camtasia Studio**

Camtasia software allows you to capture and record the activity on your computer screen.

- Capture PPT presentations with a click
- Record & highlight interaction with websites or applications
- Emphasize and elaborate with callouts
- Measure retention with Flash quizzes
- Collect quiz results via email or SCORM-compliant LMS
- Make content accessible with closed captioning

There is a learning curve associated with it, and editing and adding the features like callouts takes some time. It will, however, give you a very polished product. Unlike many of the products discussed in this website, Camtasia is not free. Licensing runs around $180 for educators.
Example of Camtasia during the edit phase:

---

**Jing**

Jing is made by the same company that makes Camtasia, but is a down and dirty free product. It is simple to download and use. There is no editing capability, and videos are limited to 5 minutes. However, it makes a great tool for quick replies to students where “how to do something on the web” is part of the issue.

**Screenr**

Screenr is a quick and easy to use screen capture web application by Articulate. It does not require a download, and also has a 5 minute limit.

**Podcasting and iTunes U**

The instructional use of podcasts has increasingly become a more common practice in higher education during the past few years. The distribution of audio content on the internet however is neither new technology nor a new practice. What is unique about podcasting is the ease with which content can be created, distributed and accessed by users. Podcasting takes advantage of a technology called Really Simple Syndication (RSS) which permits users to subscribe to podcasts and receive automatic updates each time a new episode is published to the web. At VCU, you can use the VCU iTunes University to distribute your podcasts or load them directly into Blackboard.

Some potentially valuable instructional uses of podcasting in higher education include delivery of:

- Lecture recordings
- Supplementary course content
- Interviews and panel discussions
- Conference proceedings
- Unit summaries
- Student generated content
Getting Started

Download

To get started, you will need to download iTunes from Apple’s website. It is a free download and available for both Windows and Mac. Once you have downloaded and installed iTunes, you can access iTunes U by clicking one of the two buttons above.

Within VCU iTunes U, you can explore categories such as VCU News, VCU Sports, or course-specific downloads by clicking the icon or title of the area that interests you. There are several ways to download files.

- **To download an individual file**, click the Get or Get Movie button on the rightmost column for the file you want to download.

- **To download all current files for a specific course or category**, click Get Tracks at the top of the page.

- **To automatically download any future files for a specific category**, click Subscribe at the top of the page. This will add the category to your Podcasts in iTunes.

Listen

Now that you have all these files to listen to (or watch), how do you make the most of them? The good news is that it's as easy as double clicking a file if you don't mind listening to it at your computer. (You'll need speakers or headphones, of course.) But what if you'd rather listen to it elsewhere?

- If you have a CD or DVD recorder installed on your computer, you can create playlists and **burn them as audio CDs**.
- If you have an iPod or iPhone, you can set it up to **automatically download your files**.
- With an **Apple TV**, you can watch or listen to your music and videos on your computer from the comfort of your couch.
- Not an Apple fan? There are other ways of getting the files out of iTunes and into your music library in Windows Media Player or other programs. Most (if not all) files created on-campus are not protected by DRM so you should have no trouble exporting them to other software programs to listen to.

While all of the files on iTunes U are available free to students, faculty, staff, and others for use and reuse, please keep in mind that they still retain the copyright of the university and the individual professors or
departments that created them. Files downloaded from VCU's iTunes U may not be republished or remixed without express consent from their creators.

The CTE offers two workshops to assist faculty members with exploring the use of podcasting technology to support teaching and learning: Introduction to Podcasting and Creating Podcasts for Instruction.

Links:
- [7 Things You Should Know About Podcasting](#)
- [ELI Guide to Podcasting](#)
- [Teaching with Technology White Paper: Podcasting](#)

### Introduction to Social Media and Teaching

Social media has radically changed how information is created and shared. For nearly six hundred years, we depended on printing presses to distribute information. More recently, in the past fifty years, information delivery shifted to electronic forms, such as radio and television. In both of these models, delivery was expensive and therefore centralized in publishing houses and commercial media networks.

The web altered this formula. With social media tools, anyone can publish and distribute content. This means that faculty (and students) now can develop, distribute, comment on, and even alter content that originally was the province of commercial entities.

- **Reach** - both commercial and social media technologies provide scale and enable anyone to reach a global audience.
- **Accessibility** - the means of production for commercial media are typically owned privately or by government; social media tools are generally available to anyone at little or no cost.
- **Usability** - commercial media production typically requires specialized skills and training. Most social media do not, or in some cases reinvent skills, so anyone can operate the means of production.
- **Recency** - the time lag between communications produced by commercial media can be long (days, weeks, or even months) compared to social media (which can be capable of virtually instantaneous responses; only the participants determine any delay in response). As commercial media are currently adopting social media tools, this feature may well not be as distinctive in the future,
- **Permanence** - commercial media, once created, cannot be altered (once a magazine article is printed and distributed changes cannot be made to that same article) whereas social media can be altered almost instantaneously by comments or editing.

Elisabeth Losh, Writing Director at the University of California-Irving, listed some principles for using social media:

- The closer the connection to course content, the more valuable the use of social media
- We have to be mindful of the privacy of our students when we expose them to the public sphere
- We have to be conscious of the potential politics of academic labor (and this includes questions about faculty rewards)
- We need to model appropriately academic uses of social media: YouTube shown for scientific experiments, scientific blogs, etc.
- We need to stress connections between print media and electronic media: blogs that became books, video or interactive essays by academics, etc.
- We need to think about issues of authorship and appropriation
- We need to plan for discomfort when traditional roles and structures of classroom authority are disrupted
- We need to have clear criteria for grading and evaluating student work that uses digital media

In this section, we will review the following tools and examine their potential use in online classes:

- RSS Feed and Aggregation
- Using Blogs
- Using Wikis
- Google Docs
- Graphics, Pictures, Videos and Presentations
- Using Social Bookmarking
- Microblogging

### Using RSS Feed and Aggregation

You have seen the orange icon on many websites. This icon indicates that you are at a website to which one can subscribe. Subscribing means that updates to this website will automatically be forwarded to you in a RSS feed reader (or aggregator as it is more commonly called).

RSS is one answer to the question of how to filter and organize the vast amount of information on the Web. Internet users tend to settle on preferred sources of information, whether news sites, blogs, wikis, or other online resources that regularly update content. RSS allows faculty and students to create a list of those sources in an application that automatically retrieves updates, saving considerable time and effort. RSS feeds can be offered at varying levels of granularity, further enhancing users’ ability to specify exactly what information they want to receive. For example, a college or university might offer one RSS feed for the institution’s main news page, sharing information that concerns the institution broadly, and other feeds focused on the college of arts and sciences, the history department, or research being conducted by a professor of European history. Users can subscribe to feeds independently, tailoring the content they receive to their unique interests and needs.

Growing numbers of online resources offer RSS functionality. Because applications such as browsers and operating systems increasingly support RSS, the technology has the potential to become the primary vehicle through which users interact with the Internet.
There are many types of information in RSS feeds:
- Journal table of contents
- News
- Weather
- Blogs, Podcasts
- Shared bookmarks
- Newsletters
- Professional and Commercial websites
- Cartoons, Photographs, and more

7 Things You Should Know About RSS

Blackboard currently does not allow for RSS feed, but it is relatively easy to set up an aggregator that does allow for customized RSS feeds for your online class.

- **Netvibes**
  Netvibes gives you the ability to not only gather multiple feeds for your class, but to also place student blogs at one website.

- **Google Reader**
  Google Reader makes an excellent personal tool for feed aggregation. This link has some excellent tips on getting started with RSS feed.

- **Pageflakes**
  Another good aggregator

### Using Blogs

A blog (a contraction of the term "Web log") is a website, usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. "Blog" can also be used as a verb, meaning to maintain or add content to a blog.

Many blogs provide commentary or news on a particular subject; others function as more personal online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. The ability for readers to leave comments in an interactive format is an important part of many blogs. Most blogs are primarily textual, although some focus on art (artlog), photographs (photoblog), sketches (sketchblog), videos (vlog), music (MP3 blog), audio (podcasting), which are part of a wider network of social
Micro-blogging is another type of blogging, one which consists of blogs with very short posts. As of June 2008, blog search engine Technorati was tracking more than 133 million blogs. (From Wikipedia)

Blogs are excellent for developing student writing and student sharing of ideas and thoughts. They also become a means of connecting with your students, through your own blog.

Common blog sites:

- VCU Blogs
- Blogger
- Edublog

You can even "blog" from your email:

- Posterous

Will Richardson, author of Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms (2006), provided some good guidelines for student blogging:

1. What did you read in order to write this blog entry?
2. What do you think is important about your blog entry?
3. What are both sides of your issue?
4. What do you want your readers to know, believe or do?
5. What else needs to be said?

7 Things You Should Know About Blogging

Educational Blogging

Using Wikis

It used to be that in order to publish to the internet; you had to know some pretty sophisticated programming code. Those days are gone. A wiki is a web page or collection of web pages which you and your students can access to contribute or modify content without having to know code language or HTML. Wikis are often used to create collaborative websites and to power community websites. The collaborative encyclopedia Wikipedia is one of the best-known wikis.

"Wiki" is a Hawaiian word for "fast". {From Wikipedia}

Duffy and Bruns (2006) list several possible educational uses of wikis:

- Students can use a wiki to develop research projects, with the wiki serving as ongoing documentation of their work.
- Students can add summaries of their thoughts from the prescribed readings, building a collaborative annotated bibliography on a wiki.
- A wiki can be used for publishing course resources like syllabi and handouts, and students can edit and comment on these directly for all to see.
- Faculty can use wikis as a knowledge base, enabling them to share reflections and thoughts regarding teaching practices, and allowing for versioning and documentation.
- Wikis can be used to map concepts. They are useful for brainstorming, and editing a given wiki topic can produce a linked network of resources.
- A wiki can be used as a presentation tool in place of conventional software, and students are able to directly comment on and revise the presentation content.
- Wikis are tools for group authoring. Often group members collaborate on a document by emailing to each member of the group a file that each person edits on their computer, and some attempt is then made to coordinate the edits so that everyone’s work is equally represented; using a wiki pulls the group members together and enables them to build and edit the document on a single, central wiki page.

7 things You Should Know About Wikis
“Wiki as a Teaching Tool”
Parker, Keving and Joseph Chao, Interdisciplinary Journal of Knowledge and Learning Objects, Vol 3, 2007
Good Wiki Sites (Free)

- WetPaint - http://www.wetpaint.com

- Wikispaces - http://www.wikispaces.com

One warning - the "free" versions of WetPaint and Wikispaces contain advertisements over which you have no control. You can purchase ad-free sites, but they can be pricey.

Using Google Docs

Google Docs gives you and your students the capability to collaboratively create, share, and edit documents, spreadsheets, and presentations without the need to purchase Microsoft Office. Your "files" are stored online in your Google account. It provides an excellent vehicle for collaborative writing, as well as eliminating issues associated with having multiple versions of the same document.

A quick start guide is available from Google here. Google also noted:

Here's what you can do with documents:

- Upload Word documents, OpenOffice, RTF, HTML or text (or create documents from scratch).
- Use a simple WYSIWYG editor to format your documents, spell-check them, etc.
- Invite others (by e-mail address) to edit or view your documents and spreadsheets.
- Edit documents online with whomever you choose.
- View your documents' and spreadsheets' revision history and roll back to any version.
• Publish documents online to the world, as Web pages or post documents to your blog.
• Download documents to your desktop as Word, OpenOffice, RTF, PDF, HTML or zip.
• Email your documents out as attachments.

Here’s what you can do with spreadsheets:

• Import and export of .xls, .csv, .txt and .ods formatted data (and export functionality for .pdf and html).
• Enjoy intuitive navigation and editing, like any traditional document or spreadsheet.
• Use formatting and formula editing in spreadsheets so you can calculate results and make your data look the way you want it.
• Chat in real time with others who are editing your spreadsheet.
• Embed a spreadsheet, or a piece of a spreadsheet, in your blog or website.

Here’s what you can do with presentations:

• Share and edit presentations with your friends and coworkers.
• Import existing presentations in .ppt and .pps file types.
• Export your presentations using the Save as PDF and Save as PPT features from the File menu.
• Edit your presentations using our simple WYSIWYG editor.
• Insert images and videos, and format your slides to fit your preferences.
• Allow real-time viewing of presentations, online, from separate remote locations.
• Publish and embed your presentations in a website, allowing access to a wide audience.

7 Things You Should Know About Collaborative Editing

Integrating Videos, Graphics, Pictures, and Presentations Online

User generated content refers to various kinds of media content, publicly available, that are produced by end-users such as faculty or students (as opposed to mass media generated content).

The term entered mainstream usage during 2005 due to the explosion of web publishing opportunities. Its use for a wide range of applications including problem processing, news, gossip, and research reflects the expansion of media production through new technologies that are accessible and affordable to the general public. All digital media technologies are included, such as question-answer databases, digital pictures and video, blogging, podcasting, mobile phone photography and videos, and wikis. In addition to these technologies, user generated content may also employ a combination of open source, free software and flexible licensing or related agreements to further reduce the barriers to collaboration, skill-building, and discovery.

Adding graphics, pictures, videos, or slideshows to your Blackboard site or blog or wiki certainly adds visual appeal, and can be used instructionally to engage your students. There are several websites that you can use for open-source content.
Before the launch of YouTube in 2005, there were few simple methods available for ordinary computer users who wanted to post videos online. With its easy to use interface, YouTube made it possible for anyone who could use a computer to post a video that millions of people could watch within a few minutes. The wide range of topics covered by YouTube has turned video sharing into one of the most important parts of internet culture. Importantly, by using the embed feature, you are linking to someone else’s video, which does not violate any questions of copyright.

**7 Things You Should Know About YouTube**

The YouTube Handbook provides ways to help you find and watch videos. You can also interact with other YouTube users and around shared interests. If you make videos, you can broadcast them to the whole world, and maybe even develop an audience for your creations.

- **Home**: Clicking the "YouTube Handbook" link in the navigation bar will always bring you back here.
- **Watch**: Everything there is to know about watching videos, like how to find cool videos, subscribe to channels, and save videos to watch later.
- **Produce**: Tips & tricks for making better videos, copyright information, and how to upload to YouTube.

**Flickr** is an image and video hosting website as well as an online community. Individuals can share personal photography, tag the photos for organization, and browse the photos of others. A good practice to observe is to only use pictures that are released through Creative Commons (either by attribution or share-alike releases).

**7 Things You Should Know About Flickr**

**Slideshare** is a PowerPoint-sharing website where you or your students can post powerpoints and importantly, comment on individual slides.

You and your students can also find presentations by others on topics that interest you and them. Presentations can be tagged, downloaded, or embedded into blogs & websites (including Blackboard).

Some of the things you can do on SlideShare:

- Embed slideshows into your own blog or website.
- Students can ask questions about specific slides and faculty can respond.
- Share slideshows publicly or privately. There are several ways to share privately.
- Synch audio to your slides.
- Create or join groups to connect with SlideShare members who share your interests
- Download the original PowerPoint / Pdf file
- Great resource of powerpoints on many subjects (look for Creative Commons licensing)
- Ability to share your powerpoints and get feedback from community
One of the best features of many multimedia products today is the ability to embed videos or presentations into your websites:

Embedding YouTube videos or slideshows is easy in Blackboard:
Using Social Bookmarking

Social bookmarking, using websites like Delicious or Diigo, is a free web service that allows faculty and students to tag, save, manage and share web pages from a centralized web source. With emphasis on the power of the community, social bookmarking greatly improves how people discover, remember and share on the Internet.

Delicious lets you and your students bookmark any site on the Internet, and get to it from anywhere. Instead of having different bookmarks on every computer, Delicious makes it easy to have a single set of bookmarks kept in sync between all of your computers – office, classroom, laptop or iPhone, and home. Even if you’re not on a computer you own, you can still get to your bookmarks on the Delicious website.

You and your students can share your bookmarks and get bookmarks in return. If your colleagues use Delicious, you can send them interesting bookmarks that they can check out the next time they log in. Of course, they can do the same for you.

Tags give you much more flexibility over saving bookmarks or favorites on your computer. Instead of a single keyword, you can now assign multiple keywords (or “tags”) to any site, making recall and subsequent finding much easier. It also allows a site like Delicious to be used as a search engine.

Others who use the same keywords you do will have already found and filed relevant websites that you can use for instruction or research.

As you explore the site and find interesting users, you can use the Subscriptions and Network features to keep track of the Delicious tags and users you find most interesting. Through your network and your students’ networks, you connect with hundreds of people sharing websites and filtering information on topics of interest to you.
Delicious also allows you to organize your bookmarks into folders:

The web is awash in disorganized information. Delicious brings order to this mess. ([http://delicious.com/about](http://delicious.com/about))

### 7 Things You Should Know About Social Bookmarking

#### Good Social Bookmarking Sites

- Delicious - [http://delicious.com](http://delicious.com)
- Diigo - [http://www.diigo.com](http://www.diigo.com)

### Using Microblogging (Twitter / Yammer)

**Twitter** is a micro-blogging and social networking service. It enables its users to send and read other users' updates (known as tweets), which are text-based posts of up to 140 characters in length. Updates are displayed on the user’s profile page and delivered to other users who have signed up to receive them. Twitter now shows up on news shows like CNN, and was used by the Obama campaign to update followers during the campaign.

Twitter has many potential instructional uses:

- Twitter can provide mass updates to students
- Twitter can provide personalized updates to students (direct message)
- Twitter can provide reminders to students
- Twitter matches digital learning styles
- Twitter fosters technological and digital literacy
- Twitter may encourage collaboration
- Twitter promotes questioning and answering
- Twitter can provide a "back channel" communication in class

It can also help you as faculty keep up to date in your
discipline

- Twitter provides instant connection to faculty
- Twitter provides access to a community

For many, Twitter is their first source for breaking news and help. One can ask their network a question and get a response immediately. It can also be a source for learning, with tweets that highlight new information or new services on the web.

Whereas Twitter is a microblogging service open worldwide, Yammer serves the same function within a specific domain, such as @vcu.edu. By requiring users to possess an email address with our university domain, Yammer provides a private microblogging platform. You can even set up groups in Yammer for your class. It can then serve as an instant-messaging service restricted to just the VCU domain.

Smartphones and Mobile Communication with Online Classes

If you are looking for new ways to connect with your students, the answer might be in their back pocket or hanging on their belt. The ECAR survey suggests that today’s students expect to be able to interact with everything on their mobile devices. Blackboard Learn for the Apple iPhone is a new application that allows students to receive updates from their Blackboard course via the iPhone or iPod Touch.
It is a three step process to set up Blackboard Learn, where you and your students have to download the App, configure your Blackboard account, and configure the App.

- On your iPhone or iPod touch, go to the App Store and search for the term “Blackboard Learn”. The Bb Learn app is available for free installation.
- Log into your account on VCU’s Blackboard system and click the Blackboard Sync tool linked at the left of the screen in the “Tools” box. Then click the Add the Blackboard Sync application to your iPhone link. On the next screen will be a six-digit number, which you will need for the next step.
- On your iPhone, run the Bb Learn application. When asked for the URL of your institution’s Blackboard Server, enter “blackboard.vcu.edu”. On the next screen, when asked for your Blackboard PIN#, enter that six-digit number from step 2. There will be a brief delay while your content syncs up, and then you will be able to view the new content in Blackboard courses for which you have access.

This application is not just for students, but could be helpful to you as well.

ePortfolios

EPortfolios are not a new concept. In various guises, digital presentations of skills and competences, online records of achievement and action plans with opportunities for reflection have been in use in education for nearly a decade. Tools and systems built for these purposes are now numerous.

Various definitions exist of term ePortfolio. There is an emerging consensus that the term encompasses both product and process:

‘An ePortfolio is a purposeful aggregation of digital items - ideas, evidence, reflections, feedback etc. which 'presents' a selected audience with evidence of a person's learning and/or ability'

Andy Powell of eFoundations referred to Graham Attwell's podcast on e-portfolio development and wrote that ePortfolios have the following characteristics, in no particular order:

- **Plan**
  Graham refers to "personal development planning portfolios" in his podcast and it seems to me that this is one of the most important aspects of what an e-portfolio can enable. Being able to assess where one is in a learning journey and, more importantly, being able to plan for what needs to come next is a critical learning skill and an e-portfolio is one of the tools that supports that process.

- **Ponder**
  Such planning comes in part from being able to reflect on the learning that has already taken place. I must admit that this P-word is probably the most contrived out of the five but it is no less important for that. This reflective activity appears to fall within what Graham refers to as a "personal learning portfolio".
• **promote**
  There is a sense in which an e-portfolio becomes a self-promotion tool, functioning more or less like a curriculum vitae would do, either as part of getting a job, or during transition between different phases of education. (Note: the P-word present, as in Graham's "presentation portfolio" would be an alternative here but for some reason I think that promote works better).

• **prove**
  Being able to prove that learning has taken place is an important function of the e-portfolio, either as evidence to support the assessment process (c.f. Graham's "assessment portfolio") or as part of the promote function (c.f. Graham's "presentation portfolio").

• **preserve**
  Finally, there is a life-long aspect to e-portfolios which, while it may not fall under a traditional interpretation of "digital preservation", it seems to me is a long enough period to give us significant headaches about how we manage digital material for that length of time, especially given that we are talking about personally managed information by and large. An e-portfolio, and the systems around it, should help us to maintain a life-log record of our learning and, as I say, that is a non-trivial functional requirement to meet currently.

The VCU Blackboard learning management system has an embedded ePortfolio tool in the Content Management System.

• Blackboard keeps it simple
• Has a template to guide creation of ePortfolio (However, organizing content and developing your ePortfolio as you want is preferred)
• Is associated with VCU usernames and class links
• Has technical support via VCU Technology Services
• Can be shared: Share with specific individuals, a class or Organization (School/Department would need to setup a special ongoing class or Organization to track students over a 4 year period) or provide a link for those outside VCU to access an ePortfolio. Blackboard ePortfolios may also be saved to a CD for distribution. Note: an exported ePortfolio with links to URLs will require online access.
• **Example of a Blackboard Portfolio** which Bud Deihl created.

Educause has a series of articles that explore eportfolios:

• George Lorenzo and John Ittelson, Demonstrating and Assessing Student Learning with E-Portfolios, The EDUCAUSE Learning Initiative, October 2005.

Google Docs
ePortfolio Mash Up with GoogleApps
Barett, Hellen C., How to create an electronic portfolio with GoogleDocs--Document (see also, Extensive Research... below)

Extensive Research on Various Tools and Approaches
Dr. Hellen C. Barett has been exploring the creation of ePortfolios since 2004. She continues to research various tools and approaches and shares her research at http://www.electronicportfolios.org/myportfolio/versions.html and on her blog, etc.

Other Information and Resource Links re: ePortfolios
http://gallery.carnegiefoundation.org/

Michele Martin, The Bamboo Project - A Tool for Organizational and Individual Development
http://nonprofitcongress.wordpress.com/2008/03/13/eportfolios-a-tool-for-organizational-and-individual-development/

Expanding Your Del.icio.us Portfolio

Developing Student Electronic Portfolios, prepared by David Brear
http://members.shaw.ca/dbrear/dseportfolios.html

ePortfolio as Story
homepage.mac.com/eportfolios/iMovieTheater13.html
Online Assessment

It is easy to simply add multiple choice tests to Blackboard (which grade themselves), but assessment is normally much more than that. Assessment typically involves four important processes:

- identifying clear, valid, and appropriate student learning outcomes
- collecting evidence that those outcomes are being addressed
- setting the stage for a dialogue to attain a collective interpretation of the data
- using data to improve both teaching and learning

Assessment can certainly be a tool for accountability, but it can also be an ongoing process for learning. In fact, the concept of learning-centered teaching involves the effective use of both formative and summative assessment. The online environment offers some unique challenges for assessment, but also offers opportunities for positive ongoing assessment.

Key questions examined in this section:

- What online techniques can be used to make student thinking visible?
- What online study aids are available to assist students in grasping difficult concepts?
- How could you effectively use rubrics to inform the evaluation process in an online class?
- Are there tools that can help in creating and deploying assessment instruments?
- How do you promote academic honesty and ethics when assessments are taken online?

Formative and Summative Assessment

"When the cook tastes the soup, that’s formative; when the guests taste the soup, that’s summative." (Robert Stakes)

Richard Mezeske, chair of education at Hope College, and Barbara A. Mezeske, an associate professor of English at Hope, stated:

"It is not that tests have failings, but that tests are limited. Conventional paper and pencil tests should not be the sole means for assessing student learning because tests are by their very nature single snapshots in time of student learning, often limited to "what do they remember" under pressure. Tests, alongside other assessment tools, can inform teaching by providing multiple lenses for considering what it is that students know and can do. If, at a given point in the semester the teacher discovers (through timely assessment) that students are not getting it, and either do not know the material, or cannot do anything with what they know (i.e., they can't apply their knowledge), then instruction can be shifted on the spot to rectify the situation. Multiple assessment tools are always preferable to the single test."

In the early days of online teaching, assessment generally consisted of tests and quizzes. These summative forms of assessment were problematic in that concerns quickly arose regarding the heightened potential for cheating, and snapshots at the end of a module rarely gave insight into the learning that was (or was not)
happening in the course of study. Faculty members looked for better ways to assess student progress in online courses.

Janet Fulk, a professor with Bakersfield College, noted that good assessment requires faculty with expertise and resources:

- to measure and report learning
- in a variety of courses
- under diverse conditions
- about students with varied abilities
- and disparate levels of academic engagement.

Angelo and Cross in Classroom Assessment Techniques (1993) noted that formative assessment focused on improving the quality of learning as opposed to gathering evidence for evaluating and grading students. They suggested that faculty need to:

- Make goals and objectives explicit
- Gather feedback from students on the extent to which these goals and objectives were being met
- Provide feedback early and often to students, and
- Help students learn to self-assess their progress

Black and Williams (1998) referred to formative assessment as assessment for learning, as opposed to assessment of learning. They stated that the key elements of formative assessment include:

- The identification by faculty and learners of learning goals, intentions or outcomes and criteria for achieving these.
- Rich conversations between faculty and students that continually build and go deeper.
- The provision of effective, timely feedback to enable students to advance their learning.
- The active involvement of students in their own learning.
- Faculty responding to identified learning needs and strengths by modifying their teaching approach(es).

Formative assessment is integral to a good online learning experience. Weekly lessons can have their learning goals and outcomes explicitly stated. The discussions boards, chat rooms and blogs allow for rich and reflective conversations (synchronously or asynchronously). Online quizzes can give instant feedback. Groups can be set up for peer-review and feedback. Through monitoring, faculty members can adjust their approach as necessary. Because you are not seeing students weekly, having some form of continual assessment is very important.

Of course, there are learning benefits from formative assessment. In a recent study (Pavan Mallikarjun - School of Community Health Sciences, UK, 2009):

The students who had taken the online formative assessment had a mean score of 39.6 (61.8%, sd 5.02), and students who had not accessed the formative assessment had a mean score of 28.0 (43.75%, sd 4.96) on the summative assessment. This study found that students who had accessed the online formative assessment had scored 18 percent higher on the summative assessment compared to students who had not.
Several researchers (Amal Oraifige (2009), Zakrzewski and Bull (1999), Buchanan (2000)) have noted that online formative assessment have many advantages over traditional classroom assessment. Students can take the assessment at any time, they can take it repeatedly and it can provide instant feedback that helps remedy weaknesses in their learning abilities. Student anxiety could be reduced if they take the formative assessment before summative tests. A web-based formative assessment strategy can improve student learning interest and student scores. Formative assessment allowed students to assess their own progress and understanding. Formative assessment designs should be able to engage student attention, engender student commitment to self-evaluation and enhance learning effectiveness.

An excellent review of literature on formative assessment is Valerie Shute's (2007) Focus on Formative Feedback.

We have focused on formative assessment because we believe that formative assessment is even more critical in online classes. Student progress needs a systematic series of checks and balances to ensure successful completion. This is not to suggest that summative assessment be ignored. Grades are still required at the end of the course, and a variety of methods exist to summatively assess learning.

In the pages that follow, we will examine both formative and summative assessment techniques that can be applied to online teaching and learning.

For more background information on assessment, check out:

- Internet Resources for Higher Education Outcomes Assessment (from NC State University) [http://www2.acs.ncsu.edu/UPA/assmt/resource.htm](http://www2.acs.ncsu.edu/UPA/assmt/resource.htm)
- Instructional Assessment Resources (from University of Texas at Austin) [http://www.utexas.edu/academic/diia/assessment/iar/](http://www.utexas.edu/academic/diia/assessment/iar/)

In the pages that follow, we will examine both formative and summative assessment techniques that can be applied to online teaching and learning. We begin with Formative Assessment:

- Concept Mapping
- Determining Prior Knowledge
- Online CATs
- Blogging and Learning Journals
- Surveys
- Practice Quizzes
- StudyMate

**Formative Assessment Techniques Online – Concept Mapping**

We have already discussed the use of concept maps as a planning tool in.
Concept maps can also be used formatively to make student thinking visible. When students construct and submit their understanding of key concepts and their linkages through a concept map, it becomes clear whether in fact the students understand the conceptual framework around a topic of study.

Concept maps are visual representations of linkages/connections between a major concept and other knowledge students have learned. Concept maps can be used by faculty as a diagnostic pre-assessment prior to beginning a unit and formative assessments during learning activities. Concept maps also provide immediate visual data to faculty on student misconceptions and their level of understanding. Angelo and Cross (1993) indicate that concept maps develop student abilities in certain critical areas. Among these are:

- The ability to draw reasonable inferences from observations
- The ability to synthesize and integrate information and ideas
- The ability to learn concepts and theories in the subject area

Micheal Zeilik of University of New Mexico has a nice guide to concept mapping which includes this concept map about concept maps:

Zeilik noted the following pros and cons:

- Concept maps help students focus on the "big picture", enabling them to devote more of their time to conceptual understanding rather than rote learning
- Concept maps force students (and instructors!) to make valid connections among concepts
- They provide a low tech (cheap!) vehicle that enables students to represent graphically their knowledge, and to share it with the instructor and other students
- They shift the emphasis from inert, static knowledge to contextually-embedded knowledge; from isolated facts to theoretical frameworks of related concepts
- In addition to their role as assessment tools, concept maps offer a useful way to help students "learn how to learn"; they also serve as useful vehicles for course development and as graphic organizers before, during and after instruction
However:

- Comparisons among students are more difficult because concept maps tend to reveal the idiosyncratic way that students view a scientific explanation, as a result...
- Evaluation can become more time-consuming for the instructor, especially in large classes, unless some variation (such as Select & Fill-in) is adopted
- If you score maps, you must use a consistent (and tested) scheme
- Students who have developed a strong facility for rote learning of verbal knowledge sometimes find concept maps intimidating
- Constructing concept maps is a demanding cognitive task that requires training

Some Common Concept Mapping Tools (previously covered in Course Design)

- Cmap
- Gliffy
- MindMeister
- Bubbl.us

Formative Assessment Techniques Online – Determining Prior Knowledge

There are a number of techniques that you can use to determine the prior knowledge that your students bring to your course.

- **Background Knowledge Probe**
  
  can use in the first week of class, or before introducing a new topic. Use the Blackboard Test Manager to prepare 2/3 open-ended, 5/6 short answer, or 10/20 multiple-choice questions that probe the students' existing knowledge. Once all students have completed the online no-credit quiz, let the students know the results and how this will affect them as learners. A screencast is a great way of providing class-wide feedback.

- **Knowledge Survey**
  
  Similar to a Background Knowledge Probe, but the "correct answers" are replaced. In a knowledge survey, the students do not actually try to answer any of the questions provided. Instead, they rate (on a three point scale ) their confidence to answer the questions with their present knowledge. Students are directed to:
  - Mark an "A" as response if you feel confident that you can now answer the question sufficiently for graded test purposes.
  - Mark a "B" response to the question if you can now answer at least 50% of it or if you know precisely where you could quickly get the information needed and could return here in 20 minutes or less to provide a complete answer for graded test purposes.
  - Mark a "C" as response to the question if you are not confident that you could adequately answer the question for graded test purposes at this time.

Learn more about Knowledge Surveys at Nuhfer, Edward and Delores Kipp (2003), "The Knowledge Survey: A Tool for All Reason."
• **Focused Listing**
  use as a brainstorming technique to generate definitions/ descriptions of topics. Ask students in a wiki or discussion board forum to list words or phrases that describe a concept. This can be used to generate class discussion or it could lead to students forming groups to compare lists and form the best overall description of topic.

• **Misconception/Preconception Check**
  particularly useful in classes with controversial/sensitive issues. Select a handful of troublesome beliefs that are common and most likely to interfere with students' learning, and create a simple questionnaire. Explain to your students the purpose and when they should expect to receive feedback.

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**Formative Assessment Techniques Online – Online Classroom Assessment Techniques (CATs)**

Classroom assessment is both a teaching approach and a set of techniques. The approach is that the more you know about what and how students are learning, the better you can plan learning activities to structure your teaching. Classroom Assessment Techniques (CATs) were developed by Thomas Angelo and Patricia Cross (1993) as mostly simple, non-graded, anonymous, in-class activities that give both you and your students useful feedback on the teaching-learning process.

CATs differ from tests and other forms of student assessment in that they are aimed at course improvement, rather than at assigning grades. The primary goal is to better understand your students' learning and so to improve your teaching.

Using CATs is a three-step process – Plan / Implement / Respond

- Decide what you want to learn from a classroom assessment. Choose a Classroom Assessment Technique (CAT) that provides this feedback, is consistent with your teaching style, and can be easily implemented in your class.
- Explain the purpose of the activity to students, then conduct it.
- After class, review the results and decide what changes, if any, to make. Let your students know what you learned from the CAT and how you will use this information.

The book by Angelo and Cross contain fifty CATs which can be used for assessing prior knowledge or assessing student skills. A number of these time-tested CATs can be modified for use with an online class:

• **Minute Papers**
  In class, faculty typically use the final few minutes of class to collect their students responses to two questions: (1) "What was the most important thing you learned during this class?" and (2) "What important question remains unanswered?" This could be adapted to an online class by using either the survey tool or an online polling tool to collect this data.
• **Muddiest Point**  
This simple technique asks students to identify the muddiest point in a ________ (lecture, video, powerpoint, discussion, homework assignment, etc.). You could use discussion board or a blog to post the question and gather the responses.

• **Pro Con Grid**  
Developing both pros and cons to an issue helps students see that there are two sides. You could use a wiki and have students develop a grid of pros and cons (or pluses and minuses) around the topic of interest being discussed in your class.

• **One Sentence Summary**  
This technique challenges students to answer the questions “Who does what to whom, when, where, how and why?” about a given topic, and then to synthesize their answer into a single informative (albeit long) sentence. This could be required after an assigned reading but before discussions on a topic using the Assignment Manager.

• **Student-Generated Test Questions**  
One of the best ways to determine if students understand a concept is to have them write test questions and model answers. This gives you a chance to assess what the students consider as most important, as well as build potential questions for test pools.

• **Classroom Opinion Polls**  
In situations where you may have a bipolar set of opinions, it is helpful to surface that in a non-threatening way. Anonymous online polls (ZohoPolls, PollDaddy, Blackboard surveys) can be used to gather and demonstrate the two sides without revealing individual attitudes.

• **Electronic Feedback**  
You can use the Email All Users feature of Blackboard to, on the fly, pose a question about how the online course is going and invite students to provide feedback. One of the authors of this resource guide typically sends this to students after the first module (around week 5) to see if the online format is challenging student, and if so, what changes could be made mid-course to improve learning.

These are seven of the fifty techniques described by Angelo and Cross. Copies of their book are available for review in the CTE library. See also our descriptions at the CTE website.

For faculty, more frequent use of CATs can:

• Provide short-term feedback about the day-to-day learning and teaching process at a time when it is still possible to make mid-course corrections.
• Provide useful information about student learning with a much lower investment of time compared to tests, papers, and other traditional means of learning assessment.
• Help to foster good rapport with students and increase the efficacy of teaching and learning.
• Encourage the view that teaching is a formative process that evolves over time with feedback.

For students, more frequent use of CATs can:

• Help them become better monitors of their own learning.
• Help break down feelings of anonymity, especially in larger courses.
• Point out the need to alter study skills.
• Provide concrete evidence that the instructor cares about learning.
An excellent resource on CATs is the Field-Tested Learning Assessment Guide from the University of Wisconsin-Madison.

**Formative Assessment Techniques Online – Blogging/Learning Journals**

In general, the learning journal is a way of documenting learning and collecting information for self-analysis and reflection. The writing style is often in the first person and informal; resembling natural speech. Students’ thoughts become visible and the student has to find ways of expressing and writing thoughts that are closely connected to their sense of themselves.

Learning journals help students reflect on how they learn best. Learning journals also help students reflect on their knowledge, skills and behaviors as they learn. Journals are used to:

- improve writing by helping students to practice and refine writing knowledge, skills and behaviors accumulated over time
- define personal learning goals as students can reflect and plan for future learning and progress
- record experiences so students can reflect on experiences to develop critical thinking, a questioning attitude, and creative and emotive responses
- provide a representation of understanding for students to connect the experience to the learning

Online, blogs provide a convenient tool for journaling. Blogs in education can be used as reflective learning journals in a range of learning contexts. Information can be uploaded to the journal using forms and mobile devices. This electronic version is different to paper-based journals in that the student journal is immediately accessible and public. There are advantages to the public discourse, particularly from the point of view of shared learning experiences. Other students in the class, or other visitors, can read the blogs, and in this respect, the learning is a shared experience or studying is a shared experience. Students are able to observe others’ learning through reading each other’s learning journal blogs.

While learning journals are mostly written and provide opportunities to practice writing, they do not necessarily need to be limited to text. They could also be strengthened with the use of tables, diagrams, concept maps, etc.

Clive Shepherd, a consultant on technology-assisted learning and communication, discussed the differences between a blog and wiki (and their associated potential use as learning journals):

- A blog is a personal space for expressing subjective opinion. It could be regarded as analogous to working memory, where you toss ideas around and, if you’re lucky, test them against your peers through a process of dialogue.
- A wiki, on the other hand, is a collective space for objectivising knowledge (or at least information). It could be analogous to long-term memory, where you store all those things that you’ve tested out and are happy with for now.
- In the context of learning interventions, I am working on using blogs as a form of learning journal, where students can record their reflections and share these with their colleagues. I use wikis quite
differently, as a sort of archive to which all students contribute, that can act as a source of reference to all future students. In fact, because the terms 'blog' and 'wiki' can put some people off, I sometimes substitute the terms 'learning journal' and 'learning archive'.

More on blogs and wikis is provided in the Technology Toolbox section.

**Formative Assessment Techniques Online – Surveys**

Blackboard includes a survey tool that provides a "wizard" type interface to guide instructors step-by-step through the process of creating a survey in Blackboard. Surveys are essentially ungraded anonymous tests in Blackboard. Of course, there are other online survey tools, such as SurveyMonkey and PollDaddy.

Whether using Blackboard, SurveyMonkey, or PollDaddy, surveys provide an easy way for you to get feedback from students on new instructional strategies, activities, or assignments. Whether a brief mid-course check-in or a more comprehensive end-of-course survey to supplement the standard course evaluation, surveys provide a convenient method for you if you wanted to include student reaction and feedback in their assessment and evaluation activities.

Online surveys can provide information on student perceptions (emotions, feeling, attitudes) of their classroom experience. For example it can reveal perceptions on:

- the content of a course
- specific components of a course
- course components which aid or are detrimental to learning
- the effects of course innovations

Using online surveys for an attitudinal survey may also focus on students' needs in taking a course, how well those needs are met, student interest in or appreciation for the subject matter or field, student confidence in their ability to perform in a course, or their beliefs about the nature of the discipline itself, e.g.

- the nature of a discipline (chemistry, physics, mathematics, engineering)
- the nature of learning within a discipline
- their ability to learn within a course
- useful strategies for learning within a course or discipline
- their own learning style or preferences for learning

Although surveys are always anonymous (individual responses aren't linked to individual students), the Blackboard survey does place a check by the student's name in the instructor's gradebook when the survey is completed. This allows for follow-up by you to drive up completion rates.

A survey can be useful for gauging the entire class's grasp of course concepts, since survey answers are aggregated. Because of their anonymous and aggregated nature, surveys may also be particularly handy for course evaluation.
Formative Assessment Techniques Online – Practice Quizzes

No team wins in sports without practice first. The same can be applied to assessments in online classes. A variety of tools are available to allow for students to practice and master concepts before summative tests are given.

LON-CAPA has very powerful processes built in to allow students to work problems multiple time with different variables, so that students can self-assess their progress and gain proficiency.

VCU's learning management system makes it easy to provide this ongoing assessment. Blackboard quizzes can be set so that students can take them multiple times for practice without impacting their grades of record. Research has suggested that students who take advantage of practice tests tend to perform better on the summative tests of record.

Leith Sly (1999) of Curtin University of Technology investigated the influence of practice tests as formative assessment to improve student performance on computer-managed learning assessments. Sly hypothesized that students who selected to take practice tests would outperform students who did not select to take practice tests on the first and second unit exams in a first year college Economics course. The students who selected to take practice tests did significantly outperform those who did not take practices tests on both unit exams one and two.

Cassady and Gridley (2005) looked at the effects of online formative assessments on test anxiety and performance. They found a small benefit for using online practice tests prior to graded course exams. This effect appears to be in part due to the reduction of the deleterious effects of negative test perceptions afforded in conditions where practice tests were available. The results support the integration of online practice tests to help students prepare for course exams and also reveal that secure web-based testing can aid undergraduate instruction through improved student confidence and increased instructional time.

To add practice quizzes to your class, you first need to build a “test” in the Blackboard Test Manager. To optimize your practice tests, we suggest that you first build a pool of questions in Pool Manager, and then create a Test in Test Manager that randomly draws from this pool. In this way, each time the student takes the practice quiz, they will have a different test.

Once the test is created in Test Manager, go into your content area and click the “Add Test” button on the Menu Bar. Select your test.
Remember to make the link available! In the example above, we have set this practice quiz so students can take it up to 4 times. If you have a deep enough pool, you could use the unlimited attempts. Given that it is a practice, there may or may not be a need to have it timed. That will vary by discipline.

Also, remember to un-check the Include score in Gradebook in part 3.

Formative Assessment Techniques Online – StudyMate

StudyMate, made by Respondus, allows faculty to repurpose their assessment questions into educational games such as crossword puzzles, flashcards, or even a variation of Jeopardy. Played in Flash format, these games are compatible in both PC and Mac computers and multiple browsers.

Some potentially valuable instructional uses of Respondus and StudyMate in higher education include:

- Rapid development and sharing of test pools using publisher or
 faculty test material
• Repurposing of exam material into study aids for students

StudyMate can be found under “Faculty Downloads” when you log in to Blackboard. When you first install it, you need to enter the institutional license. This license is good for one-year (August to August), so each August you need to go through the download process to find the new institutional password.

If you have used Respondus to build files for your test pools and tests/quizzes, these same files can be imported into StudyMate. For instance, StudyMate will take a multiple choice test and extract the question and right answer to create flash cards or a Challenge game (played like Jeopardy).

Possible StudyMate activities include:

No Answer Activities

Fact Cards - one-sided cards that display a fact or explanation.

Fact Cards+ - Fact Cards that can be organized by topic.
One Answer Activities

**Flash Cards** - two-sided cards that display the term/answer on one side and the definition/question on the second side.

**Pick A Letter** - displays the definition/question at the top of the screen and has the user type or click the letters for the answer.

**Fill in the Blank** - displays the definition/question in the top section and has the user enter the exact term/definition for the answer.

**Matching** - displays the definition/question in the top section and has the user select from one of the nine term/answer windows below.

**Crosswords** - displays the “clue” (definition or question) at the bottom of the screen and requires the user to enter the “answer” in a corresponding, highlighted area of the grid.

**Glossary** - provides an alphabetic listing of all One Answer items in the file. The term/answer is presented first, immediately followed by the definition/answer.
Multiple Choice & Calculated Activities

**Quiz** - displays a multiple choice question with the question wording at the top of the screen and answer choices below it. The user selects the correct answer by clicking on the letter that represents it.

**Challenge** - presents multiple choice questions in a fun, game-show environment. The game board consists of 5 topics, where each topic has 5 questions with point values that range from 100 to 500.

The CTE offers a workshop to assist faculty members with exploring the instructional uses of these tools: Blackboard Assessment, Respondus and StudyMate. Faculty members interested in learning more about how these assessment tools might be used in their teaching are welcome to contact Britt Watwood at the CTE (bwatwood@vcu.edu).

Rubrics

Scoring rubrics are explicit schemes for classifying products or behaviors into categories that vary along a continuum. They can be used to classify virtually any product or behavior, such as essays, research reports, portfolios, works of art, recitals, oral presentations, performances, and group activities. Judgments can be self-assessments by students; or judgments can be made by others, such as you as the professor, other students, fieldwork supervisors, and external reviewers. Rubrics can be used to provide formative feedback to students, to grade students, and/or to assess programs.

With rubrics, complex products or behaviors can be examined efficiently. Developing a rubric can help you to precisely define your expectations. When using rubrics for grading, grades generally are criterion-referenced, rather than norm-referenced (based on how well criteria are satisfied, rather than how students perform relative to their peers). Rubrics help you ask, “Did the student meet the criteria for level 5 of the scoring rubric?” rather than “How well did this student do compared to other students?” This is more compatible with cooperative and collaborative learning environments than competitive grading schemes.

California State University, Fresno’s Institutional Research, Assessment and Planning provided the following suggestions on developing your own scoring rubric:

- Identify what you are assessing, e.g., critical thinking.
• Identify the characteristics of what you are assessing, e.g., appropriate use of evidence, recognition of logical fallacies.

• Describe the best work you could expect using these characteristics. This describes the top category.

• Describe the worst acceptable product using these characteristics. This describes the lowest acceptable category.

• Describe an unacceptable product. This describes the lowest category.

• Develop descriptions of intermediate-level products and assign them to intermediate categories. You might decide to develop a scale that runs from 1 to 5 (unacceptable, marginal, competent, very competent, outstanding), 1 to 3 (novice, competent, exemplary), or any other set that is meaningful.

• Ask colleagues who were not involved in the rubric’s development to apply it to some products or behaviors and revise as needed to eliminate ambiguities.

Suggestions for Using Scoring Rubrics for Grading in Online Classes

CSU Fresno also suggested the following, which we have adapted for online classes:

1. Include the grading rubric with an assignment posting so students will know your expectations and how they'll be graded. This should help students master your learning objectives by guiding their work in appropriate directions.

2. Use a rubric for grading student work, including essay questions on exams, and return the rubric with the grading on it. Each row in the rubric could have a different array of possible points, reflecting its relative importance for determining the overall grade. Points (or point ranges) possible for each cell in the rubric could be printed on the rubric, and a column for points for each row and comments section(s) could be added.

3. Develop a rubric with your students for an assignment or group project (wikis are great for this development exercise). Students can then monitor themselves and their peers using agreed-upon criteria that they helped develop. (Many faculty find that students will create higher standards for themselves than faculty would impose on them.)

4. Have students apply your rubric to some sample products (e.g., lab reports) before they create their own. Faculty report that students are quite accurate when doing this, and this process should help them evaluate their own products as they develop them.

5. Have students electronically exchange paper drafts and give peer feedback using the rubric, then give students a few days before the final drafts are turned in to you. (You might also require that they turn in the draft and scored rubric with their final paper.)

6. Have students self-assess their products using the grading rubric and hand in the self-assessment with the product; then faculty and students can compare self- and faculty-generated evaluations.
The [CSU Fresno website](#) offers a variety of rubrics across multiple disciplines.

There are numerous rubrics already developed and available on the web, which you can customize for your class. One good source is [Rubistar](#), which contains both a free tool for building rubrics and a database of rubrics developed by other faculty members.

Microsoft provides a list of education competencies which represent many of the attributes, behaviors, areas of knowledge, skills, and abilities suggested for successful job performance. Each education competency includes a definition, four levels of proficiency, sample interview questions, activities and resources to develop skills, and examples of overdoing the competency. These may be helpful in developing your rubrics.

### Assignments

Blackboard provides you with an organized way to collect the work your students create, be it documents, powerpoints, spreadsheets, or other types of files. The Assignment Manager in Blackboard enables you in Blackboard to create Assignments in any content area and post them for students to complete. Creating an assignment automatically creates an item in the gradebook which holds all the submitted student assignments.

**How the Assignment Process in Blackboard Works** ([Northern Illinois University](#))

**Assignment Features:**

- Gradebook notation (!) notifies instructor an assignment has been turned in.
- All assignments support content management options (including time-release)
• Ability to download one or multiple student assignments for grading offline
• Feedback opportunities are available for INSTRUCTORS to add comments to an assignment
• Completed assignments are organized, viewed and graded in the Blackboard Gradebook

Adding an Assignment

The Add Assignment feature allows you to link your files to any of the Content Areas. This tool is accessible via the pull down list on the upper right side of the content pages.

From the Control Panel:
1. Click on desired Content Areas
2. Choose Assignment from the pull-down list on the right side of the page.
3. Click the Go button (NOT the OK button)
4. Type the name of the assignment in the Name field.
5. Complete the assignment options (i.e. add instructions, attach files, set dates)
6. Scroll down to the bottom of the page and click the Submit button.

Viewing & Downloading Completed Assignments

As an INSTRUCTOR in Blackboard, you can view the completed assignments through the Gradebook.

To view assignments, go to the Control Panel:
1. Enter the Gradebook
2. Look for the Column with name of your assignment
3. Any submitted assignments will have a "!" in the column
4. Click on the "!" and select "View" to view the assignment

One of the best features is the ability to download all submitted work in one move. To download all attached competed files for an assignment, go to the Control Panel:

1. Enter the Gradebook
2. Click on the name of the assignment (top of column)
3. Select "Item Download"
4. Select individual student files to download or select "Check All"
5. Scroll down to the bottom of the page and click the Submit button.
6. Select the link "Download Items Now"
7. Select location on computer to store files
8. Select Save - a compressed zip file is created and placed in the location you specified
9. You can drag this zip file onto a flash drive, take your laptop to the local Starbucks or other convenient location, and begin grading and annotating student work outside of Blackboard!
Grading Assignments and Providing Feedback

Once you view the assignment via the Gradebook, you can enter a grade, provide feedback, and write INSTRUCTOR notes. Once you submit these, unless specified, your students can view their grade and comments. You can re-enter the assignment and make changes at any time.

Summative Assessment - Quizzes, Tests, and Exams

Summative assessments are used to determine after a period of time what your student has learned. It summarizes the learning to that point. It is assessment of learning, as opposed to formative assessment, which is assessment for learning.

Blackboard, coupled with Respondus (covered in the next section), provides tools for developing online quizzes, tests, and exams.

The Illinois Online Network website provides the following testing strategies for online classes:

1. Unless you plan to use a proctoring site, plan on the quiz being open notes.
2. Use question data banks so that all students get a randomized quiz and can’t copy from one another.
3. Use random numerical values when possible so that each student gets different numbers for numerical answers, even if the rest of the question is the same.
4. Create questions in many formats so that multiple choice guessing is minimized.
5. Insert at least one higher level thinking question in short answer or essay form.
6. Embed quizzes within other exercises. A pop quiz during a synchronous session can keep students on their toes so to speak.
7. Monitor IP addresses for quiz taking. If a student is always taking a quiz at one IP address but completing other course content from another IP address, there is a possible sign of cheating.
8. Provide practice exams. In some cases, students can be provided with a bank of questions before the actual quiz to work through. They will then learn how to do every question, even though the actual quiz may only include a subset of those questions.
9. Set specific time constraints in Blackboard for the quiz. This can make cheating coordination more difficult.
10. Provide an honor code at the start of the course and make cheating policies clear in the syllabus.
11. Allow the students to write quiz questions that are then given to the class. This can create student ownership over the process and increase motivation to perform the work.
12. For more resources, do a Web search for "online" "quizzing" "academic" and/or "honesty" as examples to receive a number of helpful resources.
13. Sample Test Questions Addressing Bloom's Taxonomy

Assessments can be used to measure a student’s knowledge, skills, aptitudes or beliefs. A variety of formats are available, as shown below, with many providing automatic grade calculation:
A standard process is used whether building pools of questions, survey questions, or test questions. The large variety of question types can be applied in surveys, pre- and post-tests, weekly quizzes, practice tests, midterms, or final examinations. Blackboard gives you the ability to administer quizzes 24/7 with safeguards such as random questions for each student, timed tests, password protection and adaptive release of quizzes.

As the Illinois Online Network material noted above, you do not have to limit yourself to only multiple-choice tests. Using a variety of formats addresses multiple learning styles, and using pools of questions with random blocks for tests mitigates against student collaboration on tests. If every student in your class had a different and unique test, the value of collaboration drops off, as does the value of any one student printing her or his test.

The CTE provides a series of video tutorials on creating online assessments. These video tutorials provide an introduction to authoring, deploying and grading these assessments in Blackboard.

- Watch the Video: Overview of Assessment in Blackboard
- Watch the Video: Assessment Processes in Blackboard
- Watch the Video: Creating a Test in Blackboard
- Watch the Video: Using Pools to Create Assessments
- Watch the Video: Giving a Test in Blackboard
- Watch the Video: Grading a Test in Blackboard
- Watch the Video: Exporting and Importing Tests in Blackboard

Technology Services also provides good tip sheets on creating and deploying tests:

- Create a Test in Blackboard
- Test Question Types and Features
- Deploy a Test in a Course
- Setting Test Availability (On-Off Dates)

**Respondus**

Assessments can be used to measure a student’s knowledge, skills, aptitudes or beliefs. Blackboard has a variety of question formats available for surveys or tests. However, it can be both inconvenient and tedious to craft the assessments while online, one question at a time in Blackboard.
Respondus is a third-party software package that works with Blackboard. Faculty can now take existing tests in Microsoft Word or publisher-provided test banks, convert them into Blackboard formatted questions, and load them into their Blackboard class sites. As Respondus supports up to 15 question types, including calculated and algorithmic formats, tests can now be drafted in a more user-friendly format than the ‘one-question-at-a-time” process in Blackboard. Existing Blackboard assessments can be downloaded from Blackboard and converted into Word documents for paper-pencil testing or historical backup.

With Respondus, you can:

- Create exams and assessments offline using a Windows interface
- Supports up to 15 question types, including calculated and algorithmic formats.
- Import questions from MS Word (including embedded images), rich-text, QTI and tab/comma delimited formats
- Use the Exam Wizard to create an assessment in minutes
- "Spell check" an entire exam file (includes dictionaries for American English, Canadian English, British English, French, German, Spanish, Dutch, Finnish, and a comprehensive medical dictionary)
- Add tables, bulleted lists, font changes, and enhanced formatting (e.g. bold, italics) just like in a word processor
- Insert mathematical and scientific symbols using the Respondus Equation Editor or MathType
- Embed graphics, audio, and video without writing or viewing the underlying HTML
- Resize graphics and convert them to JPEG format with one click
- Add links to multimedia content on other servers with the Web Links tool
- Create random sets of questions in seconds with a one-step wizard
- Publish exams and assessments directly to an online course (media files are automatically uploaded)
- A “batch publish” feature allows assessments and surveys to be published to multiple courses in a single step
- Determine point values and exam settings offline
- Print exams/surveys directly from Respondus, or save files to MS Word or rich-text format
- Retrieve exams from Blackboard, complete with media files
- Retrieve custom reports, such as student scores, summary statistics, and answer distributions
- Download answer databases for quizzes or surveys and save them in an Excel-compatible format
- Archive and restore exam/survey projects (including media content) with one click — ideal for providing a colleague with a ready-to-use exam
- Quickly locate questions using keyword searches

Respondus also partners with many publishers, so that you can download and customize the test banks associated with specific textbooks. The Respondus Test Bank Network allows you to search for and adopt publisher test banks. This can be useful in building pools of questions for your assessments.

As a faculty member at VCU, you can download Respondus for free for both your home and office by:
1. Logging into https://blackboard.vcu.edu
2. Clicking on the “Downloads & Help” tab
3. Under "My Faculty Downloads", clicking Respondus Download
4. Click Download Respondus now
5. Enter your eID and password (same as email and Blackboard)
   **Note:** The faculty member will receive an email containing the Installation Password required for activating the license. One or more prompts for your VCU eID and password should be expected for Download of the installer.
6. Once downloaded, navigate to the folder on your PC where you downloaded the Respondus installer and double-click the executable program file to launch the installation wizard.
7. Follow all prompts as directed until the Campus-wide License box appears. Enter the following:
   - **Institution Name:** Virginia Commonwealth University
   - **Software Support:** VCU Help desk - 828-2227 or help@vcu.edu
   - **Installation Password:** <Emailed to the user and provided on the Respondus Download Page>

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**LON-CAPA**

LON-CAPA (Learning Online Network – Computer-Assisted Personalized Approach) functions as a distributed network system which permits the sharing of assessment items and learning objects both within and among participating institutions. LON-CAPA is used by faculty members and students in the sciences and mathematics because of its ability to author sophisticated problem types.

In reality, LON-CAPA can be a stand-alone course management system. It has the following features:

- **Content sharing and content reusability, including:**
  - Network of shared resources from [over 70 participating institutions](#)
  - Shared repository of circa 150,000 resources including assessment questions and multimedia content
  - Easy semester transition
  - A large set of resources in physics/astronomy, chemistry, biology, mathematics/statistics, and geology
  - Ability to add new resources to the existing content pool

- **Creation and grading of randomized homework, quizzes or exams, including the ability to:**
  - create sophisticated question types such as: click-on image, random label, random plot, or formula response
  - reduce blind copying of answers by giving a different version of the problems to each student
  - print randomized bubblesheet exams and quizzes
  - configure the reporting of grades and feedback with a wide variety of options
  - contextualize threaded homework discussions

- **A development group base that sustains a twice-yearly LON-CAPA release cycle to insure rapid incorporation of instructor-requested enhancements.**
LON-CAPA now serves approximately 40,000 course enrollments system-wide, ranging from middle school to graduate level courses. Disciplines include astronomy, biology, business, chemistry, civil engineering, computer science, family and child ecology, geology, human food and nutrition, human medicine, mathematics, medical technology, physics, and psychology.

With LON-CAPA, an instructor can create and/or assemble individualized assignments, quizzes, and examinations with a large variety of conceptual questions and quantitative problems. "Individualized" means that each student sees a slightly different computer-generated problem. This encourages collaboration between students on a conceptual level, but prevents blind copying of answers.

Problems can include pictures, animations, graphics, tables, links, etc.. The writing and development is done through a web-based editor, and facilitated by templates.

Students are given instant feedback and relevant hints via the internet and may correct errors without penalty prior to an assignment's due date.

As with all other LON-CAPA documents, problems are one-source-multiple-target. Depending on external parameters, problems can render themselves in online mode (shown below), print mode, online exam mode, and bubble-sheet mode, as well as edit mode for online problem creation.

LON-CAPA has dynamic plotting support - in this problem, both the plotted function and the x-value are different from student to student. The student has to graphically determine the slope.

The labels on the above image are different from student to student, so are the options and the order of the options. Labels on the image and in the
Online Teaching and Learning Resource Guide

An important use of NH₃ is in the production of nitric acid, a top 15 industrial chemical (7 billion kg produced in 1991). Nitric acid is produced by a three-step synthesis called the Ostwald process:

\[ 4 \text{NH}_3 + 5 \text{O}_2 \rightarrow 4 \text{NO} + 5 \text{H}_2\text{O} \]
\[ 2 \text{NO} + \text{O}_2 \rightarrow 2 \text{NO}_2 \]
\[ 3 \text{NO}_2 + \text{H}_2\text{O} \rightarrow 2 \text{HNO}_3 + \text{NO} \]

Starting with 685 kg of ammonia, how many kg of nitric acid can be produced if each step is 91.6% efficient?

LON-CAPA has full LaTeX-support from both online and print. In the example, the ammonia mass and the efficiency are randomized.

LON-CAPA can accept and grade multi-dimensional symbolic answers, including mathematical equivalence. In this example, the functions in the vector are randomized.

LON-CAPA has full support for physical units, understands all SI-units and their relationships, as well as all prefixes.

In this example, the student can see the plot build up over time. The parameters for this plotting applet are randomized. There are multiple answer fields, which require physical units in the answer.

In this example, the options and the order of the options are randomized.

Example:

\[ \frac{3at^2}{2} = \frac{3at}{5} \]

with respect to \( t \): Enter the components separated by commas, with exponents denoted by * and explicit multiplication using *, e.g., \((7b+3)\text{a}^5, a+b, a)^5\).

You were driving along the highway when you spotted a police officer. You brake to slow down at a constant rate. Your position at a time interval of 0.4 s is plotted along \( x \). (a) Find the initial velocity before you apply the brakes. (b) Find your acceleration.

In this example, the options are randomized.
Tolerances for numerical answers can be set symmetric and asymmetric, absolute and relative. In addition, ranges for number of significant digits can be specified.

You can contact the VCU Help Desk to set up a LON-CAPA course for you. Once created, you can log in to your course at http://loncapa.vcu.edu/adm/roles. Your roles screen should appear after logging in.

- You can always go back to this screen by clicking the Roles link on the Inline Menu which appears at the top of every page or by going to the Main Menu.
- Click the [Select] button next to the Course Coordinator role for the course you wish to work in.
- This course will now be displayed.

Edit Course

- The Course Editor is where you can upload, import, and create documents for your course.
- If you are not already at the Course Editor, click the Edit Course link from the Inline Menu or Main Menu.
- You can use folders to organize your course in terms of Homework Sets, Chapters, and Units. After creating a folder (Ex: Unit 1), click on the folder icon to enter the folder and create a sub-folder (Ex: Chapter 1).

NOTE: You cannot drag and drop resources. If you add a resource to the wrong folder, use the Cut link before the resource name. Navigate to the folder you wish to paste the resource and click the [Paste] button.

Special Documents

- By clicking on the corresponding button, you can add a new folder, syllabus, simple page, navigate contents page, simple problem, document drop-box, and more.
- Click the [New Folder] button to add folders in your course. For example, you can create a folder called “Homework Set 1” and import homework problems to that folder.
- Clicking the [Navigate Contents] button will add a Navigate Course Contents resource page to your course. This is a good first resource for your course because it displays all of your course contents, such as your syllabus and problems sets.

Importing Published Documents
• Go to the folder you want to add material to.
• Click the [Import] button on the Edit Course screen.
• Browse published documents from the LON-CAPA resource pool.
• Select the documents you wish to use.
• Click the [Import] button to add documents to your course folder.
• Finalize the order if more than one document was selected and then click the [Finish Import] button.
• Click the [re-initializing Course] button to make changes appear.

Search for Published Documents

• Click the [Search] button to search the LON-CAPA Catalog and upload documents.
• Uploading Documents from Your Computer
  • Go to the folder you want to add material to. Click the [Browse] button to search for documents saved to your computer.
  • Select a file, choose a title, and click the [Upload Document] button to import to your course. Re-initialize course when finished.

Set/Modify Course Parameter Settings

• Use the Course Parameter Settings to set parameters such as open date, due date, and number of tries.
• Select the Clock Icon to Modify parameter settings from the Main Menu. This will take you to the Set/Modify Course Parameters screen.

Parameter Helper

• The Course Assessment Parameter Helper Mode is the easiest way to set your parameters, as it will guide you through the process step-by-step. Using the Helper, you will be able to set the following parameters: open date (when problems open to students), due date (when problems are due; students cannot view problems after this date unless answer date is set), answer date (when answers are viewable to students), tries, and weight.

NOTE: Changes may take up to 10 minutes to be active for all students in your course.

Peer Review and Peer Feedback

There have been many studies on the usefulness of peer review in higher education particularly for facilitating online learning (Carlson & Berry, 2003; Raadt, Tolemen, & Watson, 2005). There has however, been contradictory evidence as to the reliability and validity of peer assessment (Brown, Bull & Pendlebury, 1997; Topping et al., 2000; Segers & Dochy, 2001) as it has been suggested that good students under rate their performance and less accomplished students often over rate their performance (Dochy et. al., 1999; Lejk & Wyvill, 2001).

Students can misinterpret the assessment criteria (Orsmond et. al. 1996; 1997; 2000; 2002), causing confusion when comparing peer to teacher feedback.
There has been a lot of focus in the literature on the process of peer review particularly as a tool for providing feedback. There has however, been less emphasis placed on the collaborative nature of the process and its value towards life-long learning. As Collins, Harkin and Nind (2001) explained “good learning is collaborative both because of the centrality of communication for learning and because thinking is, itself, a social practice” (p.110).

When peer review is used in an online collaborative learning environment, collaborative learning can empower the student and encourage exploratory talk, which is above and beyond its role as an assessment tool. Rowland (2000) sees this interchange as a form of “collaborative enquiry” where mutual support is provided. Margaret Riel, James Rhoads, and Eric Ellis (2006) in “Culture of Critique: Online Learning Circles and Peer Review in Graduate Education” noted that early schooling required students to acquire knowledge alone, but that much of graduate education required collaboration and group critical analysis. They suggested that peer feedback led to deeper learning due to the evaluative processes used and the give and take of examining alternative approaches. For peer review to be effective, one of their findings was that trust was crucial. As Palloff and Pratt (2007) suggested, trust develops when a community of learners is created.

Resources

- Active/Cooperative Learning: Assessments The materials featured here include grading rubrics and peer assessment instruments developed by Foundation Coalition Faculty in support of active/cooperative learning lessons and projects.
- University of Hawaii at Manoa – Peer Review Guidelines Provides suggested processes as well as sample feedback forms
- Google Forms and ZohoPools provide easy to build tools to support online peer-review.
Online Teaching and Learning Resource Guide

Additional Resources

The sections above have given you a good overview of online teaching and learning.

In this section, we have placed some miscellaneous items, such as journals and web resources focused on online teaching and learning, as well as some means to continue the conversation with us.

If you desire a consultation to work together on creating your online course, see our page on consultation requests. If you have suggestions, comments, improvements, or requests that have not been covered in this resource guide, please send us some feedback using the web form page.

We hope this resource has been helpful, and we look forward to working with you as you transition your courses online.

Consultation Request

The CTE offers both individual and group consultations.

Individual Consultations:
Individual consultations are a great opportunity for faculty members to work with CTE staff on a range of instructional needs and issues associated with online teaching and learning. We have a wealth of experience assisting faculty with the exploration of new teaching methods, refining online classroom management, aligning instructional objectives with assessments, crafting course syllabi, considering innovative uses of instructional technology, and course design - including the transitioning courses to the online environment. We look forward to the opportunity of working closely with faculty to arrive at creative solutions to the challenges we all face in the classroom. Consultations are strictly confidential and non-evaluative.

Consultations are also a great way to receive follow-up from the CTE after a workshop or to receive assistance from the CTE when your schedule doesn’t permit workshop attendance on a topic of interest. The CTE staff can give you the individualized, ongoing support needed to help you realize your online teaching and learning goals.

Group Consultations:
Groups of faculty, departments, or schools can work with the CTE to request workshops, mini institutes, assessment plans or help with online course or program development. These faculty development opportunities can be tailored to your meet specific needs and presented during a time and place that is most convenient for your faculty. Please contact ctetech@vcu.edu to set up an appointment.

Blackboard Tip Sheets

Technology Services provides a wealth of information in the Content System of Blackboard.
A. Direct link to Blackboard Tip Sheets

You can bookmark the link for quick access.

B. Navigating to Tip Sheets in Blackboard
Journals on Online Teaching and Learning

- **EDUCAUSE Review**
  The journal of EDUCAUSE, a nonprofit association whose mission is to advance higher education by promoting the intelligent use of information technology.

- **Innovate: Journal of Online Education**
  The journal focuses on the creative use of information technology to enhance education and training in academic, commercial, and governmental settings.

- **Journal for Asynchronous Learning Networks (JALN)**
  JALN's mission is to provide practitioners in online education with knowledge about the very best research in online learning.

- **MERLOT Journal of Online Learning and Teaching (JOLT)**
  JOLT is a peer-reviewed, open access, online publication addressing the scholarly use of multimedia resources in online education.

- **Online Journal of Distance Learning Administration (OJDLA)**
  Journal focused on implications for the management of distance education programs.

- **Journal of Interactive Online Learning**
  The Virtual Center for Online Learning Research focuses on the research and development of best practices in online education, particularly higher education. The center is jointly housed at the University of Idaho and the University of Alabama. The Journal of Interactive Online Learning (JIOL) was launched in 2002 and has since attracted contributions from a growing number of international scholars.

- **The International Review of Research in Open and Distance Learning**
  The International Review of Research in Open and Distance Learning (www.irrodl.org) is a refereed, open access e-journal that disseminates original research, theory, and best practice in open and distance learning worldwide.

- **Distance Education Journals and Magazines**
  A list compiled by the University of Wisconsin-Madison Division of Continuing Studies

Additional Web Resources

The CTE also provides access to additional resources to assist you with the meaningful use of technology to support online teaching and learning.

- **SLOAN-C**
  The Sloan Consortium is an institutional and professional leadership organization dedicated to integrating online education into the mainstream of higher education, helping institutions and individual educators improve the quality, scale, and breadth of online education. Membership in the
Sloan Consortium provides knowledge, practice, community, and direction for educators. Originally funded by the Alfred P. Sloan Foundation, Sloan-C is now a non-profit, member sustained organization. Sloan-C publishes the Sloan-C View, the Journal of Asynchronous Learning Networks (JALN), and annual volumes of applied research studies; and conducts research, annual surveys on online learning and forums to inform academic, government and private sector audiences.

- **EDUCAUSE**
  EDUCAUSE is a nonprofit association whose mission is to advance higher education by promoting the intelligent use of information technology. VCU is an institutional member of EDUCAUSE which provides access to the full range of their resources. The EDUCAUSE Learning Initiative has excellent resources that explore the impact of technology on teaching and learning. Search “online learning” to pull up a number of articles on best practices.

- **The Teaching, Learning and Technology (TLT) Group**
  The TLT Group helps people in educational institutions to improve teaching and learning by making more appropriate and cost-effective use of information technology. VCU is an institutional member of TLT which provide VCU faculty with complete access to their resources which includes research studies, an online survey tool called Flashlight online, web-based seminars, and more. An institutional login is required, please contact Jeff Nugent at the CTE for login access.

- **elearnpace**
  George Siemens is Associate Director, Research and Development with the Learning Technologies Centre at University of Manitoba. This website is his attempt to do the same thing we have attempted here in this online resource guide - create a resource on learning, networks, and ecologies that links many disparate resources, in an attempt to give a complete, whole picture view of the learning experience, one that, as George says, appeals to the beginner - and to the guru.

- **Handbook of Emerging Technologies for Learning Wiki**
  The Handbook of Emerging Technologies for Learning (HETL) has been designed by Peter Tittenberger and George Siemens as a resource for educators planning to incorporate technologies in their teaching and learning activities. It examines change pressures and trends, emerging technologies and their fit with teaching and learning, and the new skills needed by learners and educators in this emerging world.

- **Ning Sites**
  Ning offers any organization or group the ability to quickly create a social network based on common interests. To date, there are over 1.3 million Nings (including a number that are class-based – in effect, replacing the course management system. A small number are focused on elearning; among them are:
  - College 2.0
  - eTools and Tips for Educators
  - eLearning 2.0 Practices and Research
  - Engaging eLearning