Teaching Tips from CUTLA

Favorite Teaching Tips from 2006-2016

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The Center for University Teaching, Learning, and Assessment (CUTLA) facilitates the efforts of faculty, academic programs, and colleges to develop and sustain practices that promote the highest quality of teaching and learning at the University of West Florida. CUTLA provides workshops and other support for the full range of faculty professional development needs. CUTLA informs and advocates for the use of evidence-based teaching practices, provides workshops and facilitates mentoring for professional and career issues, consults with faculty on scholarship (publication and grant writing), and provides training in the skills required for the assessment of student learning. CUTLA also contributes to initiatives directed at organizational development and institutional effectiveness.

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One afternoon many years ago Jane Halonen and I met for coffee and talked about an idea: Send faculty a short, helpful tip about teaching through campus group mail once a week. So began the CUTLA teaching tips project. By May, I had a new appreciation for journalists who write a weekly column. The tipster took a summer hiatus and prepared for another round in the fall. Now, after 10 years distributing teaching tips, I also have a massive collection of tips.

The most exciting teaching tips are evidence-based and easy to implement. Faculty seldom have the time to tear apart a class and rebuild it from scratch. An ideal tip describes a small change that doesn’t require extensive time or effort to prepare or implement (similar to the Small Teaching practices James Lang advocates). The tip must be grounded in high-quality, peer-reviewed scholarship on teaching and learning or peer-reviewed laboratory research on memory and cognition. Tips based on basic science must provide evidence that the findings generalize to the experience of students learning in the classroom.

In Small Teaching, James Lang (2016) argues that faculty who attend to fundamental principles of learning and make small changes to teaching can transform their classes into powerful learning experiences. Along the way, they transform themselves into master teachers. The tips offered in the CUTLA emails were written in this spirit of small changes that produce large benefits for teaching and learning over time.

Over the years, faculty have shared their reactions to the tips. They told me about tips they enjoyed, used, and found helpful. They complained about tips they didn’t like. A few told me about their private stashes of favorite tips.

As I began planning CUTLA activities for 2016-2017, I realized that, after distributing teaching tips for 10 years, I now have a collection of nearly 300 messages. Teaching Tips from CUTLA represents 80 of the best tips. Chapters gather tips on a common topic, which should reduce the difficulty of finding a useful suggestion for a specific teaching goal.

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Chapter 1
Developing a Class

The tips in this chapter are most useful when planning a class for the following term. Tips include advice about syllabus construction, course design, and decisions faculty make about planning class activities and developing large-scale assignments. These suggestions would be difficult to implement “on the fly” in an ongoing class. Use time near the end of the term or during the summer to reflect on a course you teach and think you might like to revise. Use the suggestions in this chapter to inform your decisions about designing a new course or making larger modifications to an existing course.

Learning-Centered Course Design

What is a learning-centered course?

A learning-centered course places the focus of attention on the quality of student learning (Barr & Tagg, 1995). When designing a learning-centered course, instructors select readings, make decisions about how class time will be used, and design assignments, examinations, and other assessments based on the contribution these components make toward achieving the learning goals identified for the course. A learning-centered course differs from a traditional teaching-centered course in several ways (Weimer, 2002).

First, the balance of control in a learning-centered class will change. Individuals who are responsible for an outcome prefer to control the factors that contribute to the success of the outcome. In a teaching-centered environment, instructors feel responsible for learning (and feel vulnerable when some students fail to learn) in part because they believe that good learning depends entirely on good teaching. As a result, instructors of teaching-centered courses exert control over many aspects of the course. In contrast, a learning-centered instructor recognizes that students are ultimately responsible for their own learning. Students must engage in assigned learning activities and exert the effort required to learn. If we expect students to take responsibility for their own learning, we might need to give them more control over the way we structure learning experiences. An instructor creating a learning-centered course must balance the conflicting demands associated with each party’s need for control. Instructors need to control aspects of the course to ensure that they meet their professional responsibility to create a course that addresses certain learning outcomes. Students need to control aspects of the learning environment to meet individual learning goals and maintain motivation. The location of the balancing point between competing claims of instructors and students for control in a specific course depends on the maturity and metacognition skills of the students. Students vary in their ability to identify appropriate learning goals, regulate their learning strategies, and monitor their...
progress. The level of control exerted by instructors will be greater in beginning courses populated by students who have less developed metacognition skills.

Second, how students learn content is structured differently in a learning-centered course. Teaching-centered courses are content-heavy and encourage rote memorization, which produces memories for content that are seldom retained for the long term (Craik & Lockhart, 1972; Glenberg, Smith, & Green, 1977; Tulving, 1962). A learning-centered course will include activities that promote long-term learning, especially learning that involves higher-order thinking skills. For example, a learning-centered course will include activities in which students create integrated, organized representations of knowledge that students must access while applying disciplinary content to solve realistic problems.

Third, teachers in a learner-centered course take on the roles of coach and mentor instead of performing as a “sage on the stage.” Instructors with a teaching-centered orientation are more likely to focus on course content and the transmission of information to students. Learning-centered instructors act as a “guide on the side.” Both “sages on the stage” and “guides on the side” present content, but learning-centered instructors also design activities that allow students to practice disciplinary skills with the content, provide feedback to students about the quality of their performance, and suggest learning strategies that will help students improve their disciplinary skills and expand their knowledge base (King, 1993).

Fourth, responsibility for learning is placed squarely on the shoulders of students in a learning-centered course. Unfortunately, students at the beginning of a college program frequently operate at a level of cognitive development that Perry (1970/1999) characterizes as “dualistic learning.” Dualists learners believe that their instructors should be expert authorities who transmit knowledge to them by lecturing about content and identify the correct models and interpretations for students. One of the challenges associated with teaching in a learning-centered environment is the need to create course structures that establish the instructor’s authority as an expert guide to the content and skills of the discipline while simultaneously holding students accountable for their own learning. As students advance in academic programs and become more sophisticated learners, they become more comfortable with a learning-centered environment in which students are expected to independently evaluate the quality and credibility of arguments in the discipline.

Finally, faculty and students in a learning-centered course use feedback based on the assessment and evaluation of student work for the important purpose of evaluating the effectiveness of learning activities toward reaching course learning outcomes. Students in a learning-centered environment use information from assessments to monitor their progress toward achieving their learning goals and calibrate their activities to improve their expertise. Instructors use information from assessment to evaluate whether assignments and activities in the course are effective in promoting the quality of learning intended. In a learning-centered environment, tests and other evaluations function as learning experiences as well as serving the traditional role of describing and ranking students in terms of expertise achieved (assigning grades).

A learning-centered course is not a client-centered course in the sense that “the customer is always right.” Although student needs should inform and influence the design choices an
instructor makes, design choices should not be based on superficial “customer satisfaction” needs. Instead, the student-centered aspect of a learning-centered course means that instructors make design decisions based on information about the knowledge and skills students bring to the course with the goal of enabling students to benefit and learn from specific instructional activities. Being learning-centered means that instructors focus on what students ought to do during the course to learn and whether those learning activities actually promote the learning outcomes intended for the course. For example, if a course learning outcome identifies application of theory to problems or analysis and evaluation of evidence as goals, instructors should design class activities, assignments, and assessments that require students to apply theory to problems and analyze and evaluate evidence rather than merely recall and reproduce facts and other memorized content on an exam.

Comparing backward course design to teaching-centered course design

With a traditional teaching-centered course design process, instructors first select a text and other relevant readings. For example, a course might be organized around the chapters in a selected textbook. Instructors decide how much time they will devote to different blocks of content, how they will sequence their lectures, and the number and timing of exams and other assignments. Instructors may identify intended learning outcomes after completing the course design (sometimes years after the initial course design, in response to a request from a Chair or Dean). Learning outcomes might consist of a list of topics the instructor “covers” in the class. Learning outcomes may be dominated by descriptions of content that students should retain, although some learning outcomes might identify higher-order thinking skills. In a teaching-centered approach, instructors might decide to use an examination or assignment to assign grades to students based on expectations about the number and type of examinations that should be given, constraints on grading time imposed by class size, and expectations about whether students should be required to write a paper. Examinations that emphasize the retention of content might not be aligned well with the more sophisticated learning outcomes identified and might not hold students accountable for developing these higher-order skills.

In contrast, the backward design process reverses the order of decisions and activities that teaching-centered instructors follow (Fink, 2003; Maki, 2010). Backward course design begins with articulation of the intended learning outcomes for a course. Guided by these learning goals, the instructor selects reading materials and designs assignments and in-class activities that promote acquisition of the knowledge, skills, and abilities described in the learning outcomes. Assignments and other assessments that instructors use to assign grades in the course should be aligned with the learning outcomes (Fink, 2003; Wulff, 2005). For example, an instructor might assign problem sets as homework to give students practice with these skills. A course with learning outcomes that describe written communication skills will include paper assignments that create opportunities to practice writing and editing work to improve use of language appropriate to the discipline. Introductory courses that emphasize acquisition of content might include a number of examinations that evaluate retention. If students are expected to evaluate evidence and apply models to solve a problem or interpret a real-life situation, instructors should create exam questions that require these thinking skills to select or construct a correct response.
Designing a learning-centered course

Dee Fink (2003, 2004) describes a multistage design process for creating integrated courses that promote significant learning.

- Identify critical components of the course: learning goals, teaching and learning activities, assessment procedures, and strategies for providing feedback to students. Instructors who begin design of a course by identifying learning outcomes are more likely to select other course components that align and integrate with learning outcomes, with no disconnects between components.
- Create the overall course structure and sequence of instructional strategies that promote the course learning outcomes.
- Finalize the details of course mechanics. Create a system for assigning grades and write the course syllabus.
- Identify and debug potential problems in managing the course. For example, will students have enough time to complete the background work for an assignment before the assignment is due? Will students have access to the resources needed to complete assignments? Are the required readings available on campus?

Include formal mechanisms for assessing the learning activities in the course. Good course design concludes with planning how the instructor will evaluate the effectiveness of assignments and instructional strategies. Not every assignment works perfectly the first time we implement it. Moreover, change over time is inevitable. Disciplinary changes may require changes in course learning outcomes. Changes in the skill sets of new cohorts of students present challenges and may require modified strategies for teaching and learning. Technology may render an existing teaching activity ineffective or irrelevant. New technology may present opportunities for creating new, more effective learning activities. In the absence of continuous self-reflection and evidence-based evaluation of course components, a well-designed course will become obsolete and ineffective.

Resources


Universal Design of Instruction (UDI) is an approach to teaching that consists of a proactive design and use of inclusive instructional strategies that benefit a broad range of learners including students with disabilities. The seven principles of UDI provide a framework for faculty to use when designing or revising instruction to be responsive to diverse student learners and to minimize the need for "special" accommodations and retrofitted changes to the learning environment. UDI operates on the premise that the planning and delivery of instruction as well as the evaluation of learning can incorporate inclusive attributes that embrace diversity in learners without compromising academic standards.

**Seven Principles of UDI**

1. **Equitable Use.** The design is useful and marketable to people with diverse abilities. For example, a website that is designed so that it is accessible to everyone, including students who are blind and using text-to-speech software, employs this principle.

2. **Flexibility in Use.** The design accommodates a wide range of individual preferences and abilities. An example is a museum that allows a visitor to choose to read or listen to the description of the contents of a display case.

3. **Simple and Intuitive.** Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level. Science lab equipment with control buttons that are clear and intuitive is a good example of an application of this principle.
4. **Perceptible Information.** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. An example of this principle being employed is when multimedia projected in a noisy academic conference exhibit includes captioning.

5. **Tolerance for Error.** The design minimizes hazards and the adverse consequences of accidental or unintended actions. An example of a product applying this principle is educational software that provides guidance when the student makes an inappropriate selection.

6. **Low Physical Effort.** The design can be used efficiently and comfortably, and with a minimum of fatigue. Doors that are easy to open by people with a wide variety of physical characteristics demonstrate the application of this principle.

7. **Size and Space for Approach and Use.** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility. A science lab work area designed for use by students with a wide variety of physical characteristics and abilities is an example of employing this principle.

Information about UDI is from the University of Washington DO-IT program.

http://www.washington.edu/doit/

The guidelines are from The Center for Universal Design at North Carolina University.

http://www.design.ncsu.edu/cud/

Thanks to Vannee Cao-Nguyen, Ed.D., Assistant Director of the UWF Student Disability Resource Center for this teaching tip.

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**Do Student Learning Outcomes Reflect the Goals of Your Course or Program?**

When did you last review the student learning outcomes (SLOs) for your course? When did faculty last review and discuss the program-level SLOs for degree programs offered by their department?

Faculty often write their first set of SLOs under duress. A mandate from an external agency requires that all programs identify SLOs or that all syllabi include a list of SLOs for the course. SLOs written in a hurry may suffer from the following weaknesses:

- The syllabus has too many SLOs for a course or program.
- Course and program SLOs describe learning in more detail that is appropriate.
- Faculty describe aspirational SLOs but fail to consider whether the learning experiences they create provide opportunities for students to practice or acquire these skills.

A long list of detailed SLOs creates difficulties for assessment. Faculty might have difficulty identifying a direct measure for each SLO. Although multiple SLOs might be assessed together on a class exam, few faculty can identify which exam questions assess specific course-level
SLOs. Grades on an exam reflect learning on several SLOs and do not function well as assessments of specific SLOs.

A good practice for course or program improvement is to ask faculty to reflect on their SLOs in the context of the assignments and learning activities they require students to complete.

- Can we describe the specific learning activities that support (and assess) each SLO?
- If an assignment or exam assesses a bundle of related SLOs, can we create measures for each SLO based on subsets of exam questions or individual elements of the rubric used to grade the work? If we cannot do this, consider writing a single, global SLO that describes the core learning for the bundle.
- If no assignments or activities support an SLO, why does it exist? Either revise the curriculum or course to support the SLO or delete it.
- Do you have hidden SLOs? Instructors write many SLOs that describe disciplinary content but overlook SLOs that describe disciplinary skills. However, assignments and projects often give students opportunities to practice skills other than retrieval of content knowledge. They use the disciplinary editorial style to write their papers. They use specialized analytic tools to think about and solve problems. They use disciplinary criteria to evaluate evidence. Students may be unaware of the additional skills instructors embed in a project. Instructors who articulate the SLOs draw student attention to the value of these projects. Write SLOs that describe the goals of assignments such as teaching students to use disciplinary modes of thinking and argument, evaluate evidence, write in a professional style, adhere to ethical practices, and similar skills.

How to deal with the problem of students who are motivated only by grades or “earning a degree.”

Instructors can’t guarantee that students will be learning-oriented. But students who are unable to see any relation between course activities and intended learning outcomes are more likely to focus on “meeting requirements.” If students perceive a course only as a meaningless check-box that stands between them and earning a credential, they will do the least amount of work required to earn a grade and earn the credential. When students do not know the relation between valued skills and course requirements, they are more likely to focus on earning grades rather than learning or developing skills. Students who do not understand the relation between assignments and learning goals are more likely to seek short-cuts (cheating, plagiarism) to earning the credential or grade (Lang, 2013).

Too many students think about attending college in terms of earning a credential. This focus is exacerbated by stories in popular media that highlight the higher earnings of adults who possess a college degree. These stories focus on the earned credential without examining or describing the underlying skills the credential represents. A credential earned without acquiring the underlying knowledge and skills is an empty credential that has little value in the marketplace.

Explain the relation between assignments and SLOs to help students focus on learning. When students understand the relation between SLOs and the readings, activities, and assignments instructors ask them to complete during the course, they are more likely to engage in these activities with a focus on learning and achieving these outcomes rather than earning a grade.
• The connection between assignments and learning activities must be obvious to students. They must be able to identify which assignments and activities support specific SLOs. When students can describe why an instructor requires students to do something, they are more likely to do it.
• Students must value the skill described in an SLO. They may not value the SLO as much as the instructor, but students who do not value the SLO are unlikely to be motivated to engage in associated learning activities, no matter how obvious the connection.

**Resources**


**Align Class Activities with Course Learning Outcomes**

Skilled teachers identify clear goals (student learning outcomes) for their course, identify and develop learning activities that create opportunities for students to practice and develop skill on these outcomes, and create assessments that are sensitive to the articulated goals (Blumberg, 2009, 2014; Fink, 2003). Instructors should design each course to support the learning outcomes. Introductory courses might identify SLOs at low levels of Bloom’s taxonomy (e.g., retention and retrieval of facts and other content) whereas advanced undergraduate and graduate courses will identify higher-order thinking skills (e.g., analysis, evaluation, synthesis).

Each decision about course design should be driven by weighing the relative contribution of alternative strategies toward achieving the course SLOs. Do the assigned readings provide the necessary content? What types of class activities will best support the learning goals? How much time should the instructor devote to lecture, in-class writing, group discussion, small groups working on problems together, or other learning activities? Should students write a major paper, complete a project, or make a formal presentation in class?

Courses with different goals and learning outcomes require different designs and learning activities. An introductory course that articulates learning outcomes at lower levels of Bloom’s taxonomy might rely on activities that focus on information transmission, such as listening to lectures and reading. In contrast, an advanced course with higher-level learning outcomes (e.g., evaluate evidence related to disciplinary theory, apply disciplinary concepts to solve problems) might include learning activities that enable students to practice these skills and receive useful feedback on how they can develop and improve their ability with these skills.

Students learn best when courses are aligned and when instructors clearly explain the relation between intended learning outcomes and the learning activities they include in the course.
For a humorous illustration of a sadly misaligned course, see the Brigham Young University Center for Teaching and Learning video, *Professor Dancealot and the Perils of a Misaligned Course*.

**Resources**


Center for Teaching & Learning (uploaded December 14, 2009). *Professor Dancealot and the Perils of a Misaligned Course*. [http://www.youtube.com/watch?v=oWi5vy6TSso](http://www.youtube.com/watch?v=oWi5vy6TSso)


**Align Course SLOs with Learning Activities and Assessments in Courses**

Chickering & Gamson (1987) identify seven principles that contribute to learning activities that produce deep, enduring learning:

- Learning activities encourage interaction between students and teachers (other than students passively listening to teachers profess)
- Activities that encourage cooperation among students
- Activities that require active participation and engagement with the material (active learning) instead of passive listening
- Instructors include prompt feedback on student work that suggests ways student can improve their work (not just evaluation of quality)
- Activities emphasize time on task (require students to invest time and energy to complete the task)
- Instructors communicate high expectations for the quality of student products
- Activities demonstrate respect for diverse talents and ways of learning

Construct a course design matrix to describe how course SLOs, planned learning activities (readings, class activities, projects, etc.), and course assessments (exam questions, written work, presentation, etc.) relate to one another. A course design matrix helps instructors determine whether planned learning activities engage students in appropriate types of practice and develop the skills intended as learning outcomes for the course.
Describe learning activities, assignments, and assessments in terms of the level of skill described in the learning outcomes, using the Anderson and Kathwohl (2001) revision of Bloom’s taxonomy.

<table>
<thead>
<tr>
<th>Level of Cognitive Skill (Bloom’s Taxonomy)</th>
<th>Common SLO language (Anderson &amp; Krathwohl, 2001)</th>
<th>Aligned Assignment / Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remember</td>
<td>Recognize, Recall</td>
<td>Retrieve relevant knowledge from long-term memory</td>
</tr>
<tr>
<td>Understand</td>
<td>Interpret, Summarize, Compare, Explain, Classify</td>
<td>Construct meaning from course discussions (readings, lectures, class discussions, etc.) in a written, oral, or graphic product</td>
</tr>
<tr>
<td>Apply</td>
<td>Execute, Implement, Apply</td>
<td>Carry out a disciplinary skill or procedure in a relevant situation</td>
</tr>
<tr>
<td>Analyze</td>
<td>Differentiate, Organize, Analyze</td>
<td>Identify component parts of course material (models, theories, etc.) and explain how these relate to one another and/or to a larger structure or purpose</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Check, Critique, Evaluate</td>
<td>Make judgments based on disciplinary criteria and standards learned in class</td>
</tr>
<tr>
<td>Create</td>
<td>Generate, Plan, Produce, Create</td>
<td>Use course content and skill to create a research project, artistic performance, scholarly paper (combine elements together to form a coherent, functional whole; reorganize elements into new patterns)</td>
</tr>
</tbody>
</table>
For example, a course design matrix might align several student learning outcomes with assignments, class activities, and assessments as follows:

<table>
<thead>
<tr>
<th>Course student learning outcomes</th>
<th>Activities and assignments</th>
<th>Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify, recognize, and articulate disciplinary content</td>
<td>Assigned readings</td>
<td>Performance on fact-based exam questions</td>
</tr>
<tr>
<td></td>
<td>Class lectures &amp; discussion</td>
<td></td>
</tr>
<tr>
<td>Analyze and use evidence in disciplinary-appropriate ways</td>
<td>Class discussion</td>
<td>Performance on application and analysis questions on exams; evaluation of analysis in in-class writing, papers, and essay questions</td>
</tr>
<tr>
<td></td>
<td>In-class writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short papers</td>
<td></td>
</tr>
<tr>
<td>Produce written work that adheres to appropriate disciplinary writing conventions</td>
<td>In-class writing</td>
<td>Evaluation of writing skill in papers and essay questions</td>
</tr>
<tr>
<td></td>
<td>Short papers</td>
<td></td>
</tr>
</tbody>
</table>

**Resources**


**Design Motivating Courses by First Identifying Why Students Are (and Are Not) Motivated**

When we think about how to motivate students, we might assume our students will be motivated by the same goals and values that motivated us, but we will often be mistaken. When we try to motivate students with the wrong incentives, students disengage from classes and assigned learning activities, avoid doing more than the minimal work needed to get by, fail to use mentoring and tutoring opportunities we create, do not employ effective study strategies we suggest, or behave defensively, feigning understanding and avoiding tasks they believe might challenge their ability to perform. In the long run, all of these behaviors undermine students’ ability to learn.

Ambrose et al. (2010) discuss three factors that influence student motivation in a course. No one factor is definitive; the three work interactively to determine student motivation. If we want to structure our course to motivate students, we must attend to all three factors:

- The value a student places on the learning goals.
- Whether the student expects he/she can achieve the learning goals.
Whether the student perceives support in the class – does the student believe course activities and supportive resources will help him/her achieve the learning goals?

Ambrose et al. (2010) describe strategies instructors can use to leverage each factor and improve student motivation.

**Establish the value of your learning goals**

- Connect course content and skills to student interests.
- Create problems and tasks that address real-world problems.
- Connect content and skills in your course with other courses in the curriculum and describe the connections repeatedly in your course.
- Explain how skills students acquire in your course (e.g., writing clearly) will contribute to their professional lives.

**Help students develop expectations that they can achieve the learning goals**

- Determine the appropriate level of challenge for students in your course and design assignments at this level. Assignments that are too easy sap motivation as much as do assignments that set unrealistic demands.
- Create assignments and assessments that align with learning goals. Describe the relation between learning goals and assessments in a rubric in which you describe the learning outcomes for an assignment and articulate your expectations for performance.

**Create a supportive structure and communicate the role of this structure to students**

- Create early, short, low-stakes assignments to give students an opportunity to practice skills and develop confidence in their ability before they tackle a larger, high-stakes assignment.
- Provide constructive feedback and opportunities to use it. Feedback should identify strengths, weaknesses, and specific suggestions for actions students can take to improve the quality of their work.
- Describe effective strategies for learning course material and explain why these strategies work.
- Stereotypes about “talent” depict academic success as a manifestation of an unchangeable characteristic and undermine motivation when students encounter an early set-back. Students cannot alter their “talent” but they can alter their work habits. Emphasize the value of variables students can control: hard work, good time management, and practice guided by constructive feedback for success. Give explicit examples of these strategies in action.
Facts and Fantasies about How Students Learn

What is the best way to learn content and skills in a new discipline? How much can we trust our intuitions about how we learn to guide decisions about how we should study new material? Students and instructors wrestle with these questions. Popular culture is rife with advice about how to study, but not all of all of this advice is well-grounded in evidence.

One common misconception about learning is that individuals have specific “learning styles” (Lilienfeld, Lynn, Ruscio, & Beyerstein, 2009). An internet search will quickly produce web sites with questionnaires and diagnostic tests that claim to determine your optimal learning style, often categorized in terms of sensory modalities (visual learners, verbal learners, kinesthetic learners). These assessments depend on self-reported preferences to engage with material in one form or another (e.g., pictures, graphics, reading, listening, writing, manipulating objects, or movement). Students do prefer to engage in some learning activities more than others. However, their preferences may not coincide with activities work best as study strategies and create the largest benefit for learning. Pashler, McDaniel, Roher, and Bjork (2009) reviewed the research literature on learning styles and found little support for the common belief that instructional strategies work best when they align with a student’s “learning style.” They report that in many cases, students who use a “preferred learning style” learn less than students who use a non-preferred learning style.

If learning styles don’t predict effective teaching strategies, can we ignore student preferences for how we present information and just lecture? Although little evidence supports the value of matching presentation modality to learning preference, an extensive body of research supports the value of presenting information in a variety of modalities to improve retention and retrieval. Ambrose, Bridges, DiPietro, Lovett, and Norman (2010), Pashler, Bain, Bottge, Graesser, Koedinger, McDaniel, and Metecalf (2007), and Winne & Nesbit (2010) review evidence-based strategies for effective teaching and learning. A selected list of their recommendations appears below.

Effective Learning Strategies

- Present material in a variety of modalities: visual (pictures and graphics) and verbal (written and spoken).
- Provide concrete examples as well as abstract explanations of concepts. Discuss the connection between characteristics of the concrete examples and key elements of the abstract representation.
- Distribute learning activities over time. Repeated exposure and practice of new material with intervals of time (a few weeks) produces longer-term learning.

Resources

Interleave review of examples of solved problems with activities that require students to solve problems independently. As expertise and problem-solving skill increase, ask students to spend less time studying examples of solved problems and more time working independently to solve new problems.

Use quizzes and exams as opportunities to learn. Tests require students to practice retrieving information from memory. Students get feedback during the test and from their test scores about how well they encoded new material and appropriate retrieval cues. Ask students to reflect on how they prepared for an exam and consider whether using a different study strategy might improve future test performance. Post-exam reflections (so-called “exam wrappers”) help students calibrate their judgments about how well they have prepare and how much they have learned. These insights can guide their choices for future study activities.

Resources


**Align Course Exams and Assignments with Course Student Learning Outcomes**

Skilled teachers identify clear goals (student learning outcomes) for their course, identify and develop learning activities that create opportunities for students to practice and develop skill on these outcomes, and create assessments that are sensitive to the articulated goals (Blumberg, 2009, 2014; Fink, 2003).

An earlier tip discussed the importance of aligning learning activities with learning outcomes when planning a course. The second component of an aligned course is the alignment of assessments with the course student learning outcomes.
If learning outcomes include higher-level skills such as analysis, use of evidence, and application of concepts to problems, students should use these skills when they complete a course assessment. These skills can be assessed through case studies, responses to open-ended questions, or projects or problem sets.

**Can objective tests assess higher level learning outcomes?** Unfortunately, multiple choice questions that depend only on fact retrieval dominate most textbook test banks. However, some test banks include conceptual questions that tap higher level skills. Instructors can write their own questions or edit test bank questions to create questions that require students to evaluate evidence, apply a model and make a prediction about an outcome, or evaluate alternative solutions to a real-world problem. Be prepared: Writing a good multiple choice question to evaluate a higher-level learning outcome takes time. These questions are frequently longer than fact-based questions. However, a test need not be dominated by higher-level questions. Instructors might still want to evaluate whether students mastered basic fact-level content.

**Advice for constructing an objective exam to assess multiple student learning outcomes**

Most course exams include questions to evaluate student learning on multiple learning outcomes. The complexity of course exams is one reason that grades on an exam do not work well as program-level assessments of student learning. However, a carefully constructed exam can produce meaningful assessment evidence for multiple learning outcomes.

Begin by identifying the learning outcomes assessed by the exam in a test blueprint. For each learning outcome, select one or more objective questions that assess that learning outcome. For example, a 50-item class exam might include 5 questions aligned with each of 10 different learning outcomes. Some outcomes might be low-level Bloom outcomes (recognition or retrieval of content) whereas other outcomes might represent higher-level skills (predict the outcome of an experiment based on a specific explanatory model by selecting among several plausible outcomes, apply disciplinary criteria to select a correct solution to a complex problem described in a case).

Students learn best when courses are aligned and when instructors clearly explain the relation between intended learning outcomes and the learning activities they include in the course.

**Resources**


CUTLA web site: Writing Higher Order Multiple Choice Questions, Elluminate Session (2/28/2013). Recording of an Elluminate workshop that discussed how to write multiple choice questions at higher levels of Bloom’s taxonomy. Located in the Bloom’s
When Is This Due? Plan Assignment Deadlines to Minimize Technical Problems When Students Submit Their Work

We all face deadlines. We are accustomed to deadlines that end at midnight or at the close of business hours. A conference submission must be posted by 5 PM in a particular time zone. Our tax returns must be postmarked or submitted electronically no later than midnight on April 15.

Electronic deadlines are unforgiving; if the deadline passes before we upload our submission, we can no longer submit the work. Yes, people “ought” to plan their work to anticipate and adjust to unexpected obstacles near the submission deadline. However, we have all experienced frustration when an unexpected technical problem arises just as we try to submit work electronically. Websites and servers get overloaded and crash. An electrical outage knocks out our internet service. The online submission form includes fields that don’t behave the way we expect. Our computer mysteriously fails to interact properly with the online interface. Unfortunately, tech support is seldom available at midnight or 5 PM.

Instructors have control over the deadlines we set for student work. If we set a deadline at a time when no technical support is available, students are left to their own devices to cope with technical challenges. Why not close drop boxes or set deadlines at times when last-minute submitters can get technical support if they need it?

Create user-friendly deadlines

Give special attention to the times we set for deadlines when students must submit their work through technology. Think about when students will have access to campus resources for help with technical problems when they submit their work.

- Close the drop box in eLearning during business hours instead of at midnight.
- Schedule intervals of time for students to take an online quiz during times when technical support is available, especially during the final hours of the testing schedule when usage will be high.
- If students must use a piece of technology that is available on a limited number of machines in a computer lab, think about the number of students who must compete for time on these machines during lab hours. Make sure students have plenty of time to use these resources between the time when you make the assignment and when they must submit their project. Bottlenecks for lab access can create delays, especially near the deadline.
- If possible, avoid deadlines that coincide with known times when eLearning will be offline for an upgrade or ITS conducts routine service.
• Set deadlines during work hours, when the technology help desk is likely to be staffed. Students who experience technology problems can then seek assistance and still meet the deadline.

**eLearning Crashed Just as I tried to Submit My Paper to the Drop Box!**
**Ensure Students Have Access to Technical Assistance with eLearning When Planning Assignments**

Our culture has a long tradition of deadlines that end at midnight (think of the deadline for filing your taxes with the IRS). Although students “ought” to plan their work to accommodate unexpected obstacles near the submission deadline, some deadlines might be more punitive to procrastinators than others. A particularly punishing deadline is one that occurs when students have no access to assistance with last-minute technical problems.

When you select deadlines for student work that requires the use of technology (e.g., electronic submissions of work to drop a box in eLearning, access to a timed online quiz, assignments that require use of a limited-access piece of technology), give some consideration to when campus help resources are available to students for technical support.

• Check with the Academic Technology Center (ATC) for information on regularly scheduled system updates and avoid creating deadlines on dates that coincide with times when eLearning is scheduled to be taken offline for routine service.
• Set deadlines for times when campus technology help desks are open and staffed. Procrastinating students might still have panics and difficulties with last-minute technical problems, but they can at least seek assistance and might still manage to meet the deadline. Midnight closing deadlines are not kind to students who encounter technical problems.

**Write a Syllabus That Engages and Guides Students**

A well-written syllabus serves as an invitation to students that describes the overall purpose of the course, documents your expectations for assignments and how you will evaluate students, and creates a common course reference that you and students will use to manage day-to-day activities during the term. External readers use syllabi to evaluate institutional curriculum and determine whether your course is a reasonable substitute for a course offered at another institution when faculty evaluate courses and transcripts of transfer students.

**Questions to ask about your syllabus**

The Derek Bok Center for Teaching and Learning (Harvard University) suggests that faculty ask whether their syllabus addresses several key questions about course content, course policies, and the community of learning the instructor intends to create for the course. Questions faculty should ask include:

• Does the syllabus clearly state what the course is about and the role the course plays in the curriculum?
• Does the syllabus orient students to the course content and goals? Does it give students a reason to be excited about the course and motivated to engage in the learning activities planned?

• Does the syllabus establish all of the important “housekeeping” functions for the course? For example does it describe how to contact the instructor, provide information about office hours, describe expectations for assignments and policies for determining grades, identify important due dates, etc. (CUTLA has a list of required elements posted on the Syllabus Construction web page.)

• Is the syllabus coherent? Do the learning activities described in the calendar of events represent a logical plan to develop the content knowledge and skills described in the student learning outcomes?

• Are the learning outcomes, activities and assessments aligned? Are expectations appropriate for the students enrolled in the course (lower division, general education students; advanced undergraduate students; master’s students; doctoral students)? Are assignments and learning activities sequenced to develop knowledge and skill that build to a final, challenging assignment, project, or exam?

Resources

Center for University Teaching, Learning, and Assessment. Syllabus Construction (http://uwf.edu/offices/cutla/supporting-pages/syllabus-construction/)

See the Rubric for Self-Reflection and Evaluation of a Course Syllabus, which evaluates both required syllabus components and “best practices” for a learning-centered syllabus.

Derek Bok Center for Teaching and Learning, Function and Components of a Syllabus (http://bokcenter.harvard.edu/icb/icb.do?keyword=k1985&pageid=icb.page29695)

See the History of the Syllabus document linked on this page, which includes examples of syllabi from Harvard dated c.1876 and 1951-1952, and Four Questions (and sub-questions) to Pose to Your Syllabus (2010).

Include High-impact Teaching Practices in Courses

The AAC&U identifies five “high-impact practices” that promote substantial benefits for student learning and student persistence, increased student engagement, and improved retention and graduation rates. High impact practices share common characteristics that make them effective strategies for teaching and learning:

• Students must invest time and effort in a purposeful task.
• Students interact with faculty and peers about substantive matters.
• Students receive frequent feedback about their work and guidance about how they can make improvements.
• Students connect disciplinary content with real-world experience when they apply knowledge and skills from the discipline to a real-world problem.
• Students discover connections between the curriculum, their learning, and personal experience through a reflective writing component.
Although research on high-impact practices (undergraduate research, learning communities, capstone courses, study abroad, internships, and service learning) documents the association between HIPs and many desirable learning outcomes, few students participate in these activities. NSSE data indicate that only about 25% of seniors participated in one high-impact practice during their time in college.

High-impact practices demand time and resources to implement. However, we can sometimes achieve the benefits of HIPs when we include small-scale high-impact pedagogies in individual courses. High-impact pedagogies include features that make HIPs effective. These activities reap the benefits of larger-scale high-impact activities and can be included in the courses we require students to take to meet degree requirements. While engaged in these small-scale activities, students can learn about the large-scale activities, discover how their learning improves when they participate in these activities, and discover how they can access the resources needed to engage in a large-scale activity during their undergraduate career.

Examples of small-scale high-impact pedagogies for individual classes include:

- Require students to make a short presentation during class.
- Revise a writing assignment to require students to prepare two or more drafts and use feedback on early drafts to improve their final submission. Design a peer review assignment for early drafts to minimize your grading burden.
- Create a community-based assignment that illustrates how course content connects to a practical problem.
- Connect students to relevant academic support resources: Require students to use the writing center, create study groups, or consult with peer tutors.
- Create a mini-HIPs for the class: Case studies, a small research project directed at a new and relevant problem or question (not a canned laboratory exercise), a service learning project, or a short-distance excursion in which students observe and experience practical use of course content in the field.
- Assign a low-stakes assignment during the first three weeks of the term to provide feedback to students. Identify relevant academic support resources and refer students to these services when needed.

Resources

Teaching Students to Think Like Professionals in the Discipline Requires Developing Metacognitive Skill

We often identify the ability to think like a professional in the discipline as an important program-level student learning outcome. The ability to frame and solve problems like a professional requires both specific disciplinary skills and general metacognitive skills. Psychologists use the term *metacognition* to refer to our knowledge about how we think and awareness of our thinking while we learn new material and solve problems. Metacognitive skill extends to our ability to apply our understanding about our cognitive processes to make decisions about how we will monitor and regulate our behavior: how we plan, monitor progress, identify and correct errors, and select strategies to solve problems.

Students will make more progress toward achieving course learning outcomes if they have strong metacognitive skills, but novices in a discipline frequently have poor metacognitive skills, particularly for thinking strategies specific to the discipline (Dunning Johnson, Ehrlinger, & Kruger, 2003). What can faculty do to help students develop metacognitive skills and make progress toward developing disciplinary approaches to thinking and problem-solving?

Turner (2012) describes strategies faculty can use to prompt students to reflect on and improve their ability to think about their learning and problem solving in the discipline. Her work focuses on improving metacognition and “thinking like a biologist,” but the strategies are applicable to multiple disciplines.

- **Make learning and conceptual change explicit.** Ask students to reflect on how their thinking about a disciplinary topic has changed by including a prompt for a reflective essay as part of a major exam or as an in-class “minute paper.” Ask students to describe how they thought about a topic at the beginning of the course and how they think about the topic now. For example, students might describe 2 or 3 ways in which their thinking about a topic has changed based on class discussions (e.g., evolution, climate change, dominant group privilege).

- **Encourage students to monitor and reflect on their learning strategies.** Ask one or more questions as a graded reflective component for written assignments and major projects in which students write about the process of completing the assignment. What was the most challenging or confusing part of this assignment? What questions did you have to think about to complete this assignment? What new skills did you develop while completing this project? What did you learn from completing this project that will help you on future assignments? What advice about how to complete this project would you give to a student who planned to take this course next term?

**Resources**

What Can Instructors Do When Students Resist Engaging in Effortful Learning Activities?

Have you ever hesitated to try a new assignment or learning activity because you thought students might resist the new work and complain about your teaching? Many instructors say they continue to lecture because they worry their students will refuse to cooperate with new learning activities. A small literature documents the possibility that some students retaliate with poor class evaluations when an instructor asks them to take a more active role in class learning (e.g., by using a flipped class format or asking student to work together in groups).

Seidel and Tanner (2013) claim students resist both novel and traditional teaching activities for similar reasons, some based on student behaviors and others based on instructor behaviors.

What does student resistance look like?
Students are most likely to resist by engaging in passive behavior that undermines the quality of the learning activity. They might engage in social loafing, avoid class, avoid participating in group activities (not contribute to discussions or sit at a distance from others), or pretend to be prepared when they are not. A few students might actively resist by engaging in disruptive behavior during group learning work or voicing complaints about the instructor or the learning activities.

Why do students resist a new approach?
Students who have prior experience with fellow students who engaged in resistant behaviors may be reluctant to participate in future group work. Collaborative learning requires specific communication and interpersonal skills. Students might resist participating in collaborative activities because they do not know how to negotiate a civil discussion of a sensitive or challenging topic with a student they have just met. Team work requires skills in communicating expectations to team members and conflict management skills that hold team members accountable for meeting expectations. Students might be unaware of or unskilled with specific strategies they need to prepare for in-class collaborative activities, including how to do more than surface reading of assigned material or prepare substantive questions for group discussions. Worse, they might be unconvinced of the value of these effortful activities for their learning.

How can instructors minimize student resistance?

- **Promote a sense of community and instructor immediacy.** Instructors should engage in behaviors that promote immediacy, that is, classroom behaviors that reduce the social distance between instructors and students. Most behaviors that promote immediacy also build a sense of shared community: learn student’s names, make eye contact, smile, reduce the physical distance between you and your students by leaving the podium and moving among students in the classroom.
• **Reflect on your behavior as an instructor and minimize behaviors that create obstacles and inspire resistant behavior in students.** Be aware of behaviors that create barriers and motivate resistant behavior in students. Seidel and Tanner (2013) discuss instructor behaviors that contribute to student resistance. Their list includes a number of behaviors that often appear in comments students write on course evaluations: sarcasm directed toward students; apathy or inaccessibility (cancelled or late arrivals for class or office hours, missed appointments); confusing or off-topic lectures (straying from course content to personal opinion or other tangents); disorganization; unfair testing or grading practices; too much or too information (or challenge) in the course.

• **Tell students about your reasons for the choices you made when you organized the class and selected assignments, learning activities, and teaching methods.** Encourage students to reflect on how they learn and explain why the assigned activities will help them improve. Do this on the first day of class; repeat as needed when making new assignments.

• **Pay attention to fairness.** We are all sensitive to injustice and inequities. Use rubrics to explain expectations and help students understand how you will evaluate their work. Structure collaborative assignments and large projects to promote effective student interactions and equitable distribution of work. Because large groups encourage social loafing and demand better team management skills, create small groups. Students working in small groups experience fewer difficulties finding times to meet and are better at negotiating conflicts between members and ensuring that all members contribute to sharing ideas. Create mechanisms for students to formally evaluate the distribution of work and fairness in contributions made by individual members.

• **Vary your approaches to teaching and assessing student learning.** Create multiple opportunities for students to practice important skills in different ways (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). Clicker questions create safety for shy students. Short, in-class reflective writing gives students an opportunity to gather their thoughts and prepare for small group or full-class discussion. Varied strategies benefit students in two ways. From a Universal Design perspective, multiple strategies increase the likelihood that students will encounter a strategy that allows them to capitalize on one of their strengths. From a developmental perspective, multiple strategies require students to sometimes practice less preferred activities and develop skills they ordinarily avoid. If you create a large enough number of these activities, no one activity will deliver a “fatal” blow to a student’s overall grade (they do worry about the impact activities will have on the final grade).

• **Give students a voice.** Conduct a mid-semester feedback activity and ask students to tell you what helps them learn in your class, what interferes with their learning, and what they would like to see you change. Their requests are not mandates. They will appreciate the fact that you cared enough to listen and considered making changes. Explain why you keep certain learning activities and identify changes that you intend to make based on their input.

**Resources**

# Chapter 2

**Tips for the First Week of Class:**

**Setting the Tone, Creating Community**

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Chapter 2

Tips for the First Week of Class: Setting the Tone, Creating Community

The first few class meetings set the stage for the kinds of interactions you will have with students during the remainder of the term. In addition to “housekeeping” activities at the start of the term, first class meetings create opportunities for you and your students to meet one another and develop rapport. Tips in this chapter describe actions you can take during the first week to connect with students and promote a sense of community and shared purpose.

Setting the Tone for Your Class - Guiding Students Toward Effective Study Strategies

Use class time during the first week of the term to provide students with guidelines and suggestions for successful study strategies. Examples of study discussion topics included the following:

- How to take notes effectively while reading the required text or during class meetings.
- The importance of supplementing bullet headings in class Power Point slides with additional information provided during class or found in relevant assigned readings.
- How to form an effective study group – rules for cooperation (focus on study, not socializing, quizzing one another, comparing notes from lecture, reading, peer review, etc.).
- How to prepare for exams. Karpicke, Butler, & Roedgier (2009) report that students hold false beliefs about the effectiveness of various study strategies. Many students believe that reading the chapter several times is a good study strategy, but in actuality, this strategy is ineffective. Students will make better use of their study time if they use it for more effective study activities such as developing and answering questions they can expect to see on the exam, writing paraphrases of concepts in their own words and checking these against the reading or to another student’s interpretation to ensure that the paraphrase captures the intended meaning correctly. Encourage students to use more effective strategies when they study.
Resources


How Accurate Are Your Assumptions about the Students in Your Class?

How much do you know about the students enrolled in your class? When was the last time you checked your assumptions about how much time your students spend studying versus working or playing, how motivated they are to learn, or how well prepared they are to tackle the content and skills in your course? Even if you reviewed the most current Beloit Mindset list (http://www.beloit.edu/mindset/), how well do the Beloit descriptions of this year’s cohort of first-year college students align with the students sitting in your classroom?

Richards and Velasquez (2014) identify faulty assumptions about student comprehension and motivation as the second most common mistake made by instructors of large lecture classes. Faulty assumptions can misrepresent the actual skills, knowledge, and motivations of students and undermine an instructor’s ability to build rapport with students. Faulty assumptions can lead instructors to adopt teaching strategies that interfere with the learning process.

Examples of problems created by faulty assumptions include the following:

- Overestimates of the quantity and quality of prior knowledge, particularly for first-year students in introductory level courses. Instructors with faulty beliefs about prior knowledge may cover basic material too quickly (or not at all). They might falsely believe this discussion would be a review when students are actually experiencing this material for the first time.
- Instructors might falsely assume that their explanations are understood by students and move on to new material before students fully understand the content and the explanations.
- Instructors might over-estimate or under-estimate student interest and motivation to learn the course content. Better calibration would help instructors identify when they need to create stronger interest or provide additional incentives to motivate students.

How to correct faulty assumptions?

Use a pre-class survey to gather information about students’ previous learning experiences, determine how comfortable they are with course content, and learn about their expectations for the course. Include a few questions to identify other interests. When it makes sense to do so, connect course content and skill to these interests to highlight the relevance of the course to things that students already find motivating and interesting.

Use in-class writing assignments or clicker questions to directly evaluate how well students understand key concepts. Ask students to spend 5 minutes writing a paraphrase of an explanation of a key concept you’ve just discussed. Or ask students to take 5 minutes at the end of class to
describe any concepts discussed in class that continue to confuse them (muddiest point paper). If you discover that large numbers of students are still confused, you will only lose them permanently if you do not take some time and attempt to clarify the concept.

Request formative feedback from your students about the class with three questions:

- What am I doing in class that helps you learn?
- What am I doing in class that does not help your learn?
- What might I do differently to improve your ability to learn?

Resources


**Build Community by Getting to Know Your Students**

Students feel more connected to faculty who know their names. Because names are abstract labels and the connection between a specific name and face is arbitrary, many people have difficulty learning names. The task is even more difficult when we meet many new people at one time, such as when we meet new students at the start of the term.

As a rote memory task, the only way to connect names and faces is to rehearse paired names and faces repeatedly. The following strategies can help you learn the names of your students.

**Practice, practice, practice.**

- Request the student photo option when you download your class list from Classmate. Use the list to review names and faces, and practice retrieving student names for faces.
- Call on students by name during class and pay attention to where they sit (usually the same place) and what they look like (not always a close match to their Classmate photo). Rotate through the entire class list and repeat until you can recall the name correctly when you see one of your students.

**Discover distinctive characteristics for each student.**

We remember distinctive, concrete information better than abstract or meaningless information. One way to make student names more distinctive is to create a connection between students and their names by learning something about each student. When we learn a unique detail about a student, we create a personal connection with students, which has an additional benefit: we create a welcoming community in our class. If you experience a memory lapse while trying to recall the student’s name, but you remember that the student likes to train for marathons or belongs to a local tango club, your students will feel connected and welcomed in your class.

- If your class is small enough, conduct an icebreaker activity during the first week of class. Ask each student to state their name and describe something distinctive about themselves: something they do for fun, an unusual skill or hobby, or something they’ve done recently that they are excited or pleased about (recent travel, an accomplishment, a special event). Begin by modeling the behavior and state something unique about
yourself. This strategy also helps build community because students can learn each other’s names and discover common interests.

- If you are reluctant to request students to disclose personal information, an alternative strategy is to ask students to imagine that they were going to be stranded on a desert island and would be allowed to bring only one item with them. The name of the item must start with the same letter as their first name. Ask students to state their name and their special item. Although this icebreaker helps make names distinctive and easier to remember, it won’t help you or your students get to know one another better and is less useful for community-building.

Thanks to the contributions of several directors of teaching centers who offered these suggestions during a discussion on the Professional and Organizational Development Network email list: Ed Nuhfer, Michael Dabney, Barbara Stuart, Ursula Sorensen, and Carol Chomsky.

**Engage Students in Your Course by Placing It in the Context of the Student’s Major**

Students enroll in courses for a variety of reasons, some intrinsic, some extrinsic. They might be curious about a topic or discipline. They might have heard positive comments about an instructor from other students. Or the course might be required, either for all majors in a discipline (or related discipline) or as an option to meet a graduation requirement.

Students who register for a course for intrinsic reasons arrive on the first day excited and motivated to engage in the course. Students who register primarily because a course satisfies a requirement might feel coerced in their choice and be resistant to engaging in the course. How can instructors engage and motivate students who arrive with ambivalence about the course?

Students sometimes select a major without fully understanding the breadth and skill expectations of the discipline. They might regard some required courses merely as obstacles to their goals rather than as important components of the knowledge and skills that characterize the discipline. The first day of a class is a good opportunity to place the course in the context of the major and clarify the importance of the learning outcomes associated with that course for development of professional skill in the discipline.

Courses that function as service courses to a variety of majors may present additional challenges, although the subset of learning outcomes that align with the program outcomes the course serves should be identified. Instructors might benefit by learning which students are enrolled in their course to pursue a major in the discipline and which students are enrolled for other reasons. This information can be useful later in the term when selecting specific examples of applications to discuss in class. Including applications that are relevant to service programs as well as applications within the major discipline will help keep these students engaged throughout the term.
Why Should Students Take Your Course? How Do Courses in Your Major Contribute to Common Learning Goals?

Do students ever ask, *Why am I required to take this course?* If you teach a required course, you have an easy answer, *You can’t earn a major in xxx without it.* However, this answer invites a second question, *Why is this course required for this major?*

Departments have good reasons for why students must take specific courses. The program’s curriculum map describes which required courses contribute to the learning outcomes intended for all students who complete the major. Most curriculum maps identify two or more courses that contribute to specific student learning outcomes. For example, a program might have the following learning outcome: *Students can locate and analyze evidence from appropriate sources to create arguments and make decisions about theories and models in the discipline.* This learning outcome describes a complex skill. Students will not master this skill in a single course. Faculty design the curriculum to provide students with opportunities to practice and develop these skills in several courses. How are these courses related?

*The intentional curriculum*

Like a good story, a coherent academic curriculum has a beginning, a middle, and an end. The collected content of required courses reflects the underlying organization of disciplinary knowledge. Ideally, students connect the ideas and skills they encounter in their major courses. Students should develop an organized, coherent system of knowledge and related skills in thinking and communication by the time they complete their course work.

Have a conversation with colleagues who teach different courses in your program that support common program-level learning goals. How do the courses students complete early in the program prepare them to meet expectations in your course? How does your course prepare students for tasks they will encounter in courses they take after your course?

Discuss the instruction and assignments assigned in these courses. How do these assignments guide student progress toward mastery of a student learning outcome? Collaborate with colleagues and coordinate the assignments you create so that each instructor can build on prior learning and prepare students as they develop their expertise.

*Make curriculum goals and relations between courses explicit for students*

Too often, students “clean house” at the end of a course. They submit their final exam and begin discarding information they believe they will never use again. When you tell students about assignments and learning outcomes for your course, be explicit about how your course connects to other courses students will take. Talk about the skills students learned in prior courses that you expect them to use in your course. Remind students that future instructors will expect their students to use the skills they developed in your class to complete work in the next class.

When we make the connections between courses explicit, we help students become more intentional learners. Students will be more likely to retain skills across courses and recognize
how to apply their skills to real-world problems if they develop connections between knowledge and skills they acquire in multiple classes.

Flipping the Syllabus: Ensure Students Read the Syllabus and Understand Expectations with a Syllabus Quiz

Do you suspect students are not reading your well-prepared syllabus? How often do students ask questions about a course requirement you described on the syllabus? Some instructors create a syllabus quiz as an early classroom assessment to ensure that students read the syllabus carefully and understand class expectations.

Use a syllabus quiz as a low-risk trial of a “flipped class” activity
In a “flipped class,” instructors create students’ first exposure to content by assigning preparatory work (e.g., assigned reading, viewing a video, or examining material on a web site) students complete before a class meeting and instructors devote the class meeting time to learning activities such as discussion and application of content. In a face-to-face class, instructors might create a syllabus quiz as a low-stakes first experience with peer instruction. Assign reading the syllabus as the “first exposure to content” component of a “flipped class” and use class time for a collaborative learning experience about course expectations based on the group quiz activity.

Questions for a syllabus quiz
Create a short multiple choice quiz based on 10-12 course requirements and deadlines you describe on your syllabus. You might include questions such as the following:

- What happens if a student submits homework or an assignment late?
- What is the date for the first exam?
- What is the due date for a specific assignment (identify the assignment)?
- What is the name the author(s) of the required textbook?
- Where can students find the supplementary readings?
- Can students use a laptop or cellphone during class? Or, if forbidden, what are the consequences of violating this policy?
- How is the final course grade computed?
- Are students required to attend class? How will their class participation be evaluated?
- What criteria will the instructor use when grading written work?

Peer Instruction Activity Based on the Syllabus Quiz
Michaelsen, Knight, and Fink (2004) create an answer sheet that tracks individual and group scores on the quiz and enables students and groups to hedge their responses if they are not confident of the correct answer. Create an answer grid for quiz responses. Students need a space to record a value for each response alternative based on their confidence that the answer is correct and track the number of points they earn as an individual and as a member of group for each question.
Instructions for students (Individual Syllabus Quiz)
Each question is worth 4 points. Assign a total of 4 points for each question based on your confidence in your answer.

- If you are sure you know which answer is correct, enter the number 4 in the cell for that option and leave other cells blank.
- If you are uncertain about the correct response, divide the four points among the alternatives you think might be correct. If you have more confidence about one of the options, you can assign more points to that option (e.g., 3 for option A, 1 for option D).
- The total points for the four options for a question must equal 4.
- If you are guessing, assign the number 1 to every option.

Grade the syllabus quiz as a group activity (Group Syllabus Quiz)
This activity requires a scratch-off IF-AT form. These forms provide the correct answers to multiple choice questions on a scratch-off form: wrong answers have a blank whereas a star appears when students scratch off the correct option. Contact CUTLA for information about ordering IF-AT forms.

During this activity, students keep track of the points they earn based on their individual responses. They also track and the points they earn based on the group decisions.

Members of each group discuss their responses and reach consensus about the correct response for the first question. They then scratch off that option for the question on the IF-AT form.

Group Quiz Score
If the group response is correct on the first option scratched, the group earns 4 points. If the group must select a second option to find the correct answer, the group earns 2 points. If the group must select a third option, the group earns 1 point.
**Individual Quiz Score**
Individual students earn the number of points they assigned to the correct answer when they took the quiz alone. If they assigned 4 points to the correct answer, they earn 4 points. If they assigned 3, 2, 1, or 0 points to the correct answer, that is the number of points they earn.

For class records, all individuals earn the score earned by the group during the group quiz activity. However, because students keep track of both individual and group scores, they will discover that each individual in the group earns a higher score based on the collaborative responses supported by group learning than does any individual working alone. In addition, during the group activity, an overconfident student who presses for an option that proves to be incorrect helps the group realize the wisdom of other students who might have been less assertive but chose the correct answer. After the group loses points on one or two questions, members learn to improve the group’s performance on later questions by first eliciting opinions from all members before deciding which option to scratch off first. This discovery develops group cohesion and fosters effective collaborations on future activities.

**Syllabus Quizzes for the Online Environment**
Revak (2014) encourages online instructors to create a syllabus quiz. Students can take the quiz multiple times during the first week of class for a low-stakes grade (e.g., earn up to 6 extra-credit points toward a 1,000 point total used to determine the course grade). Create a question library of multiple-choice syllabus questions and use the quiz tool to randomly select questions for a short self-grading quiz. Repeat quiz takers might encounter different questions each time, but will see answers to questions with each administration. The quiz functions as a both a tutorial on the syllabus and an assessment. Although the online syllabus quiz will not promote group work skills, it will ensure that students read the syllabus and understand your course expectations.

**Resources**


Information about IF-AT Forms:  [http://www.epsteineducation.com/home/about/how.aspx](http://www.epsteineducation.com/home/about/how.aspx)
Contact CUTLA if you are interested in trying these forms in your class.

**Assign Graded Work Early in the Term to Alert Students to Problems with Their Learning**

The first exam or major graded assignment in the term delivers a loud message to a certain number of students in a course: You are not performing well enough to succeed in this course. What can faculty do to help students who are “on the edge” pull back from the brink of disaster and succeed in the course?
Alert students to problems early in the term with concrete feedback to give students time to make necessary corrections. Students need feedback early enough in the term to locate sources of assistance and make use of opportunities to improve (forming study groups, obtaining tutoring, increasing participation in class, consulting with the writing center or other campus support services).

Structure the grading system for the course so that an early failure still leaves some hope for recovery. When the final grade in a course is determined by one or two major exams or projects, an early stumble might not be recoverable. When courses include multiple opportunities for graded work or when grades for later assignments are weighted more heavily than early assignments, students can realistically expect that significant improvements in their work will offset an early stumble.

Contact students who are at risk of failing following the first graded assignment or exam. Email students who receive a D or F and request that they come to speak to you during office hours. This gesture can provide the encouragement to students who get off to a bad start but are otherwise capable, especially if you use the meeting time to direct the student to campus resources for additional help. Some instructors use their graduate teaching assistants or recruit honors students in the class to serve as mentors to students who are struggling. Both students can benefit from this experience.

Advise students about the consequences of decisions and choices they make. Students increasingly have unrealistic expectations that they can manage a full-time job, a complex family life, and a full load of university course work. Although students must accept responsibility for decisions that impair their ability to succeed in a course, a heart-to-heart discussion with their advisor or course instructor about the impact of their choices might motivate them to choose more wisely. Discussions that occur early in the term (before withdrawal deadlines) allow students to save themselves from poor decisions and back out of unrealistic course loads or reduce other demands on their time.

Focus Learning by Beginning a Lecture with a Question or Thinking Prompt

Lectures are an efficient way to communicate a large amount of content in a fixed period of time. Unfortunately, “telling” (the main activity in many lectures) does not translate directly into “learning” (the main goal for most faculty who prepare and deliver lectures). Students sometimes become lost in the forest of content details in lectures and fail to extract the larger picture that reflects how these details are integrated. Students will be more likely to recall specific content details if they begin with an overarching organization that creates context and suggests how details relate to one another.

Providing an organizational theme or structure before presenting content improves comprehension and facilitates recall of content details. For example, Bransford and Johnson (1973) asked students to read and recall a short text that described 18 details associated with a common activity (e.g., First you arrange things into different groups. . . . If you have to go somewhere else due to lack of facilities, that is the next step. . . . it is better to do too few things at once than too many. . . . After the procedure is completed, one arranges the materials into different groups again.). When students were told that the passage was about washing laundry...
before they read the passage, they recalled twice as many details than when they learned about the theme of the passage after reading it.

Instructors can facilitate comprehension of their lectures and improve student recall of lecture content by providing a question, thinking prompt, or other organizing theme before beginning the lecture. Write the question or prompt on the board where it will be visible throughout the lecture. Include it in the first slide of a power point presentation. Instructors should direct attention to the prompt as students enter and prepare to listen to the lecture. Some instructors will ask students to write a short paragraph in response to the prompt before the lecture begins to encourage students to complete assigned readings before class. Refer to the question or prompt at relevant points during the lecture to reinforce the theme that connects content of the lecture in a coherent whole.

**Resources**

Bergey, B. (n.d.) Making it stick: How to design engaging and effective learning activities. Workshop handout, Teaching & Learning Center, Temple University.


This tip is based in part on a suggestion by Bradley Bergey, Teaching & Learning Center, Temple University.

**Help Students Improve Their Study Skills**

Students often need explicit guidance on effective study strategies. The SQ3R technique is an effective study strategy that has been described and promoted in countless textbooks in multiple disciplines.

David Myers, author of a widely-used text for introductory psychology, recently produced a narrated animated video (*Make Things Memorable!* ) that provides an engaging and short (at just over 5 minutes) overview of the SQ3R method. David Myers describes the SQ3R technique for study and discusses psychological research findings on the “testing and retrieval effect” that explain why these strategies improve student learning.

If you teach a course with a large enrollment of first year students, consider providing your students with a referral to this video. Post a link to it from your faculty web page or include a link in your course materials in eLearning.

This animated video is available at the following URL: [http://www.youtube.com/watch?v=rFIK5gutHKM](http://www.youtube.com/watch?v=rFIK5gutHKM)
Tips for Managing Email from Students: How to be Responsive and Maintain Your Sanity

Students are more likely to interact with instructors outside of class by sending an email than by visiting an instructor during office hours. Prompt responses to student email create a sense of “connectedness” between students and faculty, contribute to the quality of engagement with the course, and can indirectly improve student learning and retention.

We all appreciate prompt responses to our email messages. But with a huge volume of mail in our queue, how can we respond effectively to student email messages and protect our time for other important activities?

Respond promptly to messages from your students. You need not respond immediately. Try to respond within a reasonable period of time (24-48 hours).

Tell your students how quickly they can expect a response on the first day of class and in your syllabus. Honor this promise. They might expect prompter responses from their friends, but you can and should set reasonable expectations and limits on how quickly students can expect you to respond. Communicate email policies clearly. Plan to communicate them more than once, e.g., repeat them near assignment deadlines and test administrations.

Set up a filter in email to direct mail from students to a designated folder. A good filter prevents messages from getting lost in your email queue.

Identify a key phrase (best to pick one that is easy for students to remember) that you used when you set up your filter. For example, if you set up a filter so that all mail with EXP4407 in the subject line goes to your EXP4407 class folder, students must always include this in their subject line or risk having their message buried and neglected. Tell your students what they must include in the subject line to ensure their message is filtered properly. As tech-savvy as we think our students might be, they might be unaware of filters for email and the need to put a key word in the subject line to ensure their message is directed properly. Consider this a “teachable moment” for practical real-world communication skills.

Use this strategy to sort your email from other key sources. You can filter emails from your department chair or a colleague you collaborate with on a research project by filtering mail based on their email address.

Remind students to sign the email with their full name. Student accounts and private email addresses are cryptic. As with strategic use of the subject line, full identification of the sender is an email skill that students might still be learning.

Identify a time when you will respond to student email. If you think about responses to student email as a replacement for conversations during office hours, consider setting aside a designated time when you respond to email from students. De-clutter your inbox by creating a filter for student messages, which you can then locate, read, and respond to during your designated time. This strategy also works well for managing the flow of messages from a topical listserv. Isolate these messages in a folder with a filter and read them when you have time.
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Chapter 3
Teaching Strategies that Promote Effective Learning

Well-established research findings about how people learn have been finally making the journey from the laboratory to applications in higher education. These tips draw from this rich research literature in cognitive psychology, neuroscience, scholarship of teaching and learning, and faculty development. Tips in this chapter describe learning activities that instructors can adopt for assignments and class activities throughout the academic term. The teaching and learning strategies in this chapter are applicable to a broad range of content and disciplinary skill.

Strategies That Make Ideas Stick

Do students sometimes smile and nod while you present an important idea in class and then seem unable to explain it or seem to forget it entirely shortly afterward? Heath and Heath (2010) present 6 strategies that make new ideas more memorable.

- **Simplify ideas without trivializing them.** Avoid turning on a fire hose of information during a lecture. Prioritize and identify the critical core ideas and focus on clearly presenting a small number of new ideas. Students need your expertise to identify the key concepts they should attend to and learn. Anchor core ideas in information and context that students already know. Use examples, analogies, and models that students already understand and can use as the foundation for new ideas and understanding.

- **Create surprise and curiosity to capture and hold attention.** Introduce a topic by posing a question, presenting a puzzle or problem to be solved, or identifying a gap in knowledge that can be filled by the new ideas you will discuss.

- **Use concrete examples.** Ground new abstract ideas in specific, concrete analogies and examples. Concrete examples are easier to understand than purely abstract concepts. Each concrete sensory component associated with a concept will serve as mechanism for recalling the idea later. If students learn redundant retrieval cues, if one retrieval cue fails, another cue might be successful.

- **Ideas must be credible to be memorable.** Present new ideas in a way that allows students to imagine or experience a credible test of the ideas. Demonstrations and active learning experiences are effective strategies for creating credible tests.

- **Memorable ideas make an emotional impact.** Students are more likely to remember ideas they care about. Why should students care about the new idea you want them to learn? Why is it important? Surprise can be the emotional hook that makes a new concept memorable.
Examples of real-world consequences that are important to students will also make new ideas more memorable.

- **Narratives are more memorable than lists.** Embed new content in a story or simulation. The story does not have to be a compelling piece of fiction to make the embedded ideas memorable. The story only needs to create a meaningful organization that highlights how the new ideas relate to one another. Ideas that are connected to one another are more memorable than a disconnected list of topics.

Heath and Heath illustrate the narrative strategy by contrasting how well students learn the concepts from a series of lectures on various accounting practices (identifying revenue, computing current assets) to students who learned these concepts in the context of a story about two fictional students who launched a start-up company for a new product.

**Resources**


### Develop Expertise in Students by Creating Cognitive Apprenticeships for Students

Learning in a discipline involves more than acquisition of content knowledge. Development of expertise requires students to develop skills in reasoning and strategies for solving disciplinary problems or applying disciplinary models to real-world applications. Fields with tradition of teaching through apprenticeships include trades and crafts dominated by skills and tasks that students can easily observe (e.g., building a cabinet, tailoring a piece of clothing). Academic disciplines present challenges because disciplinary strategies for reasoning and problem solving are cognitive strategies and are not readily observable. Nevertheless, students must acquire these skills to develop advanced skills in the discipline.

Collins, Brown, and Holum (1991) propose that instructors must find strategies to make their expert thinking and problem-solving skills explicit to create effective cognitive apprenticeships in academic disciplines. They propose the following components for an effective cognitive apprenticeship:

- Domain knowledge: the subject matter content usually addressed in textbooks and lectures
- Heuristic strategies: techniques used to accomplish common tasks in the discipline
- Control strategies: approaches experts use to guide their problem-solving processes
- Learning strategies: knowledge about how to learn new concepts, procedures and strategies
We have many strategies for transmitting domain knowledge (lectures, textbooks, etc.), but the remaining three components must be addressed in other ways. Colling, Brown, and Holum (1991) suggest the following strategies:

- Model a task so that students can observe all of the component steps: completing a heuristic strategy, thinking aloud to demonstrate how you guide your problem solving
- Coach students and provide feedback on their actions while they perform a task or solve a problem
- Scaffold tasks by breaking a complex task into simpler components that build on one another
- Encourage students to verbalize their thought processes while solving problems so you can observe and offer feedback to correct sub-optimal strategies
- Ask students to reflect on their performance and compare their strategies and outcomes to others
- Explore new problems; solving the same problems over and over encourages a plug-and-chug mentality that does not generalize well to the new problems students encounter

Pay attention to the sequence of learning activities to build skill.
- Begin with a conceptual model for the larger task. This model creates a road map that enables students to identify how component skills contribute to larger goals.
- Initial tasks should be relatively simple; later tasks should add complexity as students become more skilled. Create a series of assignments or projects that provide repeated practice with initial skills; later tasks include additional skills without becoming overwhelmingly complex, the final project should require the full set of skills.
- Introduce variations in how students apply skills to new tasks and assignments that add complexity. Students must then make decisions about when and how to apply a strategy they’ve practiced and increases the likelihood that students will apply strategies to new situations appropriately.

Resources


Identify Bottlenecks to Student Learning to Develop Improved Learning Strategies

Faculty are experts in their disciplines. The cognitive skills that comprise expertise can also create barriers to instruction. Experts internalize disciplinary cognitive skills and procedures through extensive practice and repetition to the point where they can execute these skills without deliberate thought. The automation of these skills (developing skilled disciplinary habits of thought) enables experts to devote their attention to areas that are difficult. However, this automation can also make it more difficult for experts to clearly articulate and explain how they carry out skilled behaviors. A solution that appears to simply “pop into the head” of an expert may actually be based on a complex series of cognitive steps that play out rapidly in the mind of
the expert. When explaining the solution to a novice, the expert might omit one or more intermediary steps.

From a student’s perspective, experts solve problems through processes that seem mysterious and hidden. Students might not know all the intermediate steps hidden below the surface of the fluid performance of an expert. The “curse of expertise” sometimes prevents experts from accurately anticipating the obstacles that impair the learning of novices (Hinds, 1999). The detailed steps experts follow when they solve a problem become less obvious after years of practice and enable experts to execute these steps automatically. Experts tend to represent and describe their knowledge in abstract language that interferes with clear communication with novices (Hinds, Patterson, & Pfeffer, 2001; Nickerson, 1999). The challenge facing experts who teach is to articulate their implicit knowledge so that it is explicit and accessible to students.

Researchers at Indiana University have been exploring ways to make implicit expert knowledge explicit through a process called Decoding the Disciplines. They identify three types of bottlenecks or obstacles to learning

- **Procedural bottlenecks** occur when successful completion of a task requires multiple steps. Students may not have identified and/or mastered all of the steps required to complete the task (e.g., the steps involved in formulating a hypothesis, identifying competing hypotheses, and determining which variables must be manipulated, which variables must be controlled, and which variables must be measured to design an experiment).

- **Epistemological bottlenecks** occur when students do not understand how knowledge is constructed within a discipline (e.g., the nature of what “counts” as evidence to support an argument).

- **Emotional bottlenecks** occur when students have emotional responses to the discipline or subject matter that hinders learning (e.g., when students feel that their religious beliefs are threatened if they study or accept the concept of evolution in biology).

The Decoding the Disciplines process helps expert faculty identify conceptual bottlenecks and discover strategies to help make implicit expert strategies explicit and devise learning activities that will help students develop these skills. The process involves the following steps:

1. Identify a bottleneck concept
2. Define the processes students must learn to overcome the bottleneck
3. Identify ways to model these processes
4. Create activities and assignments that give students practice with these processes and feedback on their performance
5. Identify strategies to maintain student motivation while learning these processes
6. Assess student progress in acquiring these processes
7. Share effective strategies with others in our discipline

Interested faculty can learn more about Decoding the Disciplines and read about specific disciplinary examples by visiting the Decoding the Disciplines web site: http://www.iub.edu/~hlp/decodingthedisciplines.html
Not Just Fun and Games! Structure Class Demonstrations to Reinforce Learning Goals

Classroom demonstrations that illustrate an important process, phenomenon, or application of a concept can generate interest and engage students with course material. Although students enjoy classroom demonstrations, they sometimes remember the activity but do not remember the course learning goals that instructors want to promote when they design the demonstration. An effective demonstration connects student memories of the classroom experience with the concepts the activity was designed to demonstrate.

**Strategies that transform an entertaining demonstration into an effective learning experience**

- **Identify the learning outcome(s) you intend to promote with the classroom demonstration.** For example, a demonstration that illustrates a counterintuitive or surprising outcome can be used to identify assumptions that lead students to make erroneous predictions. Students experience surprise at unexpected results, which motivates curiosity and encourages students to give weight and credibility to disciplinary concepts and models that explain these findings.
- **Practice the demonstration to ensure it works properly during class.**
- **Prepare students for the demonstration.** Observations are biased by preconceptions (Bransford & Johnson, 1972). Two observers of the same event will remember it differently if they experience the event with different frameworks and expectations (Holst & Pezdek, 1992). Don’t assume students will notice the details you notice or interpret the demonstration in the same way you do. Begin with an explanation that gives students the framework they need to focus their attention on the most relevant aspects of the
demonstration. Remind students about the relation between observations during the demonstration and the course material.

- If possible, make students predict the outcome before you conduct the demonstration.
- After the demonstration is finished, ask students to discuss the outcome and their observations with each other and the class as a whole.
- Reinforce the purpose of the demonstration with a debriefing discussion that identifies and explains the principles demonstrated. Explicitly connect the observations from the demonstration to course content and the learning goals for the activity. Use the curiosity elicited by a surprising outcome to focus attention on disciplinary explanations that are based on valid disciplinary assumptions and models rather than the naïve models students used when they made their initial prediction.
- Ask students to take a minute or two to write a reflection on the demonstration. What did they learn from this experience? What was the purpose of including this activity in the class? Reflective writing will reinforce student learning. These essays will also reveal areas that continue to confuse students, which instructors can use to refine the demonstration for use in future classes.

**Resources**


**Use Elements of Cognitive Constructivism to Design Effective Learning Activities**

The American Association for the Advancement of Science (2011) and others (Bransford et al., 2000) identify constructivism as a critical learning theory for the design of effective teaching methods. However, this term is often misunderstood and confused with concepts such as “social constructionism” (Hartle, Baviskar, & Smith, 2012).

Cognitive constructivism has four major characteristics. Learning activities become more effective when we include these elements in the design of the activity.

1. **Activate prior knowledge.** Learning activities should elicit prior knowledge and engage students cognitively and emotionally with the topic. New learning is retained better when it is connected with existing knowledge structures; both new knowledge and existing knowledge
is not active and students experience the new knowledge in isolation. Instructors should be able to observe and interpret student’s prior knowledge, including assumptions and misconceptions they might bring to the task. Select a meaningful activity that engages and motivates student interest; activities that only check whether students read the text or did their homework are not suitably engaging.

2. **Create surprise.** Create learning activities that reveal disconnects between prior knowledge and the demands of the current task. Sometimes prior knowledge is incomplete and students are unable to solve a problem without additional knowledge. Sometimes prior knowledge is incorrect (misconceptions and false assumptions) and obstructs problem solving. Learning is most effective when circumstances violate our expectations and predictions (a surprising outcome, new information contradicts prior knowledge or beliefs). When we confront discrepancies created by inadequate information or misconceptions, we experience emotional discomfort (dissonance) that can motivate learning. However, instructors must handle this component with care. Too little discomfort will not motivate students to learn; too much discomfort will direct attention away from the learning activity and toward other behaviors that will reduce or eliminate the discomfort.

3. **Apply and evaluate the new knowledge.** Students should apply the new learning to a variety of related problems and receive detailed formative feedback. These activities create opportunities to make any corrections needed. Repetition with a variety of problems provides practice and reinforcement for the learning. When possible, construct learning and practice tasks that provide self-correcting feedback as an integral part of the task. Tasks completed as a group frequently create opportunities for students to give effective feedback to their peers while completing the task.

4. **Include a closing reflective assignment.** Require students to reflect on their learning experience. Students frequently complete learning activities without recognizing what they gained from these activities beyond completing a required assignment. When students can articulate what they have learned and how a learning activity contributed to their learning, they become more motivated to engage in similar learning activities. At the close of a learning activity, ask students to explain what they learned, what they are now able to do, describe how they did it, and describe why the activity was important for their learning.

**Resources**


**To Post or Not to Post: What Are the Consequences of Posting PowerPoint Slides for Student Learning?**

What is the evidence about the impact of having a handout of PowerPoint slides during class presentations? Do instructors who proved the slides as handouts free students from the multitasking associated with copying information from the slides and allow them to concentrate on listening to the presentation and class discussion? Or does having a copy of the slides encourage students to skip class, allow them to surf the web during class, or otherwise disengage?
Marsh and Sink (2010) examined the content of notes students took during classes when they either had an advance copy of the presentation slides or only had blank paper for taking notes. They also examined student performance on several types of course exams (multiple choice questions, short answer questions, free recall essays). Although students took more notes when they did not have copies of the presentation slides, the notes they took consisted primarily of verbatim copies of the content of the slides presented during class. Both groups recorded additional information from the lecture and discussion that had not been included on the slides, but both groups of students recorded this additional information at equal rates.

What were the consequences for learning? Students who received a copy of the slides as handouts before attending the lecture performed better than students who took notes and received the slide handouts later when both groups were tested with short-answer questions. The groups performed equivalently on other types of questions. Thus, student’s claims that having a copy of the slides in advance helps them focus on the meaning of the lecture by reducing the time they spend recording specific slide content appears to be supported by evidence.

If you decide to post slides in advance, consider posting a bare-bones variant of the slides you plan to use in class. This handout will support note-taking without providing all the detail that might be included on class slides. This creates an incentive to attend class, provides a structure for organizing the notes, and forces students to attend to details included in the class slides and your presentation as they add these details to the notes on their handouts.

**Resources**


**Use PowerPoint to Prompt Engaging Learning Activities During Class**

Dilbert depicts PowerPoint presentations as a direct route to slumber and employee revolt. PowerPoint presentations need not be deadly. Instructors can create slides that prompt class activities that engage students, motivate meaningful class discussion, and promote deep learning (Berk, 2011).

Instructors commonly organize and plan the presentation of content while they create a set of PowerPoint slides. Consider creating slides to plan and prompt engaging learning activities at key points during a class presentation.

Instructors who use personal response systems (clickers) can add a slide that poses a question to evaluate student understanding of a critical concept or to ask students to apply a model or principle to a specific application. Allow students a moment to think individually or discuss the question in small groups before they record their response to the question with their clickers.
An instructor who does not use clickers can present a slide that poses a question as a prompt for small group discussion (e.g., as a pair-share activity) or a brief in-class written response to the question (e.g., a minute paper).

Share responses to the prompt with the entire class. If using clicker questions, display a chart summarizing the pattern of responses from the group. Otherwise, ask for a show of hands for typical responses or initiate a class discussion in which several groups report the consensus response from their discussion.

Wrap up the discussion and refocus attention on the content that triggered the activity.
- If common misconceptions about the critical concept emerge in the pattern of responses, spend some time defusing these misconceptions.
- If the prompt asked for application to a real world problem, discuss and evaluate the strengths and weaknesses of the applications proposed.
- If the prompt asked for opinions on a controversial topic, ask the class to discuss the strengths and weaknesses of the different positions that emerge.

Include no more than one or two of these engagement slides during a class session to engage student interest and focus attention on critical points for the day’s lesson.

**Resources**


Chapter 4
Improving Student Communication: Facilitating Class Discussions and Team Communication

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Chapter 4
Improving Student Communication: Facilitating Class Discussions and Team Communication

These tips address strategies for improving communication between students and between students and faculty. Topics include how to facilitate a productive class discussion through how to promote effective communication among students working collaboratively, either as members of a team or for peer feedback.

What Kinds of Questions Promote Meaningful Class Discussions?

Faculty ask students questions. We ask questions on exams and we ask questions in class. The kinds of questions instructors ask influence the quality of class discussion.

Questions asked during class serve four purposes (Blosser, 1975/2000):

- **Managerial questions** organize and guide class activities (*Does everyone have a copy of the handout?*). We use managerial questions to create structure and organize classroom tasks.

- **Rhetorical questions** emphasize a point or reinforce a concept (*We agreed at our last meeting that Smith’s theory posed several problems that require further research, correct?*). We use these questions to create transitions and don’t expect students to answer these questions.

- **Closed questions** have few options for answers. Usually only one response is a correct answer to the question (*What kind of chemical bond holds this molecule together?*). Closed questions assess current student understanding. We use these questions to determine whether students retained recent content knowledge well enough for us to build on a concept or move on to the next topic.

- **Open questions** elicit a range of relevant responses and do not have a single “correct” response (*Which of the following three businesses would be the best use for a parcel of land on Nine Mile Road and why?*). Students may answer open questions with opinions based on course principles (what defines “best use”), justify their choices with relevant evidence, apply theory to a specific example, or practice complex problem-solving skills used in the discipline. Open questions create conditions for extended discussion.
Although open questions have the greatest potential for stimulating lively class discussion, faculty seldom ask open questions during class. Ewing and Whittington (2007) found that only 13.4% of the questions instructors asked were open questions. Nearly half the questions instructors asked were managerial or rhetorical questions (45%) and 41.6% were closed questions.

Examine the kinds of questions you ask during class. If you want to promote thoughtful discussions during class, spend some time preparing open questions that require higher-level engagement with course concepts.

Lang (2008) suggests scaffolding a class discussion with a series of questions. Begin with a fact-based question to get students comfortable with answering questions. Then introduce students to questions that require students to apply concepts to practical problems that do not have an obvious solution or discuss the merits of alternative interpretations (e.g., competing interpretations of a novel in a literature class, competing diagnoses for a set of symptoms in a health-related class).

Good discussions require time. Give students time to reflect before they respond. Learn to endure at least 3-5 seconds of silence while students gather their thoughts. Some instructors give students a minute to write a response before inviting students to discuss or asking a specific student to answer the question. Blosser (1975/2000) reports that when instructors create a delay for thinking before they ask for the first student response, students engage in richer discussions. More students participate. They are more likely to include supporting evidence when they respond. Students are more likely to ask follow-up questions and engage in speculative thinking about course content.

If course goals emphasize higher-level cognitive skills (problem-solving, application of concepts), construct class discussions that require students to use these skills. Reinforce the value of complex in-class discussions by asking similar questions on exams. Students will value the in-class practice with complex questions if they encounter similar questions on course exams that require problem-solving and application. If course exams ask only fact-based memory retrieval questions, students will lose interest in class discussions that require higher-order skills and demand that their instructor spend more class time telling them the “facts” they need to know for the exam.

Resources


Use Response Cards to Facilitate Class Discussion of Sensitive Topics

Students may be reluctant to raise questions or express opinions during class discussion, especially if the discussion involves a sensitive topic and the student’s participation might entail stating a controversial or unpopular opinion, revealing unflattering personal information, or asking a question the student fears others might think is overly simplistic. Students can be engaged more fully in discussion if they can make contributions in a less public way.

First, ask students to write a brief response to a prompt for the discussion on an index card or sheet of paper. Students should not write their name on the index card. Remind students to write legibly because they will pass their card to other students.

Next, ask students to exchange cards with at least three different people. Multiple exchanges ensure that no student will know the author of the comment written on the index card they hold at the end of this activity. Most students will finish this activity with an index card written by another student.

Begin the discussion by asking several students to read the response to the prompt written on their current index card.

This strategy enables students to participate without raising concerns about appearing naïve or uninformed or feeling threatened by responses that reveal unflattering information about themselves. Initial contributions to the discussion that are based on the anonymous responses written on the index cards will open the discussion and encourage additional contributions. If discussion falters, ask students to review their index card and contribute responses related to any additional issues the class has not yet discussed.

Resources

Bergey, B. (n.d.) Making it stick: How to design engaging and effective learning activities. Workshop handout, Teaching & Learning Center, Temple University.


Peer Assessment of Team Skills

Team skills are highly valued but require experience working in groups to develop. Dysfunctional groups are the bane of instructors. Negative experiences with poor group dynamics motivate many students to dread group work and avoid it whenever possible.

One of the challenges associated with group work is managing and evaluating the quality of team skills and contributions of individual students. Because groups generally engage in class-related
activities independent of direct supervision, instructors can rarely make direct observations of the quality, consistency, and timeliness of individual contributions to group activities. Although team members have direct experience of their peers, they may be reluctant to provide feedback. Students may not be able to articulate the characteristics of effective team members. Poor understanding of team skills contributes to shortcomings as a team member and impairs the ability to accurately evaluate contributions of peers.

Both of these problems can be remedied with a rubric that clearly describes the expected contributions of team members. A rubric for evaluating team skills can be an effective way to clearly communicate expectations and provide guidelines to students about how they should behave as a team member. Descriptions of behaviors associated with acceptable and unacceptable levels of performance on specific dimensions of team skills enable students to engage in self-evaluation and accurately evaluate the contributions of group members.

Peer evaluations can help promote good team citizenship behavior in team members, especially if students receive the rubric when groups are created. Instructors can use the peer evaluations based on the rubric as a fair and effective method for evaluating individual students on team skills and contributions to the group project.

**Designing a rubric for peer assessment**

Instructors should be mindful of social dynamics evaluations when creating a peer evaluation rubric. Students are frequently reluctant to criticize their peers. They might not be confident in their expertise to evaluate another student’s performance or they might perceive requests for critical feedback as “ratting out” their friends and fellow students. Clear definitions and guidelines for completing the rubric are needed to offset student’s preference to rate every group member as above average.

Diane Baker (2008) offers two examples of rubrics that can be used to collect peer evaluations of student contributions to group work. She designed these rubrics to evaluate performance in team learning, in which group members work collaboratively on a series of course quizzes and other assignments. One rubric describes specific behaviors associated with nine dimensions of effective group work:

- Effort exerted for quiz preparation
- Grasp of material covered on quizzes
- Effort to contribute to group activities
- Commitment to high standards for group performance
- Facilitation of group discussion
- Performance as a group leader
- Contribution to resolution of conflict in the group
- Overall contribution to group work
- Overall contribution to group processes
Baker’s rubric describes four levels of quality in terms of specific, concrete behaviors that characterize performance on each dimension (except the final two global dimensions).

A shorter rubric describes ideal performance on four dimensions (preparation, participation and communication, promotion of group success, cooperation and team skills). Level of quality is defined in terms of the percentage of time a student engaged in the behaviors described for each dimension (over 90% of the time, more than half the time, less than half the time, never or once in a great while). Peer evaluations based on these rubrics achieved acceptable levels of inter-rater reliability and were positively correlated with other measures of student performance (Baker, 2008).

Depending on the type of projects and activities performed by groups, a rubric might include evaluation of performance on the following dimensions:

- Attendance at group meetings
- Dependability in meeting deadlines
- Quality of work submitted for the group project or activity
- Evaluation of effort or level of engagement (did the student carry his/her share of the work load?)
- Cooperation, effective communication with group members, and other social skills needed to promote effective group dynamics
- Contribution to management of conflict (promoting group coherence, assistance in resolving group conflict, minimizing destructive group dynamics)
- Evaluation of the quality of an individual’s knowledge and skills that contributed to successful implementation or completion of the group project
- Contributions to leadership of the group (structuring tasks, establishing goals, assigning tasks, monitoring progress)

Instructors can use a peer evaluation rubric to gather information from group members and use this information to determine individual student grades for team contributions or team skills. If the group engages in a series of assignments or completes several milestone assignments while completing a large project, instructors can ask students to complete the rubric at key points during the term: at the completion of specific group assignments or on reaching specific milestones on a large project. Multiple peer evaluations can be used for formative feedback and enable students to make mid-course corrections and improve their team skills over time. The multiple measures will also document student progress in improving their team skills.

**Defusing the Lake Wobegon effect**

Baker describes several strategies to encourage students to give valid feedback and make meaningful distinctions about the quality of contributions made by their peers.

- Create a rubric with behavioral anchors to describe criteria. A clear rubric provides students with concrete criteria that they can confidently apply to their observations and evaluation of peer contributions.
• Force students to make distinctions among group members. For example, ask students to assign a limited number of points to members of the group (e.g., 40 points allocated among 4 members of a team), forbid students from assigning the same score to all group members, or ask students to rank order group members on each dimension.
• Include an honor code statement on the evaluation form in which students attest to having carefully evaluated team members and assert that ratings accurately and fairly reflect the contribution of each team member.

Resources


Peer and Self-Evaluation of Participation in Discussion

We often focus on presentation skills as oral communication skills, but students more frequently need to either lead or contribute to productive group discussions. Small group discussions can easily go off the rails when students indulge in off-topic talking, inadequate listening, and disrespectful behavior. The dynamic quality of class discussion presents challenges to faculty who would like to hold students accountable for the quality of their participation in these discussions.

Multhaup (2008) describes how to prepare students for substantive class discussions and suggests two strategies for evaluating student contributions to class discussion. Many of these strategies can be adapted for the online environment.

Establish ground rules for effective class discussion (first week of class)
Establish expectations for class discussions by facilitating a think-pair-share activity during the first week of the term.
• **Think.** Ask students to reflect silently on the characteristics of great class discussions they’ve experienced and identify things that undermine a good discussion.
• **Pair.** Students discuss their thoughts in pairs (not naming any specific courses, professors, or students).
• **Share.** Bring the class together as a group and ask pairs to discuss the highlights of their discussion.

Use the comments from the group discussion to identify some ground rules and expectations for individual participation in class discussion during the remainder of the term.

Adaptation for eLearning: Create a threaded discussion based on questions such as
• What kinds of contributions to an online discussion make the thread worth reading?
• What kinds of contributions help you learn course concepts?
• What kinds of contributions are not helpful?
Peer evaluation of the quality of participation in discussion
Require students to complete a Participation Survey 3 or 4 times during the term. Each student must complete the following three evaluation elements for every student in the class, including themselves:

1. [Student name]: needs to talk more / talks about the right amount / needs to talk less
2. [Student name] 6-point rating of the quality of contributions to discussions (1 = unacceptable, added nothing to discussions, 6 = outstanding, comments in every class have been helpful)
3. Open-ended comment about the student’s role either as a discussion facilitator or participant

Compile the collective (anonymous) feedback for individual students and distribute this feedback to each student. If necessary, edit comments or add your own comments.

Adaptation for eLearning: Create a drop box assignment or survey in eLearning in which students answer these questions. You can make completion of the feedback a graded assignment (completed/not completed), compile the feedback information for individual students, and distribute this feedback through the course email function or provide it as feedback in the dropbox.

If you ask students to facilitate discussion, gather peer feedback about this skill
After each facilitated discussion, members of a discussion group complete a peer feedback survey for the discussion leader. The peer feedback answers the following questions:

1. I was prepared for the discussion (true/false)
2. The discussion leader was organized and prepared (6-point rating scale)
3. The discussion leader asked good questions (6-point rating scale)
4. The discussion/activity helped increase my understanding (6-point rating scale)
5. Describe one thing the discussion leader did well
6. What might the discussion leader have done differently to make the discussion better?
7. Other comments (optional)
8. Overall evaluation of today’s class (6-point rating scale)

Provide feedback several times during the term to enable students to improve their participation and discussion skills over time.

Resources

Improve Communication with International Students
International study presents students with multiple challenges. They must function in a new university in a country and culture that is new to them. In addition to adjusting to the culture of Pensacola (new foods, new customs), international students must adjust to the academic culture
at UWF, which may differ in many ways from their home institution. One of the most obvious challenges these students face is the challenge of functioning in English.

The International Student Office offers suggestions to help improve communications between faculty and international students:

- Communicating with anyone in their second language requires more time. Be patient.
- Speak slowly, clearly and evenly when speaking to an international student. A slower rate of speech gives speakers who are less fluent in English extra time to process language. Clear enunciation reduces perceptual errors.
- **Do not speak more loudly.** Increased volume does not improve comprehension and can be distracting.
- Avoid using slang, idiomatic and informal expressions (*It's on the tip of my tongue. I'm as happy as a clam. Once in a blue moon.*), and culture-laden metaphors and references (*This is the drop dead date for this assignment. This is a Seinfeld moment.*). International students will have fewer problems understanding formal English.
- Restate what the student says to you so he or she can correct miscommunications. Similarly, ask the student to rephrase what you say so you can also correct any miscommunication.
- If possible, communicate in writing. The student will have plenty of time to process your language and even consult a dictionary if needed.

Erin Stanley provided additional information on the challenges faced by international students and the challenges instructors might experience in helping international students adjust to the culture of academia in the United States. A PDF of this presentation is posted on the CUTLA web site on the **Responding to Student Issues** page: [http://uwf.edu/offices/cutla/supporting-pages/respond-to-student-issues/](http://uwf.edu/offices/cutla/supporting-pages/respond-to-student-issues/)

**International Student Challenges in the Classroom**

This tip is based on teaching strategy suggested by Rachel Errington and Erin Stanley, International Student Office.

**Strategies for Using Group Work in College Classes**

Are you interested in using group work but uncertain about how to manage this in a class? The Carl Wieman Science Education Initiative at the University of British Columbia created a short video on the use of group work. The video discusses several types of research-based best practices for group activities, how to manage group work to keep the focus on learning, interviews with instructors and students about their experiences with group work, and demonstrations of different types of group activity in classroom settings.

The 15-minute video can be viewed in two parts on YouTube. The link below also provides access to this video in Flash and QuickTime formats.
An interesting strategy illustrated in the second video is the use of tablet-sized white boards that students use during group work on computational problems. The tablets are 12” x 9” dry-erase boards that are large enough to allow students in a group to share their final diagram, written response, or problem solution with the rest of the class in a pair-share activity. Students can easily erase and revise their solutions to problems while they work together as a group, so they are less hesitant to begin work on problems.

Link to the Carl Wieman Science Education Initiative
http://www.cwsei.ubc.ca/resources/SEI_video.html
Chapter 5
Helping Students Develop Effective Study Strategies and Improve Metacognition

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Chapter 5
Helping Students Develop Effective Study Strategies and Improve Metacognition

As people learn and mature, they develop an understanding of how their memory and cognitive processes function. They learn to monitor and control how they learn new information, retain information in memory, and make decisions. Research on metacognition indicates that many college students have surprisingly poor insight into the most effective strategies for learning or for monitoring their progress while they acquire a new skill. This chapter collects tips that discuss strategies instructors can employ to help students improve their understanding of how they learn and choose more effective strategies for study.

Help Students Learn How to Learn: Create Assignments to Guide Student Practice with Meta-Cognition and Self-Regulation Skills

One of the greatest surprises for a new faculty member (and a repeated surprise for faculty accustomed to teaching advanced undergraduate and graduate students) is that many students do not approach learning with the same study skills and motivations we used as students. Faculty skillfully regulate their learning. We evaluate how well we understand new material, identify areas that we need to clarify, separate important information that we need to remember from other information presented in a reading or lecture, and determine when we have learned what we need to learn about a new topic. We evaluate the quality of our work and identify areas we need to improve (e.g., before we submit a manuscript for publication).

Some faculty learned these self-regulation and meta-cognitive skills implicitly and with little effort. Others had valuable mentors who modeled these skills and provided guidance and feedback.

Entering students might not have these skills. Worse, the methods of assessment they encountered in their pre-college experiences might have reinforced superficial learning. When these students enter university classes, they discover that old habits of cramming facts the night before an exam do not produce the results they expect when exams require more sophisticated learning than fact recognition.
Nilson (2013) describes multiple assignments and learning activities that can promote development of meta-cognitive skill and guide students toward habits that will help them monitor and regulate their learning. Reflective learning assignments should be short and low-stress for both students and instructors. Each assignment should contribute only a point or two and be easy to grade (usually pass/fail, competed/not completed).

Remember that students seldom do optional activities and those who choose to do optional activities are probably more advanced as self-regulated learners. Although the assignments should be required, which means they must be graded in some way, they are effective when assigned as low-stakes pass-fail learning activities. This approach creates a learning benefit for students while minimizing grading burdens for instructors. If you create an in-class reflective learning writing activity (less than 5 minutes), you can gather the papers and simply check that they were done and use them as evidence of attendance.

Explain the purpose of the assignments and describe the benefit they will have for students’ performance on higher-stakes assignments. Students will be more motivated to take these assignments seriously if they experience the connection between the skills they acquire through self-reflection assignments and increased success in other class learning activities.

Examples of reflective learning assignments:

- Create one or two questions on an assigned reading and ask students to prepare and submit a written response at the beginning of class. Do not simply ask for a paraphrase of content; ask students to identify something that puzzled them, identify the idea that interested them most, or describe how the ideas might be used to solve a problem students face in everyday life.
- Ask students to re-solve a problem they missed on a homework or exam or ask them to solve a similar problem. In addition to correcting their errors, they should describe the procedure they used to solve the problem correctly after seeing feedback on the incorrect solution in their first homework.
- When students receive a graded exam, ask them to reflect on their grade and the strategies they used when they studied. Did they receive the grade they expected or were they surprised? How did they prepare for the exam? Did they study enough? Did they study the right material? Where did they lose points? What might they do differently when they prepare for the next exam?

Nilson (2014) describes findings from a mathematics course that used three reflective learning assignments during the term. Students improved their performance on the final class exam, were more engaged with optional learning activities, and expressed appreciation for the reflective learning assignments.

**Resources**


Encourage a Growth Mindset to Help Students Improve Their Learning

Carol Dweck (2006) describes a fixed mindset as the belief that talent, intelligence, or other skills are static, enduring characteristics. The fixed ability mindset assumes that abilities can be assessed, but little can be done to change abilities. In contrast, a growth mindset is the belief that we can develop and improve our abilities. The growth mindset assumes that individuals will grow more expert with an ability if they engage in appropriate learning activities, receive effective formative feedback, and make an effort to learn from their experiences. A growth mindset appears to be more effective in promoting student behaviors that support student learning. These students are more likely to seek out and use formative feedback. They will exert more effort toward developing skills.

*How does mindset influence how students experience higher education?*

Students who are dominated by a fixed mindset believe that selection for programs and evaluation of ability are important components of the educational process. Students with a fixed mindset might believe that a major goal of their education is to identify those disciplines in which their skills allow them to excel and avoid disciplines in which they have limited ability. A student with a fixed mindset might believe that effort expended toward trying to learn skills in a discipline in which they are weak is a futile battle with inadequate talent. Students who believe that academic performance measures an unchangeable aptitude or ability may interpret weak performance as a sign that they lack ability and should give up. They may have difficulty getting motivated to expend effort toward learning new skills. Either you’ve got “it” or you don’t.

Dweck argues that individuals with a fixed mindset often describe individuals who work hard and spend extra effort to produces quality work as “overachievers” who compensate for a lack of “real talent” with extraordinary effort.

In contrast, individuals dominated by a growth mindset regard current ability as a product of an individual’s background, effort expended on practice, access to skilled coaches and mentors, and use of effective learning strategies. They regard ability as a fluid characteristic that can be altered with the right kinds of experience and adequate effort expended toward improving performance. Students with a growth mindset might believe that their performance is determined primarily by the quality of effort they expend and the appropriateness of the strategies they use to learn. They interpret weak performance as a sign that they did not exert enough effort or did not use an appropriate strategy for learning. They seek feedback that will identify alternative approaches that will enable them to perform better in the future.

*How to provide feedback to students to encourage a growth mindset*

Teachers can encourage students to adopt a growth mindset instead of a fixed mindset to encourage productive learning experiences. Students need feedback that will accurately calibrate their evaluation of the quality of their work. Feedback should also provide explicit, concrete information about specific behaviors and strategies students can adopt to develop their skill and improve future work. Feedback about the amount of effort the student expended helps reinforce the value of effort and practice to improve skill. Dr. Saundra McGuire (2014) suggests that faculty connect specific learning strategies with levels of Bloom’s taxonomy to help students see the connection between specific concrete activities and the quality of their learning. Contact the Center for University Teaching, Learning, and Assessment (CUTLA) to request a PDF of Dr.
McGuire’s handout for students that describes the relation between Bloom’s taxonomy and effective learning activities.

**Resources**


McGuire, S. Y. (October, 2014). *Get students to focus on learning instead of grades: Metacognition is the key!* Workshop presented at the University of West Florida.


**Providing Feedback to Motivate Student Learning: The Role of Beliefs About Teaching and Learning**

The beliefs instructors and students have about the nature of ability can have important consequences for the teaching strategies they adopt and their motivation to engage in effort to learn new skills. Carol Dweck (2006) describes a *fixed ability mindset* as the belief that ability (such as talent or intelligence) is a static, enduring characteristic of individuals. The *fixed ability mindset* assumes that abilities can be assessed, but little can be done to change abilities. In contrast, the *growth or developing ability mindset* is the belief that ability at any given point in time is subject to change and improvement. The *growth mindset* assumes that abilities develop and improve when a person engages in appropriate learning activities, receives effective formative feedback, and makes an effort to learn from these experiences.

**What are the implications of these mindsets for teaching and learning?**

Individuals dominated by a *fixed mindset* believe that evaluation of ability and selection based on ability are important components of the educational process. Teachers with a fixed mindset might believe that their role as a teacher is to identify talented students and encourage them to pursue advanced work in the discipline and encourage less talented students to consider other alternatives that are better suited to their existing abilities. Students with a fixed mindset might believe that a major goal of their education is to identify those disciplines in which their skills allow them to excel and avoid disciplines in which they have limited ability. A student with a fixed mindset might believe that effort expended toward trying to learn skills in a discipline in which they are weak is a futile battle with inadequate talent. These students tend to regard their performance as an indicator of their (unchangeable) ability. They interpret weak performance as a sign that they lack ability and should give up. Students with a fixed mindset may have difficulty getting motivated to expend much effort toward learning skills. Either you’ve *got it* or you don’t. Dweck notes that individuals with a fixed mindset often regard individuals who expend significant effort to achieve high levels of performance as “overachievers” who substitute effort for “real” talent.

In contrast, individuals dominated by a *growth mindset* regard abilities as a product of an individual’s background, experiences, effort expended toward acquiring new skills, access to
skilled coaches and mentors, and identification of effective strategies for learning. They regard ability as a fluid characteristic that can be altered with the right kinds of experience and adequate effort expended toward improving performance. Teachers with a growth mindset might believe that their role as a teacher is to identify and provide the kinds of experiences, learning strategies, and feedback students need to improve their skill. These teachers recognize that students might differ in terms which interventions will contribute most to skill improvement and suggest strategies that reflect the student’s current level of skill and the goals that motivate the student to exert effort toward developing skill. But these teachers believe that all students are capable of improving aspects of their performance. Students with a growth mindset might believe that their performance is determined primarily by the quality of effort they expend and the appropriateness of the strategies they use to learn. They interpret weak performance as a sign that they did not exert enough effort or used an inappropriate approach to the work. They seek feedback that will identify alternative approaches that will enable them to perform better in the future.

**Developing expertise in students**
The growth mindset is consistent with Ericsson’s work on the development of expertise (Ericsson & Charness, 1994; Ericsson, Krampe, & Tesch-Romer, 1993). Ericsson argues that expertise is not an automatic consequence of experience or time spent working in a field. Instead, expertise emerges following extended periods in which the individual engages in deliberate practice to improve the quality of performance. Deliberate practice differs on a variety of dimensions from mere repetition or time spent performing a skill. The learner must be motivated to attend to the practice tasks and exert effort to improve. The teacher or coach must provide effective feedback and create learning activities that engage students in progressively more challenging tasks as skill improves. Deliberate practice focuses the learner’s attention on areas of weakness and directs effort toward the development of new skills and strategies that improve performance. Tasks selected for deliberate practice are determined by the learner’s current level of knowledge and skill and must be designed to appropriately challenge the learner. In contrast, during other types of practice, the learner merely engages in activities that depend on skills the learner has already mastered. Deliberate practice creates challenges and demands acquisition of new skill whereas routine practice merely maintains existing levels of performance.

Although this essay depicts the fixed and growth mindsets as discrete dichotomies, Dweck proposes that individuals are inconsistent in their adherence to either belief. An individual might hold a growth mindset about language acquisition and a fixed mindset about artistic talent or personality traits. More importantly, Dweck argues that people can learn to apply either mindset toward their learning and ability in a given domain.

**Implications of mindsets for feedback on student work**
If a teacher can encourage students to adopt one mindset instead of another, which mindset would lead to more productive learning experiences? Given that students who adopt a growth mindset are more strongly motivated to seek and use formative feedback and exert effort toward developing new skills, a growth mindset appears to be more effective in promoting new learning. Dweck discusses the types of feedback that encourage adoption of either a fixed mindset or a growth mindset. Students need feedback that will accurately calibrate their evaluation of the quality of their work. However, feedback that focuses entirely on the evaluation of existing skill encourages a fixed mindset. In contrast, feedback that also includes an evaluation of the effort
the student expended and provides explicit information about additional strategies that could improve future efforts encourages a growth mindset. Should students be encouraged to select “safe” projects that they can confidently perform without error? Should students be encouraged to take a risk on a project that will stretch their skill but might not work out as planned? Evaluation of student work that includes a feedback element that reflects these decisions as well as overall quality of the learning manifested in the work produced encourages students to adopt a growth mindset.

Resources


Why Students Don’t Read: Strategies to Increase Student Preparation for Class

A “flipped” class requires students to read assigned materials and complete other assigned work that prepares them to apply new learning during in-class activities that promote deep learning of course content and skills. Instructors can assign readings, but what if students do not complete these readings before coming to class?

Hoeft (2012) reports that 56%-68% of students in a first-year class reported that they did not read assigned material before class. The most common reasons students give to explain why they did not read assigned materials are the following:

- They had too much to read.
- Their work schedule does not allow enough time for extensive reading.
- Their social life leaves little time for reading.

Students who say that they read the assigned materials usually said that they were motivated to complete reading assignments because they were concerned about grades.

Students who say that they did not complete assigned readings suggested that instructors might increase the number of students who read assigned material if they

- give quizzes on the assigned readings,
- assign supplementary graded work based on the readings to help them focus, and
- make the assigned readings interesting.
Hoeft tried each strategy in one of three different courses. She found that reading quizzes and supplementary graded work successfully motivated students to complete assigned reading (74% of students in a course that used reading quizzes; 95% of students in a course that used an assigned, graded reading journal). Although more students reported reading when the journal assignment was used as a motivator, an independent measure of reading comprehension indicated that quizzes improved comprehension more than the journal assignment. Students in the reading journal assignment class appeared to read superficially, skimming the readings to find answers to questions included in the assignment; students in the reading quiz class appeared to read more deeply because the reading quizzes tapped reading content in less predictable ways than did the journal assignments.

Instructors can implement reading quizzes by creating self-grading quizzes in eLearning as graded assignments. Close access to the quizzes on the due date for the assigned reading to motivate students to complete the reading before class sessions. Alternatively, some instructors implement reading quizzes in the first 5 minutes of the class meeting (perhaps as clicker questions). If completed during class, the reading quizzes also serve to motivate students to attend class and participate in planned learning activities.

**Resources**


**Five Concrete Strategies That Help Students “Study Better”**

A student comes to your office with his most recent class exam. He is not happy. He says he “studied hard” for this exam. He thought he knew the material. How can he do better on the next exam?

What advice can you give this student? Study more? Study harder? Do students understand how to “study harder”?

Fortunately, Stephen Chew (2010) describes five concrete study strategies we can suggest to students who want to improve. All of these strategies are based on substantial bodies of memory research on how humans encode, retain, and recall information over long periods of time.

1. **Elaborate on new information – connect it to prior knowledge.** We quickly forget isolated facts. If students want to retain new information they must connect it to information they already know. They should connect new ideas to ideas they learned in previous lectures, readings, and related courses. When we think about the material in different ways and connect it to many concepts and contexts, we create multiple paths for retrieving the information. If we only think about information in one way, we have only one way to remember it. If we create multiple retrieval paths, one retrieval path might fail but a different path might work and allow us to recall the information.
2. **Make new information distinctive.** We notice differences and remember things that stand out. Students should discover ways to make new information distinctive. What makes this new concept different from other concepts discussed in this class? What is unique about this new information?

3. **Make the information personal.** Students should connect the new information to personal experience. They might think about how they can apply the information to a problem or experience in their everyday life. They should find examples from their daily experience that illustrate how the new concept operates or how it explains why an event occurs.

4. **Practice retrieving the information and apply it to a new problem.** Students often “study” by reading and re-reading material without thinking about it in new ways. Most students recognize the value of self-testing to determine if they have “studied enough.” But self-testing serves a more important purpose. Unlike re-reading, self-testing gives students practice at retrieving new information. Each time a student retrieves his/her ID number, they strengthen their memory for their ID number. Self-testing has the same benefit. Repeated testing improves the strength of retrieval paths for the new information.

5. **Practice using the information in the ways you will use it on the test.** Students need to understand the expectations for learning and practice the skills they will use when they take an exam or complete an assignment. Study strategies must match the activities required when students complete graded assignments. A student who reads the text, memorizes definitions of bolded terms in the text, and self-tests on these definitions will not do well if the exam contains many questions that require the student to solve problems, apply concepts to specific situations, or make predictions about the outcome of an experiment based on a specific model.

**Resources**


**Short Video Guides for Students on Effective Study Strategies**

College students frequently waste time using ineffective study strategies because they are unaware of which strategies are effective or don’t retain the suggestions for effective study provided by their instructors. Stephen Chew, a cognitive psychologist at Samford University, created a series of 5 short YouTube videos that describe effective study strategies and explain why these strategies produce learning that lasts.

In each video, Chew provides context and defines terms so that an instructor can direct students to an individual video for good advice on studying. However, because each video builds on concepts explained in detail in earlier videos, the greatest benefit will be gained by asking students to view all of the videos in sequence. The following annotated guide to the five videos is based on descriptions provided by Stephen Chew.
Video Guide: How to Study Long and Hard and Still Fail…or How to Get the Most Out of Studying

The overall theme of the videos communicates two important ideas. First, students who use ineffective or inefficient ways of studying will discover that they study long and hard and still fail. Second, students who use effective strategies will get the most learning out of their study time and will be more likely to succeed.

Video 1: Beliefs That Make You Fail…Or Succeed
Chew examines common mistaken beliefs students often possess that undermine their learning. The video tries to correct those misconceptions with accurate beliefs about learning.
http://www.youtube.com/watch?v=RH95h36NChI

Video 2: What Students Should Understand About How People Learn
Chew introduces a simple but powerful theory of memory, Levels of Processing, that explains why some strategies are more beneficial than others for learning. Application of the Levels of Processing model when selecting study strategies can help students improve their study.
http://www.youtube.com/watch?v=9O7y7XE66M

Video 3: Cognitive Principles for Optimizing Learning
Chew operationalizes the concept of level of processing into four principles that students can use to develop effective study strategies.
http://www.youtube.com/watch?v=1xeHh5DnCIw

Video 4: Putting the Principles for Optimizing Learning into Practice
Chew applies the principles of deep processing to common study situations. Chew describes the conditions in which the student’s method for taking notes in class or highlighting text while reading corresponds to either shallow or deep processing, with predictable consequences for quality of learning.
http://www.youtube.com/watch?v=E9GrOxhYZdQ

Video 5: I Blew the Exam, Now What?
Chew addresses what students should and should not do when they earn a bad grade on an exam.
http://www.youtube.com/watch?v=-QVRiMkdRsU

The first four videos are based on a presentation Stephen Chew makes to freshmen at Samford, which he described in a publication of the Association for Psychological Science Observer (2010).

Resources

Available at the following URL:
Chapter 6
Student Writing

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Chapter 6
Student Writing

If you include writing assignments in your class, you will be familiar with the challenges of teaching students to write clearly and to use professional language and conventions when they write. The tips in this chapter describe how to design writing assignments, provide useful feedback to improve writing, teach students ethical authorship practices, and help students learn to edit their own writing and provide effective feedback to a peer.

Develop Student Writing as a Critical Skill for Professional Success

Writing permeates the professional life of the academic community. We write to inform colleagues of our discoveries. Our scholarly reputations depend on our publications. We write grant proposals to obtain funding for our scholarly efforts. We write exams, handouts, and syllabi to teach and evaluate our students. We write bylaws, policies, and minutes to manage day-to-day university functions.

No one doubts that academics value writing skills. You might be surprised that the business world also regards writing as an essential skill. Human resource directors from 64 corporations associated with the Business Roundtable (an association of leading U.S. corporations in manufacturing, finance, services, and high technology) described writing as a “threshold skill” for employment and promotion (National Commission on Writing, 2004). Nearly all respondents described email as a writing task expected of all employees. Over 75% expected employees to make oral presentations with visual aids (such as PowerPoint). Between 59% and 70% expected employees to produce technical reports, formal reports, and memos and correspondence.

Academic programs at the University of West Florida support these employer expectations for writing skills in several ways. The General Education curriculum and every set of learning outcomes for undergraduate and graduate programs include student learning outcomes that describe the ability to create clear, professional prose. Communication skills are the focus of the new Quality Enhancement Plan (Communication for Professional Success), which includes both speaking and writing under the umbrella of communication. All QEP projects will generate direct measures of student skill in writing or speaking based on a common rubric.

Consider using the QEP rubric to set expectations for writing quality, give students feedback, and evaluate writing quality when you assign writing in your class. You can use the entire rubric or you can select elements that are relevant to the writing goals for your assignment. Use these elements as part of a larger rubric that helps you evaluate other goals and expectations for the assignment.
Resources


UWF Quality Enhancement Plan: Communication for Professional Success

The writing rubric can be downloaded from this page. The link is located in the QEP Resources box just below the QEP proposal on the home page:
http://uwf.edu/offices/quality-enhancement/resource-toolkit/articles--books/

Develop Critical Thinking Skills through Journal Writing

David Hogsette, Associate Professor, English and Francine Glazer, Assistant Provost & Director, Center for Teaching & Learning, New York Institute of Technology

Sound critical thinking involves understanding points of view, evaluating positions, and then establishing a critical position. Students need multiple opportunities to practice critical thinking skills and receive feedback to guide improvement. Create a set of written journal assignments that develop the following three goals for student learning related to critical thinking.

Goal 1: Paraphrase what was said

Encourage students to listen to ideas, examine views carefully, gather information, and understand the various points of view on their own terms without immediately judging the merits of the positions. This step involves a willingness to be open-minded and to understand what is being said, how it is being said, and why it is asserted. Teach students how to identify key elements of a logical statement, the principles and assumptions informing the positions, and the evidence used to support the points of view stated in a written work.

Goal 2: Evaluate what was said

The next step requires that students critically evaluate the legitimacy of the arguments advanced in a written work. Students should examine the following elements of the argument:

- **Logical consistency.** Does the author’s position make logical sense? Did the author commit logical or emotional fallacies? Is the author’s position self-defeating? Are principles and assumptions adequate to sustain the point of view?

- **Empirical adequacy.** Does the author provide sufficient evidence to support the claims? Does the author present evidence accurately and use evidence appropriately? Did the author avoid or ignore known evidence that contradicts the claims?

- **Existential relevance.** Does the author’s position make sense to real-world experience? Can the author’s proposals be reasonably implemented in a real world setting?

Students who complete all three parts of this analysis should have developed enough material to present a sound evaluation of the strengths and weaknesses of the author’s position.
Goal 3: Establish a position on the topic
After completing the first two steps, students should be sufficiently prepared to establish, explain, and defend their own position. Students frequently offer statements such as “Well, it is just my opinion,” “These are my beliefs,” or “How can anyone question how I feel?” If students assume that all opinions and positions have equal value (Perry, 1970/1999), they might also believe they should not be required to defend or explain their position or, worse, argue that no one has the right to challenge their positions and views. However, sound critical thinking requires that students move beyond personal opinions and support their arguments with clear logic, accurate descriptions of reliable evidence and relevant experience.

Create opportunities for students to practice critical thinking skills with journal writing assignments
It can be challenging for students to learn these essential steps to effective critical thinking. Students need to practice these skills in multiple contexts so that they can understand how to think critically in academic, professional, and personal contexts.

A critical thinking journal assignment can be adapted to a first-year writing class, applied in core courses/seminars, and assigned in major program courses.

Example of a critical thinking journal assignment
The following example of a critical thinking journal assignment is based on a core literature seminar.

Reading assignment. The instructor assigns a scholarly article that relates to the literature read in the course (in this example, a novel).

Journal assignment. Students write a 500-600 word journal entry in which they
· State the main focus or purpose of the article
· Summarize one key point or argument the student finds interesting
· Explain why the student finds it interesting
· Discuss one example from the literature read (in this example, the novel assigned) that illustrates this idea
· Explain the extent to which the student agrees or disagrees with the author’s main point.

This journal assignment encourages students to practice three key phases of critical thinking:
· Understanding (summarize a key point)
· Evaluating arguments (discuss to what extent the student agrees and disagrees and why)
· Establishing a position (in this example, explain how the assigned article helped the student understand the novel more clearly).

Ideally, a course will include 4-5 such assignments that allow students to engage in critical thinking and practice their writing skills. The example above illustrates the general pattern for a critical thinking journal assignment. Each journal assignment should be slightly different. Faculty should provide feedback on each journal entry before the next assignment is due to engage the students and enable them to improve their work.
**Resources**


**Encourage Students to Evaluate the Quality of Information Sources**

Students are notorious procrastinators. Assigning an annotated bibliography early in the term helps students structure their time. For example, if we expect students to cite primary sources in a literature review paper, students who delay locating sources might scramble to locate the required number of sources and cite sources of marginal relevance.

The annotated bibliography can encourage students to evaluate the quality of sources located in a database if we require students to locate a larger number of scholarly sources than we require the students to cite in the final paper. The annotated bibliography assignment might require each student to identify 2-3 sources they located in a database search that they thought would be useful but decided were not relevant or not useful. Ask students to explain in their annotations why a rejected source looked promising at first but was ultimately rejected.

When students identify and examine more materials than they are required to include in the final submission, they can break away from the habit of including every remotely relevant source they locate to meet minimum citation requirements for an assignment. Students can then begin to evaluate the merit of materials as cited sources. Students need practice making these decisions to build their information literacy skills in the analysis and evaluation of evidence.

**Help Students Develop Paraphrasing Skills to Help Deter Plagiarism**

Although many discussions of academic integrity and plagiarism focus on failures in ethical reasoning, student problems with good authorship practices are often motivated by weaknesses in reading comprehension or skill in writing paraphrases (e.g., Roig, 2007). Students frequently have problems paraphrasing ideas from primary sources because their understanding of the original work is weak. Sometimes these problems manifest as an over-reliance on quotations. The student who has difficulty paraphrasing might string together quoted material to create a paper and contribute few, if any, thoughts stated in the student’s own language. Some students may attempt to disguise their reliance on quoted material by omitting the quotation marks (and, even worse, omitting a citation) and then discover they are now charged with plagiarism.
Use an in-class reading and paraphrasing activity to promote comprehension of source material and good authorship practices

- Assign a brief source passage for students to read and then write a one paragraph summary in which they describe or paraphrase an idea or argument presented by the author of the reading. If you think this part of the activity will take too much time, assign this in advance and require students to bring their written paragraphs to class.
- Use a pair-share activity in which students share their one-paragraph paraphrases with one another and evaluate how accurately they describe the original idea or argument and how well they use original language when writing their description.
- After discussing their paragraphs in small groups, ask the students to draft an accurate paraphrase of the original passage as a group. Describe the methods used in your discipline for providing a citation for the original passage and include an appropriate citation in the draft created by the class.

This exercise will give students practice in writing appropriate paraphrases. It will also serve as an immediate source of feedback about how well they understood the original passage and the concepts discussed. When the class develops a paraphrase that is both accurate and original, misunderstandings of the original ideas will be clarified and corrected. The class will also get direct practice with good authorship practices.


**Resources**


**Teach Students to Write Readable Sentences**

Do your students struggle to write about technical topics in clear language? The Northwestern University Collaborative Learning and Integrated Mentoring in the Biosciences (CLIMB) initiative created a set of video tutorials on professional writing in STEM (Science, Technology, Engineering, and Math). Although the video is directed at a STEM audience and uses writing examples drawn from STEM texts, the five principles will improve writing clarity in all disciplines.

The *Five Principles for Readable Sentences* video describes strategies authors can use to write clearly about complex technical topics. The video defines each principle and illustrates how the principle can be used to edit writing and improve clarity. The video presents examples of scientific texts that violate each principle followed by an edited text that shows how clarity improves when writers apply the principle. The video is short enough (less than 15 minutes) to assign as a short tutorial.
Five principles for clear scientific writing described in the Five Principles video:

- **Given before new.** Begin sentences with information we expect the reader to already know (given information) followed by information that is new. This strategy reflects a communication principle known as common ground, which describes how speakers develop common reference points and use shared knowledge to support meaningful conversations (Clark & Wilkes-Gibbs, 1986; Haviland & Clark, 1974). A sentence should begin with established or old information, which creates a context that helps readers understand the new information. When writing a paragraph, discuss old information before introducing new information. Create clear connections between the new concepts and the old information you discussed.

- **Light to heavy.** Structure sentences to move the reader from light, easy-to-understand information to more difficult or more complex (heavy) information. Begin sentences with easy concepts that establish context for understanding the complex concepts you plan to introduce later.

- **Transitions.** Transition words improve the flow of language because they help readers follow the logical structure of your argument. Choose transition words carefully. Transition words serve as signposts for readers. They should clearly indicate how the ideas they connect are related. Transition words may describe sequences, connect causes with effects, or signal presentation of an example, making a comparison, drawing a contrast, reaching a conclusion, or making a summary (for example identifies the new information as supporting evidence; however implies that the new information will describe a contrast or an exception to the old information).

- **Echo words.** Consistent word use improves readability. Echo words appear repeatedly and always refer to the same thing. Some writing guides suggest that we vary word choice to add interest, but this strategy can backfire in technical writing. Technical writers choose different words to refer to similar but distinct concepts. Their intent is to use a different word for each concept to highlight the differences in meaning. An author who creates variety by using different words for the same concept introduces confusion. The reader must work to figure out if the author introduced a new word to add variety and interest or if the new word describes a new concept. In technical writing, if you intend to refer to the same concept multiple times, be consistent and use the same word each time you write about the concept.

- **Write in the active voice.** Express actions as verbs in sentences using the active voice. When we write sentences in the passive voice, the text is more difficult to understand. The passive voice forces us to turn the verb for an action into a noun (nominalizations). For example, we can use a verb (introduce) and write in the active voice (He introduced a concept in the first class) or we can turn the verb into a noun (introduction) and write the sentence in the passive voice (Introduction of a concept occurred in the first class). The second sentence is more difficult to understand and less interesting to read.

**Resources**


**Increase the Impact of Learning Activities: Write Prompts That Set Expectations for a Substantive Reflection on the Activity**

Do students fully understand the relation between the learning activities we create and course content? Many instructors ask students to write a reflection on a learning activity to focus attention on the connection between experience and course content. However, the prompt for the reflective essay can transform an activity that students enjoy into an activity that engages students in a meaningful way and promotes student learning.

Students often treat reflective essays and discussion threads as “busy work.” When we ask them to reflect on an experience, they believe we only expect them to describe what they did or felt during the activity, state their personal opinions, or express their satisfaction with the activity (or vent their dissatisfaction). Reflective essays written to these expectations seldom produce deep discussions or improve learning.

Patti Clayton describes a model for writing prompts for critical reflection that structure the essays to set expectations for substantive engagement with course ideas and promote deep learning. The DEAL model identifies three major components of an in-depth reflective essay: Description, Examination/Evaluation, and Articulation of one’s Learning.

Without direction, most students write shallow reflective essays that address only the first component of the DEAL model. If we want students to reflect on an experience and connect it to significant learning goals, they must address all three components in their reflective essays. Clayton argues that faculty can reclaim reflective essays as substantive, critical analyses of class learning activities by creating question prompts that include the following elements:

- **Describe the experience** in detail and without making judgments. Present the “facts” of the experience: where it happened, when it happened, who participated, what was done, what was learned.
- **Examine the experience** and **evaluate** the behaviors and outcomes experienced. Support the evaluations with **evidence** based on course content (readings, lecture). Make judgments about choices and decisions made during the activity. Describe the consequences of decisions made and actions taken. Students must provide discipline-specific evidence for the judgments and evaluations they make about the activity. Personal opinions and personal preferences are not acceptable as evidence or as justification of evaluations about the value of the learning activity.
• **Articulate** the **Learning** that occurred as a result of the experience. Require a closing section in which students describe specific aspects of the experience that enabled them to learn specific things, explain why what they learned from the experience is important, or describe specific consequences of their learning (changes in attitude, behavior, etc.).

**Resources**


**Use Online Writing Diagnostics to Develop Self-Editing Skills and Improve Writing**

Because few academics receive formal training in how to write for their discipline, they might avoid attempting to teach their students to write. If faculty or student writers search for models of writing in published articles, they will encounter few examples worth emulating. Sword (2012) evaluated the prose of 1,000 articles (100 articles from each of 10 disciplines: medicine, evolutionary biology, computer science, higher education, psychology, anthropology, law, philosophy, history, and literary studies). All articles appeared in well-regarded peer-reviewed journals with high impact factor ratings. Sword found examples in every discipline in which writers engaged readers and wrote persuasive, compelling arguments in clear prose. She also found many examples of dense, jargon-laden, impenetrable prose.

*Stylish academic writing* provides good advice to faculty writers who hope to refine their scholarly prose. The book is written for professional academic writers, but graduate student writers can benefit from this advice. Sword hosts a free, online writing diagnostic (the WritersDiet Test). You can submit a sample of up to 1,000 words of text and receive feedback on whether your writing is *fit and lean* or *flabby*. The diagnostic will not identify errors in grammar. Instead, it rates five categories of language use: verbs, nouns, prepositions, waste words (it, this, that, there), and adjectives and adverbs. Use the feedback to reflect on and edit your writing.

**Use the WritersDiet Test to improve student writing**

Use the WritersDiet Test to help students improve and edit their writing. Sword (nd) advises instructors to assign a short assignment (2 or 3 paragraphs with at least 300 words) to give students practice with self-editing skills. Discuss how students should interpret the diagnostic feedback. Ask them to edit and resubmit their assignment to the WritersDiet Test and include copies of the diagnostic feedback from both diagnostic evaluations when they submit their final assignment for grading. You might require students to write a short reflection about what they learned about writing by using the WritersDiet Test.
Resources


Sword, H. (nd). Teaching with the Writer’s Diet. [PDF file]
http://writersdiet.com/Teaching%20with%20the%20Writer's%20Diet.pdf
Chapter 7
Grading and Evaluating Student Learning

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Grading student work consumes time and creates stress, both for students and instructors. Tips in this chapter describe strategies for how to evaluate student learning and give students useful feedback. Topics include test construction, how to create and use a rubric, effective clicker questions for in-class quizzes and discussion prompts.

Use a Rubric to Evaluate Class Participation

George Kuh (2008) and Carol Twigg (2003) note that “students don’t do optional.” If we know an activity or study strategy is effective, they propose that we should encourage students to use it by making the activity mandatory. Unfortunately for us, this usually means we grade the activity in some way.

Students who prepare for class and actively participate in discussion are more engaged and learn more, but grading participation can be a challenge. Many instructors include class participation as a graded element but have difficulty evaluating student participation. Simply recording attendance or counting how often students contribute to discussion or ask a question during class feels superficial. Worse, this system can misfire and create unintended problems. If we reward all contributions without evaluating whether contributions advance the discussion, the quality of discussion might degrade because students attempt to earn points for “participation” by asking trivial questions or making uninformed or off-topic comments.

A rubric that describes appropriate preparation and participation behavior provides clear guidelines to students about participation expectations. Provide periodic feedback based on the rubric during the term (once every 3 or 4 weeks works well). The feedback tells students you take meaningful class participation seriously and students can use the feedback to improve their in-class contributions. Finally, participation rubric scores serve as an unambiguous method for determining a participation grade.

An example of a rubric that I developed and used in a small seminar is included as appendix material at the end of this chapter. The rubric includes evaluation of the quality of the student’s preparation for class discussion, the substance of contributions made to discussion, and aspects of general class citizenship (listening skills, responding to other students with respect, promoting on-topic discussion).
I share this rubric with students during the first week of the class and provide feedback to them about once a month during the term, with a final evaluation at the end of the term. The rubric allows me to give students regular feedback based on a period of observation I can recall accurately. The first time I provide feedback on class discussion, the students initiate a useful discussion about my expectations for participation. I note an improvement in the quality of discussion following this initial feedback that persists through the remainder of the term. Students appreciate the opportunity to improve the quality of their participation across the term. Since using this rubric, students in my class now initiate actions to keep discussions on track and will refer to the rubric when they respond to another student whose off-topic comments threaten to send the discussion off the rails (yes, the rubric rewards students for contributions that keep the discussion focused).

Examples of rubrics for a variety of assignments and projects, including my rubric for class participation, are posted on the CUTLA web site.

**Resources**


**How Many Levels of Quality Should We Represent in a Rubric?**

Horror vacui. *Aristotle*

Aristotle may or may be right when he said *nature abhors a vacuum*, but when we create a rubric, academics loathe leaving cells empty.

Problems arise when a rubric contains many quality levels, creating empty cells that demand descriptive language:

- We have difficulty writing unambiguous descriptions of quality for rubrics with 4 or more levels. Rubrics with many levels introduce fine-grain distinctions that we cannot describe clearly. With ambiguous definitions, we have difficulty making consistent decisions.
- Some characteristics of student work are best described and evaluated with 2 or 3 levels (thesis statement included / not included; problem solved accurately / problem solved with minor technical errors / problem not solved).
- Complex rubrics create the risk that reviewers ignore the language used to define levels of quality and instead use unwritten assumptions when they evaluate work. A rubric based on five levels of quality is especially vulnerable; reviewers might adopt a mental shortcut in which 5 represents A-level work, 4 represents B-level work, etc. Other reviewers might rely on the descriptive language to make decisions. If both reviewers are
grading the same work, the reviewers will disagree and the first reviewer might use the rubric inconsistently.

Humphry and Heldsinger (2014) reported that reviewers’ judgments can be influenced by the structure of the rubric. A typical rubric creates the same number of quality levels for every criterion element in the rubric. When using these rubrics, reviewers tended to make global judgments about student papers and assign similar ratings for each element in the rubric. Thus, if a student scores in the top category on one element, the student is likely to receive scores in the top category on all other elements, even when performance across elements is uneven.

In contrast, reviewers who make decisions based on the element descriptions are more likely to assign different ratings for different elements, revealing patterns of strength and weakness in student performance. A rubric that uses different numbers of quality levels for different criteria focuses reviewer attention on the descriptive language and improves consistency. For example, a rubric might describe 5 levels of quality to describe the use of evidence to build and support an argument but use only 3 levels of quality to describe the use of mechanics of language (significant errors that interfere with readability or communication, occasional errors that do not interfere with readability or communication, no errors or minor errors, mostly related to lapses in proofreading). Reviewers who used rubrics with varying numbers of quality for different criteria were more likely to make independent decisions about each criterion (Humphry & Heldsinger, 2014).

Consider the merits of a rubric that (gasp) has some empty cells and uses 4 or 5 levels of quality to evaluate some components of student work and uses 2 or 3 levels of quality to evaluate other components. If the empty cells bother you or your students, fill them with a grey shading to let everyone know you intended them to be blank. Nilson (2014) describes rubrics with only 2 levels in which each element aligns with competency on a specific student learning outcome.

Whether you use the same number of levels for all elements in a rubric or allow these to vary, pay attention to how you combine rubric elements to generate the final grade for the assignment. Make sure that scores on the most important elements contribute most to the final grade. Rubrics that include many elements (even 2 or 3 level elements) for minor details that are easy to evaluate can come to dominate the total score. If you want the content of a literature review paper to determine 30% of the grade, ensure that it contributes 30% of the possible points to the final score. Use multipliers for a rubric element to increase the contribution of critical elements to the final score.

If the rubric generates data for assessment purposes, keep a record of the scores students earn on each element. These individual element scores are critical for identifying areas of strength and weakness in student work. For example, students may earn high scores on an element that evaluates how accurately students describe content of the literature they review, but they may earn lower scores on how well they interpret and apply that content to analysing a problem or building an argument.
Resources


Use a Common Error Code Sheet to Give Students Quality Feedback on Their Writing

Improving student writing can be a daunting task. If we hope to help students become better writers, we need to give them specific and diagnostic feedback about their writing problems. Students need a reliable resource that will explain appropriate usage and specific examples that illustrate how they can correct problems in their writing. In addition, students need opportunities to apply this new information to correct their own writing.

Design a sequence of writing assignments that require students to submit multiple drafts as milestone assignments and build to produce a larger, final writing project. A series of interlinked assignments creates opportunities for students to practice and improve their writing. Multiple writing assignments improve student writing most when students receive meaningful feedback and get guidance on how to correct their writing errors in future assignments. Writing well requires writing often and re-writing in response to formative feedback. However, large enrollment classes create obstacles for instructors who would like to provide opportunities for their students to write frequently, obtain feedback, and use feedback to improve writing.

To reduce the burden of writing extensive feedback on student papers, instructors can use a code sheet that lists common writing errors. Instead of writing long marginal notes on student papers, instructors can write a short code as a marginal note and give students a handout that identifies the writing problem denoted by each code. Hardison (2013) describes a writing feedback sheet he created that that identifies 36 common writing problems with a 1-3 character code, describes the writing problem, and provides students with a link to a relevant instructional resource hosted on the Purdue OWL site.

The Online Writing Lab at Purdue University (the Purdue OWL, [https://owl.english.purdue.edu/owl/](https://owl.english.purdue.edu/owl/)) provides writing instruction, guidelines on a variety of academic editorial styles (APA, MLA), and other writing resources. These materials are openly available to all users. The instructional materials are useful for writers at all levels of skill. Novice writers will find resources on fundamentals of grammar and punctuation. Advanced writers will find detailed information about disciplinary editorial style and guidelines for academic writing in specific disciplines (technical writing; writing in the social sciences, medicine, nursing, engineering, or mathematics; creative writing, writing for journalism). The site grants permission to instructors to use Perdue OWL materials for in-class and out-of-class instruction.
You can find a link to John Hardison’s code sheet (available as a google spreadsheet) in his blog post.

Thanks to Kristie Abston, Ph.D., SPHR, Assistant Professor of Management, University of West Florida for sharing her writing feedback code sheet and contributing to this tip.

**Resources**


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**Write Exam Questions That Create “Desirable Difficulties” To Improve Long-Term Learning**

Desirable difficulties (Bjork, 1994) represent challenges students encounter during learning that may slow down progress in learning but produce large long-term benefits. For example, students who study in short sessions distributed across days and weeks require more time in advance of an exam to learn new material. The rate of learning may seem slow to students who distribute their practice, especially if they forget some material between sessions. In contrast, students who cram the night before an exam may believe they learned a large amount of material in a short time. Students who cram can earn a high score on an immediate test. However, the students who distribute their study will outperform students who cram when the test is delayed by as little as two weeks. Thus, some learning conditions (cramming) produce rapid changes in performance but do not produce long-term learning. Other learning conditions (distributed study) slow down initial acquisition but produce learning that endures.

**Why is difficulty desirable?**

The “Goldilocks Principle” describes the conditions that are “just right” for a planet to support life. Earth is a “Goldilocks” planet because it is neither too close to the sun (too hot) nor too far away (too cold); the temperature is “just right” for life to survive and thrive. Similarly, researchers argue that we need to find the conditions that are “just right” for learning. Vygotsky (1978) called this “sweet spot” the “zone of proximal development.” More recently, memory researchers identified “desirable difficulties” as conditions that are “just right” to engage students in the learning process and produce the best outcome for long-term retention.

The challenge instructors face is that learning activities produce rapid changes in performance and make learning seem easy but do not produce enduring retention. Other conditions make learning more difficult; they require more effort and progress feels slower. However, these
conditions produce better retention. Similarly, task difficulty influences student motivation. Students may perceive tasks that are too easy as busy work and do not take these tasks seriously. Tasks that are too hard may overwhelm students and undermine motivation. Instructors need to find the balance between too easy and too difficult. They should design learning tasks that are “just right.” These tasks create “describable difficulties” that support optimal learning and challenge students enough to maintain interest and motivation.

**Frequent quizzes create a desirable difficulty**

Students will perceive any additional testing as a difficulty. Instructors might also perceive frequent testing as a difficulty. Writing and administering more tests takes time, even if the questions can be scored automatically. But these difficulties have benefits for learning. Bjork et al. (2014) reported that frequent testing in a course improved student performance on exams. Students who completed five in-class quizzes performed better on exam questions that assessed retention of concepts students answered questions about on in-class quiz questions. More importantly, students who answered in-class quiz questions also performed better on exam questions that tested related course concepts that were not directly tested with an in-class quiz question.

**Write questions that encourage students to think deeply about course content**

Maximize the benefit of frequent testing by writing questions that require students to retrieve and think about several conceptually-related course concepts. Use relevant disciplinary language and concepts when you write incorrect alternatives. Describe common misconceptions or articulate common misinterpretations of findings. Incorrect alternatives should be recognized as incorrect by students who understand the concept assessed by the question. These questions are a desirable difficulty because they force students to access and consider many course concepts. When question responses use concepts and language students see in the text and hear in lectures, they gain a superficial plausibility. Students must retrieve explanations for why these answers are incorrect. These challenges enable the questions to serve as learning experiences as well as assessing existing knowledge.

**Resources**


Does The Time Students Spend Taking Tests Reduce the Time They Can Spend Learning?

How often have you thought about the class time you give up to administer an in-class exam? Have you ever thought, “I don’t have time to schedule four or five exams. I need class time to cover content.”

Is exam-taking activity incompatible with learning? Recent research suggests the answer to this question is “no.” The psychological research on the testing effect clearly documents that taking a test can improve learning through direct and indirect mechanisms (Soderstrom & Bjork, 2014). Tests do more than simply assess how much students have learned so far. They also improve students’ learning.

**Direct benefits of tests on learning**

Retrieving information from memory is like exercise. The more often you exercise, the stronger you get. Taking a test gives students practice at retrieving course content from memory (Roediger & Karpicke, 2006). Each time a student retrieves a piece of information from memory, retrieval cues grow stronger, and the information becomes easier to remember in the future. The benefits students get when they retrieve information to answer a test question exceed the benefits they get by rereading or engaging in other types of study.

**Indirect benefits of tests on learning**

Soderstrom and Bjork (2014) describe four ways that tests indirectly improve learning.

1. Testing improves learning for related but non-tested information. Multiple choice questions improve learning for the concept tested (the correct response). They also improve learning for related concepts because students must retrieve several types of information to answer the question. Students must retrieve information about the correct alternative in a multiple-choice question and determine that the response aligns correctly with information provided in the question stem. Students must also retrieve information about the concepts described in the other alternatives and confirm that rejected responses do not correctly answer the question.

2. Tests can improve how students restudy missed items and how they study new material. Tests help students discover when their approach to thinking about content interferes with their learning. They can try new approaches when they study for a retest or when they study new material. The more tests students encounter, the more they benefit from this indirect effect.

3. Frequent testing keeps students on task and reduces procrastination. Although students might cram before each test, the frequency of tests forces students to distribute their study (if only as distributed cramming). Psychology researchers have over 60 years of data that document the benefits of distributed practice for learning and long-term retention.

4. Feedback from tests makes students aware of the gaps in their knowledge and understanding. They can use this information to selectively focus future study on concepts they don’t fully understand.
Study alone does not provide all the benefits students get from taking a test. Foresight bias is a powerful cognitive illusion that leads students to believe they are better prepared for a test at the end of a study session than they really are. Students overestimate future performance on a test at the end of a study session because the studied information is readily available in immediate memory (Soderstrom & Bjork, 2014). A student may feel confident that he will remember something when he has just reviewed his notes or text. This confidence can evaporate when the student tries to retrieve information in the new context created by a test, when the student no longer has access to notes or printed material. A test helps eliminate foresight bias. Armed with an accurate estimate of what they do and do not know, students can make better choices about how to allocate their study time.

**Resources**


**Use Clicker Questions as Prompts for Peer Instruction**

Instructors can use clicker questions to initiate a pair-share activity or peer instruction. When using peer instruction, faculty pose a question about a concept that many students have difficulty understanding. When presented as a ConcepTest clicker question, the answer options include statements of erroneous beliefs and misconceptions many students have about this topic. Before displaying the correct answer to the question, instructors ask students to discuss their answer with another student and try to persuade one another of the correct answer. When the question is posed a second time, more students will answer correctly, based on information they learn through discussion with peers. Instructors should follow a peer instruction activity with a discussion of why alternatives that represent misconceptions are wrong. They can elicit these comments from students. This activity creates unambiguous feedback about the correct response and reinforces the value of the peer learning activity.

Faculty in STEM disciplines (Science, Technology, Engineering, and Mathematics) have developed extensive collections of questions designed to probe student understanding of difficult concepts. Conduct a Google search on the terms ConcepTest and the name of your discipline to locate resources and examples of ConcepTest questions. Research on the impact of peer instruction activities supported by discussions of these questions indicates that peer instruction promotes deep and enduring learning.

Constructing questions that probe difficult concepts and identify common student misconceptions can be a daunting task. Fortunately, many faculty who use clicker questions for peer instruction collect their best questions and share these with other instructors. An excellent
collection of clicker question collections is posted on the Concordia University Centre for Teaching and Learning Services website:

http://www.concordia.ca/offices/ctl.html?ct=enable.t(),t(29515336)&WT.mc_id=ExactTarget,29515336

The site provides links to databases of clicker and ConcepTest questions for the following disciplines:

- Astronomy
- Chemistry (4 databases)
- Geoscience
- Mathematics (2 databases)
- Philosophy
- Physics

Many of these clicker questions use the ConcepTest format pioneered by Eric Mazur for implementing peer instruction in physics classes at Harvard. The Carl Wieman Science Education Initiative (University of British Columbia) has an excellent set of resources for the use of clickers to promote student learning. This site also provides links to collections of ConcepTest and clicker questions for STEM disciplines:

http://www.cwsei.ubc.ca/resources/clickers.htm

The American Association for the Advancement of Science hosts a collection of questions that assess conceptual understanding of concepts in the sciences and identify common misconceptions held by students (with data on the percentage of students in grades 6-8 and 9-12 who endorse these misconceptions). The site also includes an archive of scholarly publications that document the existence of these misconceptions: http://assessment.aaas.org/topics

A related initiative associated with Process Oriented Guided Inquiry Learning (POGIL) examines how POGIL methods can be implemented through clicker questions. A discussion of this work in college courses in STEM can be found on the POGIL site:

http://www.pogil.org/post-secondary/large-class-pogil

Provide Students with Feedback Early and Often in Their Learning. Teach Them How to Give Themselves Feedback So They Can Become Independent Learners

Students need regular feedback to direct their attention and energies toward activities that will help them improve their performance, avoid major errors and dead ends, and avoid developing habits or learning things they later will have to unlearn (sometimes at great cost). Constructive feedback also serves as a motivating form of interaction between teacher and learner, and among learners. Selective feedback on key examples creates opportunities for students to observe and reflect on their performance and internalize the voice of the "coach." When students develop the ability to observe and critique their own performance and give themselves corrective feedback, they are on the way toward becoming independent learners.
Don't assume that students understand new concepts you’ve explained. Ask them to briefly write about the "muddiest point" in a particular reading, lab exercise, or lecture. Respond to the most common areas of confusion in your next class. Find out what students are actually doing with the feedback you currently provide. Do they read and use the comments you write on papers and exams? You can model how you make use of the feedback you get on your work. Few students understand the revise-and-resubmit practices common in academic publishing.

Create opportunities for students to use your comments to improve their work. When assignments are clearly identified as multiple opportunities to practice and improve based on feedback, students will be motivated to make good use of the feedback you provide.

Give students an opportunity to rewrite and resubmit an assignment and improve their grade. Create a series of small assignments that introduce skills and provide practice and opportunities to refine these skills based on feedback before students submit a major assignment that requires these skills. Introduce a peer review assignment a few weeks before a final project is due. The assignment gives students practice at critiquing and providing feedback on student work. Students can use the feedback from their peers to revise their work before the submission deadline.

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# Appendix

## Rubric for Class Participation

<table>
<thead>
<tr>
<th>Criteria &amp; Points Assigned</th>
<th>Missing or Serious Problems</th>
<th>Below Expectations</th>
<th>Meets Expectations</th>
<th>Displays Leadership Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active participation</strong></td>
<td>Absent Does not contribute</td>
<td>Few contributions; Seldom volunteers but responds to direct queries</td>
<td>Voluntarily contributes to discussion without prompting</td>
<td>Actively and regularly contributes to discussion; Initiates discussion on issues related to class topic</td>
</tr>
<tr>
<td><strong>Relevance of participation to topic under discussion</strong></td>
<td>Contributions are off-topic or distract class from discussion</td>
<td>Contributions are sometimes off-topic or distracting</td>
<td>Contributions are always relevant to discussion</td>
<td>Contributions are relevant and promote in-depth analysis of material</td>
</tr>
<tr>
<td><strong>Evidence of level of preparation</strong></td>
<td>Not adequately prepared; Does not appear to have read the material in advance of class</td>
<td>Appears to have read the material, but not closely or did not read all material</td>
<td>Clearly read and thought about the material in advance of class</td>
<td>Consistently well-prepared; Investigates and shares relevant material not explicitly assigned</td>
</tr>
<tr>
<td><strong>Listening/Cooperation</strong></td>
<td>Inattentive or makes inappropriate or disruptive comments</td>
<td>Participates occasionally; Does not respond to contributions of others</td>
<td>Participates regularly without monopolizing; Listens and responds to contributions of others</td>
<td>Models good classroom citizenship. Listens without interrupting. Responses to others are appropriate. Promotes active participation by others</td>
</tr>
</tbody>
</table>

Claudia J. Stanny (2010)  
Center for University Teaching, Learning, and Assessment
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Chapter 8
Strategies for Documenting the Quality of Your Teaching

As faculty, we must provide evidence for the quality of our teaching for annual evaluations, teaching awards, and tenure and promotion decisions. These tips describe activities you can use to get feedback about your teaching and how you can document teaching quality for formal reviews.

**Use a Minute Paper to Evaluate What Students Actually Learn from a Lecture**

Lectures enjoy a reputation for enabling an expert to efficiently communicate content to a large audience. A well-crafted lecture delivered by an engaging, knowledgeable presenter is a delight. Consider evaluating how well students retain the key points you intended to communicate in one of your best lectures (Kalman, 2007).

Review the content of one of your best-organized lectures. Select a strong, well-organized lectures based on content area you know well and feel confident about when you present material to your students. Identify the three most important points you hope students will retain from your lecture.

On the day you give this lecture in your class, close the class session by asking students two write down the three most important points they derived from the class.

Describe the three points you identified (put them on a Power Point slide, a transparency, or write them on the board). Ask how many of your students wrote down all three points on their minute paper. How many wrote down two of the points? One of the points?

Collect the minute papers and review what students actually wrote down. Reflect on the gap between your intended message and the message students heard. Consider how you might direct students’ attention to the key points during future lectures.

TED talks are masterful presentations, famous for the engaging style used by the expert presenters. Consider selecting a TED talk on a topic related to class content. Identify three main take-away points from the talk. Do students identify these key points?
An illusion of learning occurs when students evaluate how well they will remember material immediately after studying it. Immediately after study, content is active in immediate memory simply through the passive process of recent exposure. Students can easily access it and might believe they have stored the content effectively for long-term retention. However, immediate memory (short-term memory) is ephemeral. When a delay filled with another activity displaces content material from immediate memory, access to contents can deteriorate substantially unless learners engaged with the material in a way that promotes long-term retention.

A well-organized delivery creates an immediate sense of understanding, but this perception might be misleading, especially if the presenters does most of the work required to organize and create meaning (Carpenter et al. 2013). I do not propose to create disorganized lectures to make students exert effort to discover the meaning in a lecture and thereby learn more! Rather, introduce brief pair-share activities or thought questions during the lecture to focus student attention on key points. When you require students to actually do something with material related to a key point, the effort students expend to complete these activities makes this information more distinctive and memorable (Dunlosky, et al., 2013).

Resources


Use Student Mid-Course Feedback to Improve Teaching and End-Of-Term Evaluations

Request formative feedback on teaching and assignments to identify areas where you might improve your course design or teaching strategies. Faculty can use mid-course feedback to modify assignments, refine course structure, and adjust their approaches to interacting with students to improve student learning in their current course. If an instructor seeks feedback from students through a mid-course evaluation, students enrolled in that term can benefit from improvements the instructor implements during the term. Moreover, instructors frequently discover that student comments and numerical ratings on end-of-course evaluations improve when they include a mid-course feedback activity (Bubb, et al., 2013). Five instructors, ranging in experience from recent Ph.D. through full Professor, implemented a variety of mid-course evaluations, using anonymous feedback through index cards, minute questions, on-line surveys, or focus groups facilitated by teaching center staff. These instructors describe the changes they introduced to their classes based on student feedback, describe the improvements they observed
in student learning on assessments administered in the second half of the term, and describe significant improvements in numerical ratings they received on end-of-term course evaluations and corroborated in the written comments from students. Instructors who use mid-course formative feedback from student report that students frequently express their gratitude for the instructor’s interest in their thoughts about class structure and class activities on end-of-course evaluations.

CUTLA supports several types of formative feedback on teaching. Instructors can join Teaching Partners and obtain meaningful feedback from a faculty peer. Teaching Partners learn strategies for conducting effective classroom observations before they visit one another’s classes. Faculty can request a classroom observation or Small Group Instructional Diagnostic (focus group of students) by the CUTLA Director. CUTLA provides resources to help faculty design and administer anonymous surveys (either paper-based or electronically) and elicit formative mid-term feedback from students.

**Resources**


**Small Changes Can Improve Class Community and Student Course Evaluations**

A well-organized, carefully planned course is critical for effective teaching, but attention to small details contributes to rapport with students and a classroom experience that supports effective learning. Corbett and LaFrance (2013) offer suggestions that improve the learning for students and the teaching experience for instructors.

- **Arrive early and linger after the class meeting time.** Make adjustments to lighting, set up your technology for the session, chat with students before and after class to learn about events outside of class that might influence their in-class learning and continue topic-related conversations while you walk back to your office.
- **Create a positive attitude during class meetings.** Leave your own life stresses at the door when you teach. We can’t always be our best selves every day. Life stresses and department politics can intrude on our thoughts. But try to protect class time from these worries. Similarly, do not allow sullenness in students to ruin your enthusiasm. Your enthusiasm and attitude can be contagious, although the effect will not be immediate.
- **Respond promptly to student email messages.** You need not respond immediately. Tell your students when they can expect a response (on the first day of class, in your syllabus) and honor this promise.
- **Surrender control of the class occasionally.** Choose your battles for control. Some activities and rules for class management are not negotiable. But if you can allow students to determine
how some things work, you create a sense of community and shared responsibility for classroom learning. Identify class policies that you feel comfortable allowing students to determine what is acceptable. Explain why other activities or course policies cannot be altered. (See tips on mid-semester feedback for how to elicit feedback about course procedures from students and making mid-course revisions.)

- **Remember to tell students when they are doing well.** Students need feedback to correct errors but they also need feedback to let them know when they are on track. Remember to recognize progress and successes.

When we adopt one or more of these small changes, teaching becomes a more pleasant and rewarding activity and our students become more engaged and motivated with the class.

**Resources**


**Encourage Students to Take Course Evaluations Seriously and Improve Response Rates on End-Of-Term Evaluations**

With the shift to fully online administration of course evaluations, many faculty worry about how their teaching will be evaluated if few students complete the course evaluations. Faculty trust evaluation data more when response rates represent broad student participation.

The following two strategies will help others evaluate the quality of faculty teaching: ensure that students take course evaluations seriously and use additional sources of evidence to document the quality and impact of teaching.

**Encourage students to complete course evaluations and take the process seriously**

Students are more likely to complete course evaluations when they believe their instructor takes the evaluations seriously.

- At the beginning or end of the term, talk to students about how you use course evaluation findings. Describe changes you made to the course based on the feedback students gave in previous semesters.
- Elicit feedback from your students at mid-semester and use the feedback to make course adjustments during the current term. Distribute a survey (on paper or through anonymous google or eLearning survey tools) or ask a colleague to conduct a mid-semester discussion during class time. Ask students to answer three questions: describe aspects of the class that *help them learn*, describe aspects of the course that *make learning more difficult*, and suggest changes that will improve their learning. Summarize the findings and use some class time to talk about common responses to all three questions. Describe changes you are willing and able to make. Explain which changes cannot be made and
why (e.g., you must give exams, students must learn difficult content and skills expected in other classes in the major). Contact Claudia Stanny, who has examples of forms you can use to create a google survey and guidelines for how to conduct (or request) an in-class small-group feedback session. Contact the Academic Technology Center (ATC) for assistance with creating an anonymous survey in eLearning.

- Mentor students on how to give constructive feedback. Describe the kinds of feedback that helped you identify ways to improve your course. You can also describe the kinds of feedback most people consider irrelevant (e.g., comments about physical appearance).
- Reserve a room with computers or invite students to bring their technology to class and complete the online forms during a scheduled block of class time.
- Explain how your department uses course evaluations for decision making in your department.

**Use multiple sources of information to document the quality of your teaching**

Faculty should use multiple types of evidence to document the quality of their teaching. Do not rely exclusively on ratings from course evaluations. *Faculty Careers at UWF: Advice to New Faculty*, posted on the CUTLA web, discusses the types of evidence faculty might include in a teaching portfolio. More detailed information can be found in Seldin, Miller, & Seldin (2010), who describe the contents of a teaching portfolio and provide examples of teaching portfolios created by faculty from a variety of disciplines. Consult department and college bylaws to determine which types of evidence are most valued for evaluating and documenting teaching quality for tenure and promotion decisions.

Thanks to Angela R. Linse, Ph.D., Executive Director, Schreyer Institute for Teaching Excellence, Pennsylvania State University, and Steve Ehrmann, University System of Maryland, for suggesting strategies for improving response rates to course evaluations.

**Resources**

*Faculty Careers at UWF: Advice to New Faculty.* Center for University Teaching, Learning, and Assessment, [http://uwf.edu/media/university-of-west-florida/offices/cutla/documents/Advice-to-New-Faculty(8-2014).pdf](http://uwf.edu/media/university-of-west-florida/offices/cutla/documents/Advice-to-New-Faculty(8-2014).pdf)

Faculty strategies for encouraging their students to fill out the SRTEs. Schreyer Institute for Teaching Excellence, Penn State. [http://www.schreyerinstitute.psu.edu/IncreaseSRTERespRate/](http://www.schreyerinstitute.psu.edu/IncreaseSRTERespRate/)

Use Student Assessment of Learning Gains (SALG) to Reflect on Your Teaching and Improve Student Learning in Future Courses

The final weeks of the term are one of the best times to reflect on student learning and consider changes you might want to implement the next time you offer the course. Identify activities and assignments that worked well and make notes to yourself about modifications to assignments, rubrics, and other aspects of the course that might create improvements. Use the course evaluation activity to administer a questionnaire of your own design to elicit comments and suggestions from students. Formal course evaluations currently focus on “student satisfaction.” Rather than asking students if they liked aspects of the course, create your own Student Assessment of Learning Gains (SALG) questions to evaluate the effectiveness of a specific assignment, class activity, project, or teaching strategy.

SALG questions ask students to rate the class in general or to rate specific assignments, projects, class activities, and other teaching strategies.

Examples of SALG questions

Global SALG
- How much did (insert the target activity) help you in your learning?
- Target activities may include a class activity, lab assignments, particular learning methods, guest lectures, class readings and other resources.

Content SALG
- As a result of your work in this class (or this specific activity), what gains did you make in your understanding of each of the following?
- Provide a list of specific learning outcomes or concepts that you consider important for the class.

Skills SALG
- As a result of your work in this class (or this specific activity), what gains did you make in the following skills?
- Target skill may include making quantitative estimates, finding trends in data, designing a research study, writing technical material, creating a web page, piece of art, etc.

Attitude Change SALG
- As a result of your work in this class (or this specific activity), what gains did you make in the following areas?
- For example: enthusiasm for the course or subject area

Although these are self-report measures, SALG measures can provide diagnostic evidence about teaching effectiveness that can be useful for scholarly projects on teaching and learning or inclusion in documentation of teaching effectiveness for annual evaluations, tenure and promotion, and teaching awards.

A discussion of the development of SALG measures and information about the validity and reliability of this approach to measuring student learning can be found in:
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Information about Student Assessment of Learning Gains and a free download of the Seymour et al. paper can be found at the SALG web site:

http://salgsite.org/about
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Chapter 9
Teaching Tips Related to UWF Guidelines and Policies

Teaching varies from institution to institution. These tips reflect local policies and guidelines as well as some broad regulations (e.g., FERPA) that you should consider when you design a course and determine how you interact with students.

Encourage Students to Make Wise Academic Choices Through Effective Advising

Students seek academic advising from many individuals across the UWF campus. Faculty members should be knowledgeable about degree requirements for programs in their disciplines and be prepared to advise and mentor students on professional and career choices related to the discipline.

Although academic and professional decisions are ultimately the student’s responsibility, a faculty adviser or mentor can help students learn to plan their academic work, make practical decisions about selection of courses, and discover academic options and co-curricular activities that help them make progress toward achieving their goals. A wise adviser will help students learn to think through the consequences of their choices. An adviser who is well-informed about services available to students can refer a student to campus resources on campus that can assist students with specific issues (tutoring, health and wellness, personal issues, or career counseling and resume development). A list of helpful campus resources appears on the CUTLA web site, Where to Send Students for Help [http://uwf.edu/offices/cutla/supporting-pages/where-to-send-students-for-help/].

On a practical side, the State of Florida is now directing increased attention to students who require many years to complete a degree and who graduate with excess hours and developed regulations that impose an Excess Hour Surcharge on these students. Careful advising will provide students with the information they need to make wise decisions when selecting classes and creating plans to complete a degree without incurring problems associated with excess hours.

Share Feedback with Students While Complying with FERPA

Students are more likely to improve their work when they receive frequent, diagnostic feedback from their instructors. Federal regulations govern and restrict the way we share information
about students and their academic records and present challenges for how and to whom instructors release information about students.

The most common challenge instructors face concerns how we can return graded material (exams and papers) to students quickly. Never leave graded exams and papers in a public location for students to pick up or post grades with names or any part of student ID numbers in a public location.

The eLearning system is an ideal tool for informing students of grades and providing feedback about their work. The system is convenient: students can access eLearning system at any time and from a computer at any location. The eLearning system is password-protected; when students log onto eLearning and view materials for your course, they see only their own grades in the grade book and comments on the work they submit to the drop box. The drop box has a second advantage: You no longer have to worry about losing track of a paper a student submits as an email attachment in your email queue. The submissions get stored in an organized way in eLearning, including a date stamp for when the student submitted the work.

If you use eLearning for no other aspects of course management, use eLearning to quickly share information with students about their academic performance. Post grades for exams and other assignments in the eLearning grade book. Use the drop box for secure submission of papers, student-created Power Point presentations, and other electronic documents. Similarly, instructors can leave comments on written work in the dropbox feedback section and/or post a marked-up electronic copy of a paper submitted through the drop box.

Instructors should take care to protect personal information (student ID numbers) in class. If you circulate an attendance sheet in class, the sheet should list only student names. Do not include other personal identifiers.

For additional details about FERPA compliance, see Human Resources certification courses: http://uwf.edu/offices/human-resources/i-am-a/employee/professional-development/compliance/training/

The Office of the Registrar created an on-demand online course summarizes the key points of FERPA and provides information needed to comply with access to student information. All faculty who will access student data in Banner must complete this course (FERP01 - FERPA Training for UWF Employees). Sign up for the course through the Nautical Reservation Desk (https://nautical.uwf.edu/comm/desk/viewclass.cfm?ClassID=5086) or contact the Office of Human Resources (x. 2694) to enroll.

Encourage Students to Attend Class to Improve Academic Performance

Students won’t experience or benefit from great in-class learning activities if they never come to class. Provide an incentive (such as taking attendance) to ensure that students experience the meaningful learning activities you create. Both are necessary to achieve the benefits for student learning and improve retention and graduation metrics.
Crede, Roch, & Kieszczyka (2010) examined the relation between class attendance, student characteristics, and academic performance reported in 52 peer-reviewed articles and 16 unpublished dissertations or papers. The research represents work conducted in a variety of disciplines, institutions, and countries. Crede et al. found that class attendance explained unique variation in grades independently of student characteristics such as SAT scores and high school GPA. They found that students enrolled in courses with a mandatory attendance policy tended to earn higher average course grades.

Based on these findings, we can confidently advise students that they are more likely to perform well in class if they attend class regularly. But George Kuh (2001) notes that “students don’t do optional.” He recommends that if an activity benefits learning we should require it.

Instructors face a dilemma. On the one hand, we believe that students who come to class regularly learn more and perform better on exams. On the other hand, we may be reluctant to require attendance because we believe adult students should be intrinsically motivated. Adult students should manage their personal lives, take responsibility for their educational goals, and make choices that help them achieve those goals. If our goal is to develop life-long learning, will mandates such as required attendance undermine intrinsic motivation? Will we sacrifice a long-term goal (developing life-long learning) for short-term goals (improved class performance and favorable retention and graduation rates)?

**What about intrinsic motivation?**
The conflict between intrinsic and extrinsic motivation is sometimes overstated. Successful behavior change programs frequently begin by offering extrinsic rewards. These programs have encouraged people to exercise more, eat more fruits and vegetables, and improve reading and math skills. Because people can’t experience the intrinsic benefits of an activity they don’t engage in, extrinsic rewards motivate people to start a behavior they won’t do otherwise. Offering extrinsic rewards introduces people to beneficial activities (Price & Shireman, 2013). Once people begin to experience the benefits of the activity, the intrinsic benefits can then develop and maintain intrinsic motivation.

Required attendance can be a powerful motivator for students. Burke (2010) asked business majors to identify factors that would encourage class attendance. He asked them to describe factors that would increase their own class attendance and class attendance by their peers. Students said they (and their peers) would be more likely to attend if (1) attendance contributes to the course grade, (2) the teacher is interesting or uses an appealing style of teaching, and (3) they earn extra credit for attending.

**Is mere attendance the wrong metric?**
Some researchers question whether mere “butts in seats” produces improved learning, increased academic success, and improved retention rates. Golding (2011) warns that attendance policies alone do not produce improved learning. Instead, the quality of the learning activities students experience when they attend class are the real sources of these benefits. Attendance serves as an indicator for another mechanism: student engagement in meaningful in-class learning activities. Similarly, Kinzie (2005) prefers to focus on what faculty can to do engage students in deep and
meaningful learning activities while they are in class. Instructors should attend to the quality of the learning activities they create for their students.

Create meaningful in-class learning experiences that intrinsically reward attendance
Ferraro (2014) describes an unobtrusive method for monitoring attendance (unannounced in-class assignments) that creates a significant learning activity and allows him to document attendance. Ferraro reported significance correlations between attendance metrics and final grades in ten psychology courses he taught over a 4-year period. Students might not understand the full importance of the average correlation he observed between attendance and exam grades \((r = .71)\). Another way of describing this relationship to students is to tell them that 50% of the variation in final grades student earn can be explained by whether they attend class regularly. Ferraro also argues that just “showing up” for attendance is probably not the primary mechanism underlying this relation. Instead, students experience meaningful learning activities when they attend class.

Students won’t experience or benefit from great in-class learning activities if they never come to class. Provide an incentive (such as taking attendance) to ensure that students experience the meaningful learning activities we create. Both are necessary to achieve the benefits for student learning and improve retention and graduation metrics.

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**Strategies for Monitoring Attendance in Large Classes**

Students who attend class regularly tend to perform better in class, even when class grades are adjusted to account for personal characteristics such as SAT scores and high school GPA (Crede, Roch, & Kieszczyka, 2010). George Kuh has long advised that if an activity benefits student learning, we should require it (Kuh, 2001). Embracing this advice, UWF enacted a policy
making attendance in General Education courses mandatory for all first time in college (FTIC) students.

The policy creates a challenge for instructors who teach high enrollment classes: How can an instructor enforce the attendance policy without sacrificing precious class time to taking attendance?

**Create learning activities that automatically document attendance**

*Minute papers* are excellent low-stakes assignments that force students to reflect on the content of a lecture, practice their writing, and allow instructors to check student understanding of a key concept (Angelo & Cross, 1993). They require no more than 5 minutes of class time. Ask students to take a few minutes to respond to a prompt with 3-5 sentences. Use a check, check-plus, check-minus strategy for grading. A student who submits a response but clearly does not understand the concept gets a check (1 point). Students earn more points if they write a reasonably on-target response (check – 2 points) or a thorough, well-written, or insightful response (check-plus – 3 points).

Instructors get immediate feedback about student comprehension of the lecture material, the names on the papers document attendance, and the grading process should take no longer than 30 minutes for a class of 100 students.

*Muddiest point papers* are like minute papers, but the prompt is simpler: *Describe one thing from class today that you have questions about or that confuses you.* Alternatively, the prompt might ask students to identify *one idea from the lecture that excites or interests them.* These papers do not require grading, although a quick scan will give instructors useful feedback about the class meeting. Instructors simply record attendance for students who submitted a muddiest point paper during that class.

*Clicker questions* will document attendance if you use the TurningPoint class list feature (records clicker IDs associated with student names from the class roll). Resist the temptation to ask “are you here?” as a clicker question. Asking students to purchase a clicker just to take attendance breeds resentment and serves no learning function. Instead, ask a clicker question to initiate a pair-share discussion about a challenging concept. Like minute papers, these questions help instructors evaluate student understanding on the spot and create an opportunity to correct misconceptions. Significant learning occurs when students discuss and explain their responses to each other. Clicker questions do not have to have a “correct” answer. Ask a question about a class topic that supports multiple points of view. Use the varied student responses to facilitate a discussion of the pros and cons of the different perspectives.

**Resources**


**Promote Academic Integrity: Educate Students About Plagiarism and Respond Effectively to Violations**

Although all students know that they should not plagiarize and that punishments for plagiarism can be severe, many students are unable to clearly describe why a faculty member would judge that a piece of writing was plagiarized or recognize that a sample of writing uses inappropriate forms of paraphrasing or improperly cites sources material.

Many faculty discuss plagiarism and the consequences of discoveries that a student has plagiarized in their classes and on course syllabi. Fewer faculty actively show students how to use ideas from source materials in their writing with appropriate use of summaries and paraphrases. Disciplinary variations in authorship practices create inconsistent messages to students about appropriate authorship practices.

Disciplinary writing skills include disciplinary norms for use of direct quotations, paraphrases, citation of ideas, and other authorship practices. Like many non-content, “soft” disciplinary skills, these skills have traditionally been part of the implicit curriculum. Students have been expected to arrive on campus with full mastery of these skills or acquire these skills without direct instruction. Students can acquire these skills much more efficiently if they receive unambiguous, direct instruction. Students will improve their writing skills and their compliance with expectations for academic integrity in authorship when they have explicit guidelines and clear examples of correct practices in their courses.

The Office of Teaching Resources in Psychology recently published an online resource, *Educating students about plagiarism* (Lamoreaux, Darnell, Sheehan, & Tusher, 2012), that describes instructional strategies that help educate students about plagiarism and helps faculty understand how to handle plagiarism if they suspect it in student work submitted for their classes. This resource provides links to the following downloadable instructional materials:

- A PowerPoint slide show for a lecture *Plagiarism*
- A worksheet for a student assignment *Recognizing Plagiarism*
- A sample of a plagiarism contract used at Georgia State University
- Suggestions for faculty responses to common excuses, explanations, or denials that students give when confronted with an accusation of plagiarism or cheating (*Answers to Common Excuses*).
- A flowchart showing how one university handles plagiarism reports (*Academic Dishonesty Flowchart*).
- Includes links to the Indiana University Bloomington tutorial for students (*How to Recognize Plagiarism*) [https://www.indiana.edu/~istd/](https://www.indiana.edu/~istd/)
The University of West Florida Academic Misconduct Code, policies, processes, and reporting forms related to Academic Misconduct are available on the website for the Dean of Students Office at:


This site includes a PDF document with a flowchart that describes the steps faculty at UWF should follow when handling a report of academic misconduct:


Thanks to Ted Bosack, Executive Director, Society for the Teaching of Psychology and Professor Emeritus, Providence College, for contributions to this teaching tip.

Resources


How Should I Respond to Suspected Academic Misconduct, Student Grievances, and Grade Appeals?

Faculty often experience anger and outrage when they discover evidence that a student may have cheated on an exam, plagiarized sources in written work, or committed some other form of academic misconduct. However justified the emotion, this anger is probably not the best component of an effective, professional response to this student.

As sure as you may be about a case, remember that a student has a right to due process. Gather your evidence (the originality report from Turnitin, samples of previous written work submitted by the student, statements from witnesses of cheating during an exam) and calmly present your interpretation of the evidence in an initial meeting with the student.

Contact staff at the Office of Student Rights and Responsibilities (uwf.edu/OSRR) to determine if this is a first offense for this student. First offenses are handled differently (with a stronger emphasis on educating the student) than are second offenses, which follow a different procedure. Attend to and adhere to University policy. Failure to report a first offense creates a situation in which a savvy, seemingly-contrite offender can slip through the system undetected through multiple offenses. The revised policy enables first-time offenders to who learn from their mistakes and avoid the most disastrous consequences (provided the first offense is not a real doozy!).

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The University of West Florida recently revised the policies related to academic misconduct, student grievances, and grade appeals. The revised policies are posted on the Student Affairs web site (uwf.edu/OSRR).

How Much Do Your Students Know About the Personal Librarian Program?

How much do your first-year (or more advanced) students know about the resources available at the University of West Florida Libraries or how to use them? The Personal Librarian program gives students a personalized and direct link to the library. Every entering freshman is assigned to a Personal Librarian, who is prepared to help students find resources for assignments and research papers and answer questions about using resources and services in the UWF Libraries. The Personal Librarian serves as a student’s library advisor – the "go-to" person for all things related to the library. Personal Librarians also refer students to the appropriate library or university contact for help with information technology, writing, or tutoring.

Students typically work most frequently with a Personal Librarian during their freshman year. Once they become more familiar with the Libraries or declare a major, students should begin working with the Subject Specialist Librarian for their discipline, who will provide discipline-specific research assistance.

Faculty can encourage students to make use of their Personal Librarian by including a consultation with the student’s Personal Librarian as a required component of a class project that requires library resources. Similarly, faculty can require more advanced students to consult with the Subject Specialist Librarian for their discipline. Alternatively, faculty can contact their Subject Specialist Librarian to discuss the information literacy skills required for a class project and request a library workshop that is tailored to the expectations of the assignment.

What you can expect a Personal Librarian to do during a consultation with a student:

- Help student identify relevant resources and databases, demonstrate how to use library databases to find information for a research assignment, and explain citation formats.
- Help students locate materials held in other libraries.
- Help students when they have trouble accessing the library's website or an electronic resource.
- Answer questions about library policies, procedures, and services.
- Keep students informed of new resources, services, and programs.
- Refer students to other UWF academic support units that can help them with information technology questions, writing assistance, or tutoring services.

Personal Librarians are mentors. They WILL NOT

- Carry out a student’s library research, write the student’s paper, or edit the paper.
- Replace advisement roles of any other department on campus.
- Proctor exams.
- Make photocopies.
Thanks to Melissa Gonzalez and Britt McGowan for suggesting this strategy. Special thanks to all of the Personal Librarians at the University of West Florida Libraries for creating the Personal Librarian program!

**How Long Should I Retain Grading Records for My Class?**

The term is finished. You finished grading the exams and papers, computed final grades, and submitted them to the Registrar. Time to celebrate and clean the chaos that accumulates in your office in the last weeks of the term. You hope to begin the next term with a clean desk, an organized bookshelf, and orderly files.

What to do with old exams, syllabi, and other class materials you accumulated during the term?

Resist the temptation to pitch everything in the recycle bin. Some of these records will be useful to you. Other records must be retained.

**Why save records from a class that is finished?**

Faculty seldom use paper grade books to record and track grades on assignments they use to determine student grades. Most instructors now maintain a detailed record of grades earned on assignments and exams during a term as an Excel spreadsheet or in the eLearning grade book. These records serve multiple purposes after the term is finished.

- A student might request a letter of recommendation a year or more after completing your class.
- If the student submits a grade appeal for the course, a detailed record will document how the instructor computed the final grade.
- Should a student get an incomplete and the chair or another instructor must compute the final grade (e.g., when the original instructor is on sabbatical, is on medical leave, or has left the university), the records should be complete enough to determine a grade. Instructors must describe this process when they submit an Incomplete Grade for a course.

**UWF must comply with records retention established by the State of Florida**

The State of Florida Department of State (2015) identifies documents that must be retained and specifies the retention interval for these records. A small set of these records apply to university professors and academic departments.

**What do I have to keep and why should I keep it?**

**Course Syllabus**

The course syllabus documents course policies and procedures, including how you compute final grades. Should a student file a grade appeal, the course syllabus will support your decision about the course grade you assigned. Students often request copies of the syllabus (no, they don’t always keep their copy) when they transfer to another institution and want to document that the
course they took at UWF is equivalent to a course with a similar name but different course number at another institution.

**Class work retained by the instructor**
If you do not return student work (term papers, homework, art work, lab project, and other class work), you are obliged to keep it.

**Class exams**
You need not keep every copy of the exam, but you must keep a copy of the test questions, answer key, and test administration instructions (usually included on the first page of the exam questions). Scantron forms can be returned to students; you will retain a record of the student score on the exam.

**How long must I keep these materials?**

The State of Florida record retention schedule describes different retention periods for different records. The easiest rule of thumb for faculty to follow is to retain syllabi, class exams, and other class work that you do not return to students for **two calendar years after the end of the course**. For example, for a course that ends on December 15, 2015 (the deadline for grade submission), these records must be retained until December 15, 2017.

**Resources**


**How Should I Respond to a Student Who Seems Despondent?**

The Suicide Outreach and Support (SOS) program is a suicide prevention program that is based on suicide prevention strategies that are applicable to broad populations and are well-suited for the general campus population. The SOS program also includes a special emphasis on reaching military-affiliated students (active duty servicepersons, veterans, and military spouses and dependents) and students in the gay, lesbian, bisexual, transgender, and questioning (GLBTQ) community.

The SOS program at UWF includes training sessions for faculty, staff, and students, a Suicide Prevention Coalition, a Student Organization Network, and a Social Marketing Campaign to increase knowledge and awareness of suicide warning signs and risk factors among members of the UWF community, including information about several national suicide hotline resources.
Faculty may be particularly interested in the QPR Gatekeeper Training, which will help faculty develop the ability to recognize warning signs of potential suicidal thoughts and respond effectively to individuals who present these warning signs.

QPR is easy to learn. The UWF Counseling Center offers training sessions, which require only a one-hour commitment. They are free to students, faculty and staff. Contact April Glenn to schedule additional training (474-2420 or e-mail aglenn@uwf.edu), or sign up by clicking on the following link: http://uwf.edu/offices/counseling-psychological-services/training/counselor-training-program/

Faculty can also visit the Counseling Center web site, which includes a resource page on suicide prevention: http://uwf.edu/offices/counseling-psychological-services/faculty-and-staff-emergency-guides/suicide-prevention/

Suicide Outreach & Support resource page: http://uwf.edu/offices/counseling-psychological-services/

Thanks to April Glenn, Student Counseling Specialist, UWF Counseling Center, for this teaching tip.

What Do I Do When I Have a Deaf or Hard of Hearing Student in My Class?

Because diagnostic information is not listed on the notice of accommodations the Student Disability Resource Center sends to instructors, faculty may not always know when a student in their class has a condition affecting hearing. Accommodations for a student who is hard of hearing or deaf might include:

- Preferential seating
- Sign Language interpreting
- Need for Captioned videos or transcripts
- Permission to audio record lecture
- Oral tests must be in written format

There are distinct cultural differences between the “deaf culture” and the “hearing culture.” Individuals who identify themselves as “deaf” tend to not view their hearing loss as a “disability” and are usually proficient in American Sign Language. Usually these individuals have been deaf since an early age. Individuals who view themselves as “hard of hearing” tend to use hearing aids or have hearing loss for specific sound frequencies, which impacts how they hear words. These individuals are not usually proficient in American Sign Language.

Some common myths about deaf and/or hard of hearing:

- **Can read lips.** Not all individuals are able to read lips; however, many people can gain context from body language.
- **Knows sign language.** Not all individuals are proficient in American Sign Language. Occasionally, an oral interpreter (or transliterator) is used in a classroom for a student who does not know sign language, but may be able to read lips.
• **Is better at written language than oral language.** Individuals who have used American Sign Language the majority of their life, tend to have very poor written language and reading skills. ASL is a foreign language and the word order is dramatically different than English.

• **The only accommodation need is related to hearing loss.** Individuals can also be diagnosed with learning disabilities, emotional/mental health disorders, etc. similar to the general student body.

**How do I accommodate a student who is deaf and/or hard of hearing if they are not identified by SDRC?**

The easiest way to accommodate a deaf or hard of hearing student is to create a universally designed classroom. One primary way to do this is to provide captioning or transcripts for all videos/audio materials. Faculty who include universal design features in class design, such as providing captioning and/or transcripts, can help multiple students, including students with hearing loss, processing disorder, and disorders affecting attention.

**How do I get assistance with captioning?**

- For assistance with finding captioned videos/materials: Library, 850-474-2048,
- For assistance with classroom technology: ITS, 850-474-2075
- For assistance with course development: CUTLA, 850-473-7435,
- For assistance with closed captioning, video captioning resources, or best practices: ATC 850-474-3291
- For assistance with a student currently in your course or further information please contact Student Disability Resource Center (SDRC), 850-474-2387 or email sdrc@uwf.edu.

**Other resources –**

[www.pepnet.org](http://www.pepnet.org)

Thanks to Tina Likovetz, Student Disability Resource Center (SDRC), for contributing this teaching tip.

**Faculty/Staff 911 Guides**

The Dean of Students and Counseling & Psychological Services have created three Faculty/Staff 911 Guides for managing classroom disruption and assisting students who experience difficulties during the term, suicide prevention, and responding to a report of sexual assault.

The **Faculty/Staff 911 Guides – Classroom Disruption** identifies key campus resources for referrals and describes best practices for how to respond to various types of disruptive behavior or source of student distress: aggression, illness or injury, psychological or emotional crises, or behaviors associated with a disability. The 911 Guide tells faculty and staff which office they
should call for each type of disruption, including telephone numbers, building location, and URL for the office web site. Separate 911 Guides provide information about suicide prevention and how to respond to a report of a sexual assault.

The Faculty/Staff 911 Guides can be downloaded from the Dean of Students web site (http://uwf.edu/offices/dean-of-students/dean-of-students/faculty--staff-911-guides/).

The CUTLA web site also includes two resources pages with links to UWF offices that support faculty and students.

Resources on how to respond to student issues on academic matters (academic integrity and misconduct, disruptive classroom behavior, international student issues, student disability concerns, and technology problems): http://uwf.edu/offices/cutla/supporting-pages/respond-to-student-issues/

Resources on where to send students for help, including academic, medical, and emotional needs: http://uwf.edu/offices/cutla/supporting-pages/where-to-send-students-for-help/
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Chapter 10
Professional and Career Development

We often espouse the value of life-long learning. These tips discuss long-term professional development topics and help us model life-long learning for our students.

Develop Professional Networks to Support Faculty Career Advancement

Managing a faculty career requires that faculty establish their expertise in three areas: teaching, scholarship, and service. Because professional networks can help faculty develop expertise in each of these areas, Austin and McDaniels (2006) argue that individuals entering the faculty ranks must be able to cultivate professional networks. Niehaus and O’Meara (2015) note that “not all networks are created equal” (p. 161) and compare the value of internal (on-campus) and external (off-campus) professional networks for faculty career advancement. On-campus networks can help faculty navigate the campus environment and identify professional activities that will advance faculty careers. Off-campus networks provide a broader array of information and opportunities for disciplinary-specific career advancement.

Niehaus and O’Meara (2015) identify strengths and benefits for each type of professional network.

On-campus professional networks
On-campus networks help early career faculty navigate the campus environment and make progress toward tenure and promotion. Although on-campus networks are well-tuned to internal opportunities, they mainly support career development at that institution.

- Help faculty learn about internal politics.
- Alert faculty to opportunities, resources, and impending deadlines for activities that will advance faculty careers such as internal grants for research, resources for development of innovative teaching strategies, and professional development opportunities.
- Identify internal programs that recognize and reward professional contributions (awards for excellence in teaching, scholarship, or service).

Off-campus professional networks
Off-campus networks provide broad support for career advancement. Niehaus and O’Meara report that off-campus networks are nearly twice as strong as predictors of career success for both early career (pre-tenure) and later-career faculty. Because few institutions have enough resources to hire multiple faculty members in a disciplinary specialty, off-campus networks
create a virtual community of specialists within a discipline that can be critical to ongoing professional growth. These communities help offset the sense of isolation faculty might experience when they are the only specialist in their program. Off-campus networks create opportunities for faculty to discuss ideas, develop collaborations, and gain recognition in the discipline that can lead to invitations for disciplinary service (peer review for conferences or journals, editing opportunities, etc.).

- Pre-tenure faculty establish contacts with disciplinary professionals who might serve as external reviewers for the tenure decision.
- Mid-career faculty develop collegial partnerships, develop disciplinary collaborations, maintain momentum on research agendas, and identify new opportunities for professional growth.

**Developing your professional network**

Professional networks take time to develop. New faculty should make time to develop off-campus networks early in their careers; the long-term payoff is great.

- Maintain networks established during graduate training, especially with colleagues who share your interests in research topics or teach similar courses.
- Attend professional conferences and develop new connections for your professional network.
- Join and participate in virtual professional networks (disciplinary list serves, LinkedIn, Academia.edu, ResearchGate, and other electronic communities). Protect yourself from the potential deluge of email from an active community. Create an email filter to divert mail from each group, skip your inbox, and store mail in a special folder for that group. Read these messages when you have time and avoid clutter in your inbox. Some communities offer a weekly digest version of communications.

**Resources**


**How Classroom Behavior Influences Student Perceptions of Authority**

Do students perceive you as an authority or expert in your discipline? Is this perception reflected in your course evaluations?

Berk (2013) summarizes a large literature on course evaluations that support the conclusion that students are not qualified to evaluate a professor’s knowledge or content expertise, the choice of teaching methods, the course design, or the quality of course materials, assessment methods, or grading practices (p. 22). However, student perceptions of a professor as an authority in the
discipline influence the ratings students give when they respond to questions in a course evaluation survey (Middendorf & McNary, 2011).

Middendorf and McNary (2011) identify classroom behaviors that contribute to student perception of the instructor as an authority. Instructors who engage in these behaviors receive higher ratings in class evaluations. Middendorf and McNary also identify instructor behaviors that undermine student perceptions of disciplinary expertise. These behaviors are associated with lower ratings on class evaluations. Some behaviors may be unconscious and difficult to modify. However, if instructors know how specific behaviors are related to student perceptions, they can identify a few behaviors that promote positive perceptions that they might deliberately adopt. Similarly, instructors might learn to modify or avoid detrimental habits that produce negative perceptions.

Middendorf and McNary (2011) describe an observation rubric that focuses on specific behaviors that either enhance or detract from student perception of an instructor’s authority. Attention to these behaviors can improve how students perceive and evaluate faculty. Moreover, because these behaviors generalize to other professional public interactions (e.g., making a presentation at a professional conference), faculty can improve how their professional peers evaluate their authority.

**Behaviors to cultivate: Behaviors that enhance perception of a speaker as an authority**
- Smile
- Make eye contact with students (or members of the audience at a conference)
- Move around the room
- Listen carefully to students or audience questions
- Use humor
- Make encouraging statements to students

**Behaviors to avoid: Behaviors that create doubts about a speaker as an authority**
- Apologize unnecessarily. Not knowing the answer to every question does not require an apology. Do not apologize if you do not have a ready answer to a question. Instead, simply say that you will research the question and answer the question in the next class. (And do so.)
- Do not humiliate or put students down. Treat all students with respect and civil behavior.
- Do not accept weak answers or non-responses to questions you pose to initiate class discussion. Wait for a response. Ask for additional detail or evidence to strengthen a weak response.
- Do not allow students to interrupt, but avoid engaging in monologs or non-stop talking. Create pauses that give students opportunities to ask questions without interrupting you in mid-sentence or mid-idea. Make sure the pauses are long enough to allow students to frame a question.
- Do not encourage students to challenge or complain publicly. Should a student raise a complaint, ask the student to discuss these issues with you after class or during office hours. Create opportunities for students to give you feedback privately (e.g., with an anonymous survey or minute paper). Share the general comments with the class and explain what you can and cannot modify and why.
Resources


What Is Your Professional Impact?

You worked hard to collect data, prepare a manuscript to report your findings, and successfully publish them in a disciplinary peer-reviewed journal. What impact will your work have on researchers in your discipline?

Faculty can document the impact of their scholarly work by collecting information about the acceptance rates of the journals that publish their work. Some journals will publish an impact factor for the journal. What is the impact of the article you wrote that appears in that journal?

One strategy now available to faculty is to search for their articles in Google Scholar and track the citation of these articles (click on the My Citations menu to create a personal profile and monitor citation activity).

Another option is to create a profile for your scholarly work in the Web of Science. This service will provide information about the work you cite and the authors who cite your work. You can produce useful graphics that illustrate the breadth of scholarly impact associated with a single publication.

Contact a reference librarian to learn more about how to set up a profile in the Web of Science.

Use online writing diagnostics to develop self-editing skills and improve writing

Because few academics receive formal training in how to write for their discipline, they might avoid attempting to teach their students to write. If faculty or student writers search for models of writing in published articles, they will encounter few examples worth emulating. Sword (2012) evaluated the prose of 1,000 articles (100 articles from each of 10 disciplines: medicine, evolutionary biology, computer science, higher education, psychology, anthropology, law, philosophy, history, and literary studies). All articles appeared in well-regarded peer-reviewed journals with high impact factor ratings. Sword found examples in every discipline in which writers engaged readers and wrote persuasive, compelling arguments in clear prose. She also found many examples of dense, jargon-laden, impenetrable prose.

*Stylish academic writing* provides good advice to faculty writers who hope to refine their scholarly prose. The book is written for professional academic writers, but graduate student writers can benefit from this advice. Sword hosts a free, online writing diagnostic (the WritersDiet Test). You can submit a sample of up to 1,000 words of text and receive feedback.

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on whether your writing is *fit and lean* or *flabby*. The diagnostic will not identify errors in grammar. Instead, it rates five categories of language use: verbs, nouns, prepositions, waste words (it, this, that, there), and adjectives and adverbs. Use the feedback to reflect on and edit your writing.

Have some fun! Submit a CUTLA teaching tip to the WritersDiet Test. (I already have!)

**Use the WritersDiet Test to improve student writing**

Use the WritersDiet Test to help students improve and edit their writing. Sword (nd) advises instructors to assign a short assignment (2 or 3 paragraphs with at least 300 words) to give students practice with self-editing skills. Discuss how students should interpret the diagnostic feedback. Ask them to edit and resubmit their assignment to the WritersDiet Test and include copies of the diagnostic feedback from both diagnostic evaluations when they submit their final assignment for grading. You might require students to write a short reflection about what they learned about writing by using the WritersDiet Test.

**Resources**


**Increase The Visibility and Impact of Your Scholarly Work Using ORCID and ResearchID**

When faculty attempt to document the impact of their work, they must be able to clearly identify citations for their work and separate these from citations of work by authors with similar names. If you have ever run a Google search on your name and found a collection of hits that include your work and the work of several other people, you are well aware of the problem created when many scholars have similar names, when a scholar publishes with various forms of his/her name (e.g., with and without middle initial), or when a scholar’s last name changes mid-career (e.g., adopting a new last name or creating a hyphenated name with a marriage or for other legal reasons).

Scholars now have two options for unambiguously claiming ownership of their work: the Open Research and Contributor ID (ORCID. http://orcid.org) and ResearchID (http://www.researcherid.com/).

**ORCID**

ORCID is an open, non-profit, and worldwide community that includes individual researchers, universities, national laboratories, commercial research organizations, research funders, publishers, national science agencies, data repositories, and international professional societies. Registration is independent of membership, which means researchers may use the identifier
throughout their career, irrespective of changes in discipline, location, name, or affiliation. ORCID provides a persistent digital identifier that distinguishes you from every other researcher and ensures that your work is recognized.

The ORCID registry is free. The unique identifier unambiguously identifies the work of specific researchers. Researchers use their ORCID identifier to update, maintain, and share research objects (data sets, articles, media stories, patents, etc.) with collaborators and to clearly distinguish their research activities from the work of others. Researchers may use their identifier when they submit a paper or a dataset to authorize CrossRef or DataCite to formalize the ORCID identifier-DOI connection when the work is published and to update their ORCID record. Citations for publications can be imported from many sources, including Google Scholar. ORCID can be linked to SCOPUS’ Author ID or Thomson Reuters’ ResearchID and to the NLM SciENcv tool used to create NIH and NSF Biosketches.

**ResearchID**

ResearcherID offers a free virtual space to manage and share your professional information. Each member is assigned a unique identifier to enable researchers to manage their publication lists, track their times cited counts and h-index, identify potential collaborators, and avoid author misidentification. By assigning a unique identifier to each author who participates, ResearcherID standardizes and clarifies author names and citations and makes your information search more straightforward and accessible. It also helps to identify any changes in institutional affiliations during your career. In addition, ResearcherID information fully integrates with the Web of Science and is ORCID compliant, allowing you to increase visibility of your publications from a single one account.

Faculty who register with ORCID and ResearchID will have an easier task when they attempt to document the impact of their work. They can gather information about how often their work has been cited without having to scrub the names and citations for researchers with similar names from preliminary citation searches.

**Resources**

ORCID web site. [http://orcid.org/](http://orcid.org/)

ResearcherID web site: [http://www.researcherid.com](http://www.researcherid.com)

Thanks to Bob Dugan, Dean of Libraries, University of West Florida, for this teaching tip.

**Becoming a Writer**

Many academics do not think of themselves as writers. Instead, they think of themselves as teachers, thinkers, scholars, researchers, or artists who must write. This mindset creates obstacles to writing. Tietze (2014) argues that when writing becomes part of your identity, you make it a
priority and create opportunities to write during your regular activities, just as you make room for other critical activities (sleeping, eating, spending time with your family, exercising).

If we reflect on how academics spend their time every day, writing emerges as an integral part of academic life. How much time do you spend writing emails, lecture notes, exam questions, comments on student papers, and other day-to-day academic tasks? Writing is intrinsic to academic life. The type of writing that we parcel out as unique and separate from “real” academic life is the writing that is most useful for formal professional scholarship: peer reviewed publications, conference submissions, grant proposals, chapters and books. When we isolate writing for publication as a unique activity that is fundamentally different from our other writing, we underestimate the role of writing as part of our professional identity and sabotage our commitment to writing publishable work.

Jenkins (2015) offers good advice for integrating writing into a regular schedule. Like Tietze, Jenkins argues that the first step to becoming a productive writer requires making a commitment to write: Decide that you are a writer and that writing is something you need to do to meet your personal goals (not imposed goals), not something you would like to do when the stars align properly.

The stars never align properly. Life never opens up a grand vista of free time when we can complete long-postponed plans. Mundane tasks have the uncanny knack of filling up available time. If you have all afternoon to perfect your lecture and no other pressing priorities, you will use the full afternoon for this task. Jenkins suggests scheduling time for routine tasks to prevent them from taking all your time. Although your Power Point might be more perfect if you spent another hour searching for better images, you might better spend some of that time on the important task of writing. Similarly, you should schedule times to write and honor that schedule the way you would honor your class schedule, your class prep time, or a scheduled appointment.

Consider the potential contribution made by everyday writing for your formal, scholarly work. You might write an email to a collaborator or editor to discuss the structure of an article or chapter. Treat this writing as pre-writing. It may contain the seeds of an outline or a paragraph that sorts out the main issues of a thorny topic. Notes recorded during a planning meeting may evolve into a first draft of a research methods section. Carry a notebook or iPad to record writing ideas or draft short summaries of concepts that might be the basis for new scholarly work or contribute to existing work. Some people keep a reading journal and record new and useful ideas from scholarly reading. Others keep more general journals and record notes and to-do lists associated with day-to-day activities (meetings, conversations, and phone calls, as well as formal reading). Do not throw away or ignore task-related writing. Mine it for elements you can use in formal writing projects.

Resources


**Protect Your Voice During Lectures**

Professors spend a lot of time talking, whether they spend their time advising and mentoring students, facilitating classroom discussions, making formal conference presentations, or teaching large lecture-format classes. One of the hazards of a profession that relies on vocal communication is that extended periods of speaking can tax the voice.

The Center for Instructional Innovation & Assessment at Western Washington University frequently offers a workshop (*Lecturing without Tiring or Losing Your Voice*) that is offered by Dr. Rich Brown, a professor in the Theatre Department. The teaching center recently excerpted segments of Dr. Brown’s workshop as a series of five training videos. Topics discussed in each video module include:

- An introduction to how parts of the body interact to produce voice quality
- A demonstration of warm-up exercises
- Guidelines for breath control
- Placement of sound
- Use of resonators to project the voice

Together, these video modules can help faculty learn healthy voice techniques that will enable them to project their voice during extended periods of speaking and keep their voice strong through a class or a long day of talking and maintain a healthy voice throughout a career.

The videos can be accessed at the following web site:


Thanks to the Center for Instructional Innovation & Assessment and Dr. Rich Brown, Western Washington University, for producing and sharing this resource with the teaching community.