Teaching Handbook

Section 1: Preparing to Teach

Planning a Course
- Preparing to Teach a Course
- Designing Your Course
- Choosing Learning Strategies that Encourage Student Success
- The First Day of Class
- Class Roster and Grade Book
- Course Packets and Electronic Resources
- Office Hours

Policies
- Sexual Harassment in Learning Contexts
- Privacy of Student Records
- Accommodating Religious Observances
- Assisting Students with Disabilities
- Employment and Preparation of Associate Instructors for Teaching

Interpreting Course Evaluations
- Administering and Interpreting Course Evaluations
- Some Factors that Influence Course Evaluations
- Using the Results of Course Evaluations to Improve your Teaching
- Alternatives to Course Evaluations

Section 2: Teaching Methods

Discussions
- Discussion
- Facilitating Discussions of Sensitive Issues

Groupwork
- Overview
- Organizing the Groups
- Designating Roles in Groups
- Sharing Group Results

Lecturing Techniques
- Effective Use of Lecture Time
- Resources to Meet the Challenges of Lecturing

Science Labs
- Preparing to Teach Science Labs
- Supervising Science Labs

Engaging Students in Problem-solving
- Case Studies
- Games for Learning
- Team-Based Learning

Ways of Assessing and Evaluating Student Learning
- Summative and Formative Assessment
- Test Construction
- Evaluating Student Written Work
- Assessing Student Progress over Time

Section 3: Creating a Positive Environment

Ensuring Civility
- Classroom Atmosphere
- What is Incivility?
- Instructor Behaviors to Avoid Incivilities
- Classroom Climate

Managing Difficult Events
- Teaching in the Face of Tragedy
- Dealing with Disruptive Students

Ethics
- Academic Integrity
- Academic Misconduct
- Reporting Misconduct
- Forms of Misconduct
- Contacting the Office of Student Ethics and Anti-Harrassment Programs
Section 1: Preparing to Teach

Planning a Course

Preparing to Teach a Course: An Introduction

Overview

The preparation required for teaching a course begins by taking into account the situational factors influencing student learning (Fink 2003). Prior to designing your course, consider class size, prerequisites, the typical student profile and if the class is a requirement. Also consider the nature of the subject and the type of thinking you will be asking students to accomplish since preparation involves establishing what it is you want students to learn and how they will go about learning it.

After taking into consideration situational factors we recommend using the backward design process to organize your course (Wiggins and McTighe). Backward course design ensures that all of the lectures, learning activities, assignments, and tests fit together in a way that motivates your students and engages them in learning that moves beyond the rote memorization of facts. It also provides evidence that your students are achieving the course goals and desired outcomes.

Resources:

The following links provide information about Indiana University that may help you identify situational factors for your course as well other resources to help you get ready to teach.

- **Academic Calendars**: Includes official yearly calendars, final exam dates, schedule of classes and future 9-year calendar.
- **IU Fact Book**: An index to the IU Fact Books from 1996 to the present. The Fact Books include information on the university, academic programs & degrees, alumni, enrollment, fees, personnel, physical facilities, and finances.
- **Where's that Class?**: This list of Academic Building Codes connects to the online campus map.
- **Enrollment Bulletins**: IU Academic Bulletins from 2001 to the present organized by school and year.
- **Office of the Registrar**: It includes course & section enrollments back to 1997 and Campus Grade Distribution Reports.
Wiggins, G., & McTighe, J. (2005). *Understanding by design*. Alexandria: Association for Supervision and Curriculum Development. The backward course design process used by instructors at IUB has been modified and adapted from this book.

**Backward Course Design**

We suggest that you use the backward design model (Wiggins and McTighe, 2005) when designing or redesigning your course, whether that course is a lecture, discussion or lab. In the backward design process you structure student learning based upon assessments that are intentionally designed to provide evidence that students have achieved the course goals.

The first step in backward course design is to clearly articulate the final results of the course. Begin by asking yourself:

1. What do I want my students to be able to think and do by the end of this course?
2. How will my students be different by the end of the course?

The answers to these questions are the course goal(s).

Many teachers refer to *A Taxonomy for Learning, Teaching and Assessing* (Anderson, Krathwohl 2001) as a guide for writing course goals in specific and measurable language. The taxonomy is based upon cognitive learning processes that move from lesser to greater levels of abstraction and complexity. Goals can be organized around one or more of these:

- Remember – retrieve knowledge from long-term memory
- Understand – construct meaning by interpreting, classifying, summarizing, inferring and comparing knowledge
- Apply – perform a familiar or unfamiliar task using knowledge
- Analyze – differentiate, organize and attribute knowledge
- Evaluate – judge and critique knowledge
- Create – generate and produce new knowledge

After creating your course goals the next step is to determine how you know that students have changed. What evidence will students provide to you demonstrating that they have achieved the course goals? The answer to this question is often your final assignment or assessment for the course.

Once you have decided upon the final assessment it is now time to identify the things students will need to “think and do” in order to successfully complete it. These are the learning outcomes for the course.

Finally you are ready to structure the course content, student activities, homework and lectures, all of which are based upon the learning outcomes.
The Backward Course Design Process

Keep in mind that lectures facilitate learning at the lower end of the taxonomy, while discussions, problem-solving, writing, and other more interactive teaching strategies tend to facilitate higher-order learning processes, such as analysis and evaluation. Your choice of teaching strategies should reflect the levels of thinking and learning in which you want students to be engaged.

References

The backward course design process used by instructors at IUB has been modified and adapted from Wiggins, G., & McTighe, J. (2005). *Understanding by design*. Alexandria: Association for Supervision and Curriculum Development.


**Choosing Learning Strategies That Encourage Student Success**

The learning strategies and activities you choose to engage students should align with the course learning outcomes you have identified during the backward design process. (See Backward Course Design).
Most teachers want their students to be capable of doing more than rote memorization of facts. Instead, they want students to be able to apply, synthesize, and evaluate course material. These more complex cognitive processes are commonly referred to as deep learning. Ironically, lecturing is the least effective way for students to accomplish this deep learning.

Deep learning experiences require students to be more responsible for their learning and for being informed of the course content. This means that you will need to provide students with multiple opportunities to apply newly learned principles in novel situations. For students to fully engage with a concept, they must see examples of the type of thinking that experts do in their field, and be able to practice that conceptual thinking through an application activity that is as close to the real world as possible.

Matching student learning strategies to course outcomes is one of the most important parts of the planning stage. To help you select learning strategies that align with the course outcomes, assessments and goals, ask yourself questions like these:

- Is lecturing the best and most efficient way for students to become introduced to the course content?
- What classroom activities can I use in order to hold students accountable for doing the homework readings?
- How can I have students connect new knowledge to what they already know?
- When should I tell students something and when should I let them discover for themselves?
- When should I lecture and when should I hold other activities?
- When should I show students how to do something and when should I encourage them to try it themselves?
- When should I ask students to do something alone and when should I ask them to work together (collaborative learning)?
- If I see someone make a mistake in a lab, when should I correct the mistake and when should I let the student discover her/his own mistake?
- When should I review concepts orally and when should I use handouts?

By considering such questions, you can begin to formulate strategies and techniques that match the outcomes you set for the course. Then you can choose from a myriad of student learning approaches, such as discussion sessions, active learning, problem-based learning, group projects, team-based learning and peer learning, to name just a few.

Reference: Read Richard Felder’s concise introduction to active learning.

First Day of Class

The first day of class can be an anxious experience for your students. Students enter the first day of class with at least four questions (Ericksen, 1984):

- Is the class going to meet my needs?
- Is the teacher competent?
• Is the teacher fair?
• Will the teacher care about me?

To this list we should add:

• Will I be able to succeed?
• What does the teacher expect from me?
• What will I need to do to get a good grade?
• Will I be able to juggle the workload for this course with the workload in my other courses?

Keep in mind that the first day of class sets the tone for the whole course. This is the best opportunity you have to establish your expectations for student achievement and behavior. Take advantage of the fact that most students will be looking for signs to indicate what the course holds for them, and will therefore be highly attentive. Therefore, be careful to communicate to students not only your high expectations for them, but also your commitment to and support for their learning.

**Recommended Checklist for the First Day of Class**

**Prior to the First Day**

• Visit your classroom prior to the first day
• Print and review your class roster with pictures of your students
• Create an outline for how you will use your class time
• Reflect on the climate you would like to create in your classroom (see also [classroom civility](#))

**On the First Day of Class**

• Arrive early and plan to stay late to answer student questions
• Introduce yourself to the class and help students meet each other with an activity
• Review the “key points” of the syllabus
• Communicate to your students clear expectations about attendance and grading policies
• Set the tone by engaging students the way you intend to throughout the semester (see also [group work](#), [team-based learning](#), [student response systems](#), [lecturing](#), [discussion techniques](#))

**References**

For more about the suggestions made in the above checklist consider the chapter on conducting a successful first day in Tools for Teaching, written by Barbara Gross Davis.

Find out more about students at IUB by looking at the [IU Factbook](#).

[Watch how one professor conducts her first day of class](#) (running time 5:39)

**Class Roster and Gradebook**

At Indiana University, class rosters, including student e-mail addresses, are available via [Canvas](#), [Oncourse](#), and [Onestart](#). You may also want to contact the [Registrar’s Office](#) at 855-0121, or registrar@indiana.edu.
Computer gradebook programs or electronic spreadsheets offer an efficient way of keeping track of student grades, attendance, and general background information (telephone, address, class schedule, etc.).

Consider using the electronic Gradebook in Canvas or Oncourse, as one of the most frequent requests we hear from students is how much they would prefer that all their teachers make use of it.

The Knowledge Base at Indiana University can be one way to learn about the gradebooks in Canvas and Oncourse:

- Canvas Gradebook: Instructor Guides
- Oncourse: Overview of Gradebook
- Oncourse: How to Use the Gradebook

For information on the IU Photo Roster in Canvas, please read this Knowledge Base article.

For information about the campus calendar, including last day to drop and final exam schedules, please refer to the Schedule of Classes each term.

## Course Packets and Electronic Resources

When planning their courses, many faculty members find that no commercially published textbooks meet their needs. Instead, they choose to compile course packets or use electronic resources, including journals and books that are available at Indiana University Libraries. Electronic resources used through the library are free of charge to your students and can be easily distributed through Oncourse or Canvas.

If you decide to use a course packet, ClassPak will develop, publish, and produce your packets in a fast, efficient, convenient, and versatile manner. Keep in mind that copyright permissions and fees compliance at Indiana University is mandatory and that most publishers charge a fee to reproduce their material. ClassPak will procure the required approvals for you and assist you with the application of Fair Use.

If you decide to compile a course packet, consider the following guidelines:

- Start early in developing a course packet. Copyright approvals can take up to six weeks. Work closely with the company that will make copies, since services and policies vary from company to company.
- Limit the number of documents you select for the course packet, and be sure that each serves a purpose directly linked to your course learning outcomes. The freedom gained by abandoning textbooks should be balanced against a careful, judicious selection process. This is also important for curbing costs that will be passed on to students.
- Create a table of contents, and number pages continuously so that students can easily find assignments.
- Provide an introduction to each entry in order to establish a context and rationale for the reading. The introduction can also suggest to students a reading strategy for a given selection.
- Provide questions to guide students’ reading and reflection for each selection.
• Ensure that the copies are clean and readable. Use originals that are clear. Eliminate black borders by pasting smaller pages on a white background. Do not shrink pages to fit several on one page.
• Be aware of current copyright restrictions.

Office Hours

The research on teaching and learning indicates that a student’s personal interaction with an instructor is one of the most important factors affecting his college experience (Astin 1993). Office hours can be one of the places where a meaningful exchange of ideas occurs and individual interactions can be fostered.

For a variety of reasons, some students are reluctant to come to office hours.

Several strategies can help break down barriers that prevent students from taking advantage of office hours. For example, an instructor started calling it “Study Table” instead of “Office Hours” and found that many more students wanted to study with a group of fellow students than had ever wanted to “come to the office.”

Another strategy to encourage student-instructor interaction is to require all students to sign up for an office conference with you at a key point in the semester (before a major exam, before a major paper). Shy students will thus have a compelling reason to speak with you face-to-face, something they might never volunteer to do. This also gives you an opportunity to have a conversation with each student and to offer encouragement on an individual level. Development of a more informal, personal relationship with students can improve the atmosphere of the classroom. Of course this particular strategy is limited by class size.

Getting students to come to your office hours is not always a problem; you may find that many students will come in, and for many different reasons. You may find yourself helping a student understand important core concepts, handle the logistics of a course that challenges her to think in new ways, or deal with a personal problem. Here are some ways to facilitate a helpful tutorial session:

• **Try to be as approachable as possible.** The best thing to do when a student comes in during your office hours is to make him feel welcome.

• **Listen to your students when they come to your office.** Give them your undivided attention. The best way to show that you are listening is to ask questions—it also shows students that you find their concerns important.

• **Refer students to campus services.** There may be situations in which a student needs help (e.g. financial or emotional counseling) that you are not the most qualified person to provide. If you feel that the student needs advice or assistance that you are unable to give, you may be able to suggest someone who can provide it. Making referrals is an appropriate and important responsibility. See Resources for Inclusive Teaching for a list of useful campus resources.
Policies

Sexual Harassment in Learning Contexts

Instructors exercise power over students, whether in giving them praise or criticism, evaluating them, or making recommendations for their further studies or employment. Actions by instructors and students that harm this atmosphere of mutual trust and respect undermine professionalism and hinder fulfillment of the university’s educational mission.

It is a violation of the Code of Rights, Responsibilities and Conduct if instructors engage in amorous or sexual relations with students for whom they have professional responsibility, either in an instructional context (a student enrolled in their class) or a non-instructional context (any decisions that may reward or penalize a student with whom he or she has or has had an amorous or sexual relationship, especially when the instructor and student are in the same academic unit or in allied units). In other words, all amorous or sexual relationships between instructors and students are unacceptable when the instructor has any professional responsibility for the student. Such situations greatly increase the chances that the instructor will abuse his or her power. In addition, such behavior places the instructor in a position to favor one student’s interest at the expense of others and implicitly makes obtaining benefits contingent on amorous or sexual favors.

Issues of sexual harassment can be especially tricky for associate instructors: as instructors they have some power over their students, and as graduate students they are subject to the power of the faculty over their academic records and letters of recommendation.

The following are some general guidelines for protecting yourself and the students you teach from sexual harassment:

- Don’t ask students to do favors for you, of any kind. This will help to avoid misunderstandings concerning the singling out of students for what might appear to be preferential treatment.
- Schedule meetings with students during office hours or by appointment. For more informal meetings with individuals or groups, meet in public settings such as the Union or a nearby cafe. Students should not be able to misconstrue the sentiment behind informal get-togethers and read inappropriate meanings into your invitations.
- Attempt to resolve disputes or disagreements with students in the presence (or within hearing distance) of witnesses. This may prevent a disgruntled student from making false accusations out of anger over academic matters. For AIs, another alternative is to meet simultaneously with the supervising professor for the course and the student in order to avoid similar misunderstandings.

References

The formal definition of harassment and the procedures to follow in such cases, can be found in the IU Code of Student Rights, Responsibilities, and Conduct, Part I. A. 3 and Appendix 2.
Privacy of Student Records

In accordance with the Family Educational Rights and Privacy Act (FERPA) of 1974 (also known as the Buckley Amendment), Indiana University fully supports the rights of its students to access and review their education records and to prevent the disclosure of their contents to third parties without prior consent from the student.

Some (relatively common) examples of the inappropriate disclosure of education records by instructors are:

- showing a student’s examination or paper to another student without removing all information on the examination that would make the identity of the first student easily traceable
- posting examination scores, class grades, or other documents without removing all personally identifiable information (name, student ID number) or without obtaining the prior written consent of each student involved

Instructors should ensure that their practices comply with the university’s system-wide policy concerning the release of student information. Instructors must not reveal student records to anyone other than the student. Use the Gradebook or PostEm tool in Oncourse to post student grades.

References

A detailed statement of these rights, and a summary of our institutional policies as mandated by the University Faculty Council, are set out in the Academic Handbook and the Code of Student Rights, Responsibilities, and Conduct.

Specific guidelines and procedures for inspection of student records may be found in the Appendices of the IU Code of Student Rights, Responsibilities, and Conduct.

Also see the statement about FERPA from the Office of the Registrar.

For guidelines on FERPA when using cloud services and social media, see Social Media: Legal and Privacy Concerns.

Accommodating Religious Observances

Overview

When planning courses, it is useful to remember the rich mixture of religious and ethnic groups that comprise our student population. Indiana University students follow many different religious practices; some of them will need to miss classes for observances on which the university remains open.

The IU Religious Observances policy is the result of lengthy faculty discussion about the just and appropriate way to deal with our increasingly diverse student population. The policy attempts to strike a
reasonable balance between accommodating religious observances of students and meeting academic needs and standards.

- Instructors should, on the syllabus, notify students of the religious accommodation policy and of the dates of major papers, exams, and projects.
- Students should use the appropriate form to request a religious accommodation within the first two weeks of the course.
- Instructors should make a reasonable accommodation when a student must miss an exam or other academic exercise because of a required religious observance. With timely notice, students must be allowed to make up the work that was missed. Absence for a religious observance does not count toward the number of absences an instructor might allow in a class.

References:

VPFAA provides the policy for religious observances, a five-year calendar of religious observances, and the form for requesting religious accommodations.

The Bloomington Faculty Council provides a policy about religious observances.

Assisting Students with Disabilities

Overview

The Americans with Disabilities Act (ADA), the Indiana Civil Rights Act, and Indiana University policy prohibit discrimination in educational programs against students with disabilities. Disabilities may include medical, auditory, visual, learning, psychological, mobility, or neurological problems. It is the policy of Indiana University to provide reasonable accommodations in a timely manner and on an individualized basis while maintaining institutional standards of performance. These accommodations are designed to counter the effects of disabilities where they may pose a barrier to the education process; they will not give the student an easy grade or an advantage over other students.

Students must provide to the Office of Disability Services for Students documentation of their disability and how it limits their participation in University activities. This documentation should come from appropriate professionals licensed to diagnose that disability. The Office of DSS makes the determination of whether the student is eligible for accommodations under the ADA. Then DSS staff and the student will discuss what assistance is needed, and, if requested, DSS staff will provide information to relevant faculty members and/or the academic unit verifying the disability and indicating the nature of the accommodation required. Common accommodations for test-taking include:

- Extended time
- Quiet, distraction-reduced setting
- Use of a simple calculator
- Enlarged print tests
• Permission to record answers directly on the test instead of on a Scantron answer sheet
• Written instructions

Alternate classrooms can be found by calling Classroom Scheduling (855-2489). If you do not have an associate instructor who can proctor in an alternate location, DSS can provide payment for proctors at $6/hour provided that the DSS Tests Coordinator (855-3508) is contacted with at least one week advance notice. Students with unusual needs may take a test in DSS in Wells Library W302 (double time, private setting, test reader, word processor for essay exams, scribe).

References

Instructors may be interested in “Applications of Universal Design in Postsecondary Education,” a collection of ideas and resources to ensure that education is accessible to all students.

The Adaptive Technology and Accessibility Center provides specialized technologies to help with reading, writing, studying, and information access.

**Employment and Preparation of Associate Instructors for Teaching**

An associate instructor is a graduate student who engages in activities as a teacher, assigns grades for at least a portion of the course, and has direct contact with students. The following list highlights key policies regarding the employment of graduate students as associate instructors.

Associate Instructors:

• Complete a written appointment form to be submitted to the Office of the Vice Provost for Academic Affairs.
• Receive a written statement from the supervising faculty member of the teaching objectives and administrative responsibilities associated with the appointment.
• Are tested to ensure adequate proficiency in English. The College of Arts and Sciences provides resources for international graduate students who would like to improve their teaching and language skills.
• Are limited to a 50% workload (20 hours per week).
• Receive teacher training, supervision, and development from their school or department.
• May be terminated mid-appointment only by the procedures specified by the Faculty Council.

References

The Indiana University Academic Handbook summarizes information, policies, and procedures applying to all academic appointees.

Of particular relevance to the employment of Associate Instructors are the Faculty Council Actions detailed in the Academic Guide under Student Appointments and Associate Instructors.
Interpreting Course Evaluations

Administering and Interpreting Course Evaluations

How to administer course evaluations

Most departments and schools employ standardized procedures for obtaining student ratings of instruction (commonly called course evaluations) in each course. Here are some guidelines for administering student ratings questionnaires in your course:

- Ask someone else to distribute and collect the questionnaires. You should not be present during the process.
- Have students complete the questionnaires in the last week or two of the semester, but not during or after a final exam.
- Don’t look at the results of the evaluations until after you’ve reported grades for the course.
- Save the results of your course evaluations to include in dossiers for tenure or promotion.

How to interpret the numerical results

Interpreting student ratings of instruction can be challenging, but the guidelines and suggestions below will help you extract useful information from your student ratings.

Make sure a sufficient number of students evaluate your course. The absolute number of students and the proportion responding are both important. If your course has fewer than 10 students, the ratings should be treated with caution. Similarly, if less than two-thirds of the students in your class complete ratings, the results may not accurately reflect the views of the entire class.

Take into account the average score for each item. In the IUB campus Multi-Op form, the scale ranges from 0 (Strongly Disagree) to 4 (Strongly Agree). Although the midpoint of that scale is 2.0, the campus mean for most items is around 3.0. So, any item mean that is between approximately 2.7 and 3.3 is solidly average. If you or your department use a different form, you should note the average score for each item on that form.

Don’t over-interpret the data. Rating forms typically use a 5-point scale. Due to measurement error, item means that differ by 0.3 or less may not really be different.

About percentile ranks. The campus Multi-Op report includes percentile ranks for each item, comparing the score to the overall campus mean for that item and to a specific reference group. The reference groups correspond to the professional schools and, in the College, to one of four disciplinary groups: Physical Sciences and Mathematics, Natural Sciences, Social Sciences, and Humanities.

Interpret percentile ranks with caution. Because item means for the Multi-Op form tend to cluster around 3.0, changes in means around that value tend to result in large changes in percentile rank. Changes in means that are further from the average for that item will result in smaller changes in percentile rank. For example, the difference between means of 3.1 and 3.3 for a particular item might
be 15 percentile rank points, while the difference between means of 2.1 and 2.3 (an identical numerical range) for the same item might result in a percentile rank difference of only 5 points.

For more information on interpreting and responding to student evaluations, see Using the results of evaluations to improve your teaching and Some factors that influence course evaluations.

Reference


Some Factors That Influence Course Evaluations—And Some That Don’t

Some course characteristics that are not under an instructor’s control can influence student ratings of instruction (commonly called course evaluations). While these effects do not always represent bias, they should be taken into account in interpreting course evaluations fairly and accurately.

The research investigating relationships between course characteristics and student ratings of instruction suggests that there are some small but noteworthy correlations.

- Smaller class sizes tend to get higher ratings than larger ones. It is not clear whether this relationship reflects differences in teaching methods typically used in the two contexts, or whether it is an effect of size alone.
- Classes in mathematics and the natural sciences tend to receive lower ratings than those in other disciplines.
- Elective courses tend to get slightly higher ratings than required courses, especially if a required course is outside a student’s major.
- Graduate student instructors tend to receive lower ratings than appointed faculty.

The effect of any one of these factors may not be great, but a combination could affect a teacher’s mean rating significantly.

Instructors often fear that student ratings are unduly influenced by factors that may be unrelated to effective teaching, such as:

- course difficulty
- workload
- grading leniency
- instructor popularity
- gender

The research has generally found little or no consistent relationship between such factors and student ratings (Centra, 1993).

What about students’ grades?
Some studies have shown a modest correlation between expected grade and course ratings (Braskamp and Ory, 1994). However, this can be accounted for by the likelihood that students who learn more tend both to get higher grades and give higher ratings. Braskamp and Ory conclude, “In sum, faculty do not receive high student ratings only because they give high grades.”

References


Using the Results of Course Evaluations to Improve Your Teaching

While student ratings of instruction (commonly called course evaluations) are usually seen as a form of summative evaluation of a course and an instructor, they can also be used to improve a course and an instructor’s teaching. The suggestions below will help you extract information from your evaluations that you can use to improve your teaching.

Look for trends or patterns in the results. Rather than focusing on individual item means, look for consistency among the results of several related items. Alternatively, if you have taught a particular course for several semesters, look at the results across semesters to discern trends in the data.

Focus on a few aspects of your evaluations. If the means for a number of items are lower than you’d like them to be, focus your efforts on a few of those items. For example, if your scores on items related to in-class activities and lecturing are high, but the scores for items relating to the readings and homework are low, then you might focus your efforts on revising the readings and out-of-class activities the next time you teach the course.

Don’t give undue weight to open-ended comments. Students’ written comments can be useful in improving a course, but it can be difficult to determine whether individual comments are representative of the views of the class as a whole. So as with the numerical data, look for trends in the comments. You may want to categorize comments into groups according to their content. This strategy will allow you to pay closer attention to comments that occur frequently, while paying less attention to those that seem to be outliers.

Take into account characteristics of your course (other than your teaching methods) that may affect student ratings. Such factors include:

- course size – smaller classes tend to get higher ratings than larger ones
• whether the instructor is a graduate student or appointed faculty – appointed faculty tend to receive higher ratings

• the discipline the course is in – courses in the natural sciences and math tend to get lower ratings

• whether the course is in the student’s major – courses outside the major tend to receive lower ratings

See Factors that Influence Course Evaluations for more information.

Remember that effective instructors, regardless of how well they teach, are continually working on improving their teaching skills. This is a process that takes time.

Reference


Alternatives to Course Evaluations: Other Ways to Obtain Feedback on Your Teaching

Student ratings of instruction (commonly called course evaluations) are a widely used source of feedback about teaching, but they aren’t the only source available. Below are some alternative methods for obtaining feedback on teaching.

• Ask a trusted colleague to observe your class. Often a colleague will be able to give you insight into your class dynamics and can help you understand the impression you make on your students. To make this kind of observation most useful, it’s a good idea to meet beforehand with the colleague who will observe you to discuss specific questions you have about your teaching, or particular aspects of the class that you’d like feedback on.

• Arrange for a member of the CITL staff to observe your teaching. A CITL staff member can observe your class at your convenience and provide you with confidential feedback about your teaching, along with suggestions for enhancing your teaching effectiveness. For more information, see Class Observations.

• Ask a trusted colleague or consult with a member of the CITL staff to review and discuss your course materials.

Either a trusted colleague or a CITL staff member can help you address questions such as

• Is my syllabus clear and complete?
• What does my syllabus say about my priorities as a teacher in this class?
• Are my syllabus and course materials in alignment with my goals for the course? How clearly do they support those goals?
• How can I revise my course materials to enhance my students’ learning?
• **Create a course portfolio and share it with colleagues.** A course portfolio is a way of documenting the intellectual work that goes into teaching a course. See [Portfolios](#) for more information on course portfolios.

• **Use formative assessments, such as CATs, to get feedback from your students.** See [Classroom Assessment Techniques](#) for more information.

• **Administer a midsemester evaluation to your students** to get anonymous, formative feedback about how they perceive the course and what helps or hinders their learning in your course. Staff members at CITL can administer a midsemester evaluation form (slightly different from the widely-used end-of-semester Multi-Op form) to provide you with ideas for changing your course at the midpoint of the semester, when changes can benefit your current students.

• **Ask a CITL staff member to observe your teaching and complete the Classroom Authority Rubric** if you believe that you have authority issues in your course.

---

**Section 2: Teaching Methods**

**Discussions**

**Overview**

Discussion is important to learning in all disciplines because it helps students process information rather than simply receive it. Leading a discussion requires skills different from lecturing. The goal of a discussion is to get students to practice thinking about the course material. Your role becomes that of facilitator. You design and facilitate the discussion rather than convey information. If you want to hold a discussion, don’t do all the talking yourself; don’t lecture to the group or talk to one student at a time.

**Preparing for Discussions**

To start planning a discussion (or any instruction, for that matter) decide what you want your students to get out of the discussion. For example, do you want them to share responses, make new connections, and articulate the implications of a text? Should they be able to work certain problems by the end of the hour? Should they be able to interpret and critique a journalistic photograph or a piece of art? Deciding on and articulating the objective for the discussion will help you decide what kinds of discussion activities will best help your students reach that objective. Remember that you can organize a discussion in many different ways: you can have students work in small groups, role-play, choose sides for a debate, or write and share a paragraph in response to the theme in question. You will also want to leave time to wrap up and summarize the discussion for your students (or have students summarize it), or to debrief after activities such as debates or role-plays.

**Develop a Clear Goal for the Discussion**

Knowing the content to be covered is not enough. Naming the chapter your students will read is not enough. If you’ve only thought as far as, “I want students to know...” you haven’t thought through enough what needs to be accomplished. You should be able to articulate what the students will be able to do with the information or ideas. For example, in a philosophy class for which students have read a
chapter on epistemologies or theories of knowledge, you might want students to be able to construct legitimate arguments for and against any epistemology about which they have read.

Problematize the Topic

Having a clear goal in mind makes it much easier to plan a discussion. You know what you want students to get out of it. But it is not enough: An instructor at IU several years ago told the story of how she wanted her students to deal with the issue of prejudice. She tried to start discussion merely by saying “Discuss prejudice.” No one spoke. She then asked if anyone had seen prejudice. One student raised a hand. When she asked what it was like, the student merely said “awful.” She had a goal, but not a problem or an activity to get the students to engage the ideas to achieve the goal.

The opposite end of the spectrum is also a problem. While “Discuss prejudice” is too open-ended, merely asking for the basic facts won’t work either. You’ve probably heard a professor rattle off a list of questions that require only brief factual replies and little student involvement:

- **Q. When was the Battle of Hastings?**
  - **A. 1066.**

  The result could hardly be called a discussion. So, give your students an open-ended problem to solve, a task to complete, a judgment to reach, a decision to make, or a list to create—something that begs for closure.

Select a Discussion Format

Many discussion activities can be used in the classroom. Choose one that will help your students meet your goals for the discussion. The more specific you can be in assigning the task, the more likely your students will be to succeed at it. Consider the **protocols** for tasks such as Think-Pair-Share, Affinity Mapping, Chalk Talk and other conversation structures.

Choose a Method to Assign Students to Groups

When assigning students to groups, consider the following questions.

- **How big should the groups be:** Two to six is ideal. Smaller groups (two-three) are better for simple tasks and reaching consensus. Also, students are more likely to speak in smaller groups. Larger groups of four-five are better for more complex tasks and generating lots of ideas.

  - **How should students be assigned to groups:** Randomly assigning students to groups avoids the problem of friends wanting to get off track. For long-term groups, you may want to select for certain attributes or skills (e.g. a statistician, a geology major, and a writer) or by interest in the topic, if different groups have different tasks.

  - **How long should the groups meet:** Just for this activity or for all semester. Stop the discussion groups while they are still hard at work; next time, they will work doubly hard. Long-term groups allow students to practice collaborative skills and make stronger bonds, but sometimes they get tired of each other.

Choose a Debriefing Method
Always debrief students; it is the most important part of a discussion, the time to summarize and synthesize. Most of learning in discussions happens during debriefing, so don’t squeeze it in—a rule of thumb is to use one-third of the total discussion time for debriefing.

You can use debriefing to correct incorrect notions. You can slip in any points that students neglected but that are important. You can pick which student reports from each group, though you should tell them in advance that you plan to do this. This makes everyone in the group responsible. You don’t have to hear back from every group, but can instead choose a few at random. When groups start repeating ideas, it’s time to stop.

Many techniques can get students to share what their smaller groups have done with the entire class: verbally, on newsprint/flipchart, blackboard or overhead, ditto/photocopy, etc. And you don’t have to hear from everyone; calling on a few groups at random to report works quite well. To encourage student cross-team competition in Team-Based Learning, reporting out from groups is simultaneous. Answers can be posted to a Powerpoint slide or pieces of newsprint hung on walls of class.

Problems with Discussion

- **Getting Started:** Students are often reluctant to get down to work in a discussion. Students are more likely to join in discussion if you divide them into pairs or small groups and assign a specific discussion question. After a few minutes of small group discussion, ask several groups to report out their ideas to the entire class. This often helps to get discussion going because students have had a chance to “try out” their ideas on their peers. Alternatively, give students time to write individually before opening up a discussion; they are much more likely to speak up if they have some notes to speak from. Further, by allowing for this kind of pre-discussion activity, you will be able to ask more complex and interesting questions. At the same time you will be promoting equity in the conversation, allowing everyone in the class to gather his or her thoughts before speaking rather than privileging the bold or the entitled, who can otherwise dominate the discussion.

- **Attendance:** Despite the fact that discussion section participation is a requirement for many introductory courses, students may believe that their attendance is not mandatory since the AI rather than the professor is in charge. Therefore you may want to devise a way to structure required assignments, projects or presentations into your sections so that section participation will be a part of the final course grade. If students know that the AI has some responsibility for determining their grades, that AI will have considerably more authority in the classroom or in any interactions with students.

- **Losing Control:** One fear about discussion is the possibility that the discussion will be TOO enthusiastic or not remain civil. Develop ground rules as a class. Gently, students can be reminded that behavior X (e.g., interrupting, blatantly ignoring the conversation, showing disrespect) is not appropriate in the context of the rules the class agreed on. If no rules have been established, or if the inappropriate behavior doesn’t seem to fit under the rules, you should address it immediately. Otherwise, you send a message to the students that such behavior is acceptable. Often, simply walking toward the student(s) will resolve the problem, as they will see that you are paying attention. Sometimes, however, you will need to address the problem directly. Try not to get rattled—take a deep breath, allow some silence, and then respond. This gives you some time to plan a response that models for the students how to
handle a difficult situation. Remember: never shame or humiliate a student, and don’t take
student remarks personally—although an attack may seem personal, it may be directed at
authority figures in general rather than at you in particular.

- **Discussion Monopolizers:** If the same students answer all the time, you might say, “Let’s hear
  from someone else.” Then don’t call on students who have already spoken. Do not allow one
  student to speak for an inordinate amount of class time. Take that person aside and ask him or
  her to limit comments in class. If the student does not respond to this hint, tell him or her an
  exact number of times he or she will be allowed to respond in class, and do not call on him or
  her after that number has been reached in any class period.

- **Controversial Topics:** If you teach charged topics, prepare students for discussing them. For an
  article about how to build up the skills necessary to discuss sensitive topics, see “Controlled
  Fission: Teaching Supercharged Subjects” (Pace, 2003).

**Strategies for Building Discussion throughout a Class Session**

- **Delay the problem-solving part** until the rest of the discussion has had time to develop. Start
  with expository questions to clarify the facts, then move to analysis, and finally to evaluation,
  judgment, and recommendations.

- **Shift points of view:** “Now that we’ve seen it from [W’s] standpoint, what’s happening here
  from [Y’s] standpoint?” “What evidence would support Y’s position?” “What are the dynamics
  between the two positions?”

- **Shift levels of abstraction:** if the answer to the question above is “It’s just a bad situation for
  her,” quotations help: “When [Y] says “_____,” what are her assumptions?” Or seek more
  concrete explanations: “Why does she hold this point of view?”

- **Ask for benefits/disadvantages of a position** for all sides.

- **Shift time frame**—not just to “What’s next?” but also to “How could this situation have been
  different?” “What could have been done earlier to head off this conflict and turn it into a
  productive conversation?” “Is it too late to fix this?” “What are possible leverage points for a
  more productive discussion?” “What good can come of the existing situation?”

- **Shift to another context:** “We see how a person who thinks X would see the situation. How
  would a person who thinks Y see it?” “We see what happened in the Johannesburg news, how
  could this be handled in [your town/province]?” “How might [insert person, organization]
  address this problem?”

- **Follow-up questions:** “What do you mean by ____?” Or, “Could you clarify what you said about
  ____?” (even if it was a pretty clear statement—this gives students time for thinking, developing
  different views, and exploration in more depth). Or “How would you square that observation
  with what [name of person] pointed out?”

- **Point out and acknowledge differences in discussion**—“that’s an interesting difference from
  what Sam just said, Sarah. Let’s look at where the differences lie.” (Let sides clarify their points
  before moving on).

- **Compare topics from a previous week**—“Use the four systems of though/intellectual
  movements we have studied to create a slide that answers the following questions...”

References
Facilitating Discussions of Sensitive Issues

Teaching controversial subjects is an inherent part of some courses and disciplines. Topics like race, culture, gender, and/or sexual orientation can come up in many fields, and any course dealing with current events presents an opportunity for politically-charged topics to arise spontaneously in class discussions. How we manage those discussions, however, can greatly impact how useful the conversations are to our instructional goals, and what sort of impact they have on the dynamics of the class. Many of the suggestions below focus on pre-planned discussions, but many of the techniques can also be applied to discussions that pop up unexpectedly.

Preparing for Discussions

In situations where you know you will be addressing a controversial topic, you can prepare for the discussion in ways that set the stage for success.

- **Consider possible sources of student views.** On many issues, students’ viewpoints may be wrapped up in their personal identities, influenced by family members, or connected to religious/spiritual/moral beliefs. So a challenge to an idea may be seen as a personal challenge as well. Just being aware of these deeper origins of student opinions—both for you and their classmates—may be useful in approaching delicate conversations.

- **Lead with your goals.** Contextualize the discussion within your class and disciplinary contexts. Be clear with your students why you are having this conversation and what learning outcomes you expect. Be ready to reiterate these goals during the discussion, and ask the students to redirect the conversation in ways that return to these goals.

- **Provide pre-discussion assignments.** Ask students to complete an assignment in advance that helps them understand and articulate their own views, as well as others they have heard. Such pre-discussion homework can help them reflect on those views, understand potential reasons behind them, and connect them to disciplinary content in the course. Such activities let them do some more logical thinking in advance, before any emotional barriers get thrown up during a heated discussion.
  - Listen respectfully, without interrupting
  - Allow everyone the opportunity to speak
  - Criticize ideas, not individuals or groups
  - Avoid inflammatory language, including name-calling
  - Ask questions when you don’t understand; don’t assume you know others’ thinking or motivations
  - Don’t expect any individuals to speak on behalf of their gender, ethnic group, class, status, etc. (or the groups we perceive them to be a part of).

- **Prepare students with disciplinary models for thinking.** If you are wanting them to learn how someone in your discipline discusses these matters, be certain to spend time overtly explaining and modeling those disciplinary processes, and make sure the discussion practices those
models, prompting students as needed. For example, is there a certain type/level of evidence that you expect them to apply to their reasoning? Are there certain theories/concepts that you want them to apply to their arguments?

- **Establish some discussion guidelines.** Work with students to establish a set of guidelines for class discussion; their input is important here so the rules are part of the classroom community, not just rules you impose. Some possible guidelines include:

- **Warm up first.** Consider dealing first with some less complex or emotionally-charged topics, rather than just jumping into a very heated issue. Have a reflective discussion about how that discussion went, so students can learn how to handle the discussion and build trust with their classmates.

### During Class

- **Provide a framework and starting point.** Prepare some questions to get the conversation started, balancing the needs for both focus and openness in responses. Avoid questions that seem like there is one right answer. In some cases, it works well to ask not for their own opinions, per se, but a sharing of what opinions they have heard about that topic; such an approach allows you to get the “lay of the land” without anyone feeling too exposed from the start.

- **Actively manage the discussion.** Be ready to prompt students as needed for follow-up, additional explanation, or evidence. Be ready to remind students of the discussion guidelines, and let them practice re-stating comments as needed. And be ready to steer the conversation back to the stated goals of the discussion.

- **Address the difficulty.** If there is some hesitancy in the conversation, consider asking why it is difficult to discuss, and be ready to reassert any course or disciplinary framework that will help people respond. Admitting your own discomfort in addressing such issues can make students more comfortable with their own discomfort, especially if you explain or model how you can work past it.

- **Provide structured opportunities for reflection and input.** Consider how you can structure opportunities for everyone to stop, think, and reflect, particularly when the conversation lags or becomes contentious. Ask students to write for a few moments, share answers with a neighbor, and come back to the broader discussion with that new focus. Sometimes a short writing break is useful in diffusing tension and refocusing the conversation.

- **Be ready to defer the conversation.** If the conversation gets too heated or off-topic, you may want to reach some sort of closure to the immediate discussion and defer the conversation to another class period, for which everyone can prepare. Be certain to explain the purpose of this deferral, and give students some resource or assignment that will help them prepare to discuss the topic in a more meaningful way within the context of the course and discipline. This is particularly useful in situations where the conversation was spontaneous, not planned.

- **Stay a neutral facilitator whenever possible.** Weigh the impact of you sharing your own opinions on an issue, knowing that could silence students who hold other views. If you do share your own ideas, be sure to elaborate on your thinking process enough to model the disciplinary thinking you want them to do, not necessarily the outcome.

### Follow-Up
• **Synthesize the discussion.** Leave some time at the end of class for people to synthesize what they heard, particularly in terms of how it relates back to course concepts and the activity’s stated goals. Or consider giving students a follow-up assignment outside of class that asks them to do this synthesis and reflection, both for their own benefit and for you to assess how useful the activity was. Part of the purpose here can be to give students a way to process any cognitive (or emotional) dissonance they may have encountered during the discussion.

• **Reflect on the conversation dynamics.** Ask student what they would have liked to have done differently in the conversation—either a reflection on the whole group’s behavior or (perhaps more importantly) on how they participated. You might remind them of any frameworks or guidelines as a structure for their reflections. In some cases, it might be worth giving the group a second chance at a discussion.

• **Share relevant resources as needed.** If you think some students may need assistance processing a difficult discussion, and who may need emotional or psychological support, make sure they know about campus resources available to them, including:
  - Counseling and Psychological Services (CAPS)
  - Office of Disability Services for Students
  - Sexual Assault Crisis Services (SACS)
  - IUB Commission on Multicultural Understanding

**Learning More**

The teaching center at the University of Michigan (the Center for Research in Learning and Teaching, CRLT) has several online resources related to teaching difficult topics and leading sensitive class discussions, including those aimed specifically at teaching during crises (campus unrest, national tragedies, etc.): [http://www.crlt.umich.edu/multicultural-teaching/difficult-moments](http://www.crlt.umich.edu/multicultural-teaching/difficult-moments).

Vanderbilt University’s Center for Teaching also has resources with valuable suggestions for managing difficult discussions: [https://cft.vanderbilt.edu/guides-sub-pages/difficult-dialogues/](https://cft.vanderbilt.edu/guides-sub-pages/difficult-dialogues/).

The Science Education Resource Center at Carleton College has a video example of a “Structured Academic Controversy” to engage students in discussion, consensus-building, and scientific thinking about evolution.

The [IUB Commission on Multicultural Understanding](https://mli.presswarehouse.com/sites/stylus/resrcs/chapters/1579229743_otherchap.pdf) provides resources and activities to promote understanding and celebrate diversity, useful for understanding the multicultural contexts of some topics that may be difficult to discuss in class.

The [Office of the Vice President for Diversity, Equity, and Multicultural Affairs](https://mli.presswarehouse.com/sites/stylus/resrcs/chapters/1579229743_otherchap.pdf) is an advocate for underrepresented students, faculty, and staff and provides programs to promote excellence through diversity, equity, and culture at Indiana University.

Group Work

Overview

Having students work in groups lets them practice the skills they are learning. Speaking in front of the whole class can be scary, and combined with the tension of speaking to the teacher, the situation can be downright terrifying to students. Breaking them up into groups not only develops social skills useful in the professional environment for which they are training, but gives them a chance to perform in a supportive environment before a test or even before having to do homework on the topic on their own.

Organizing the Groups

Keep in mind the following elements of group work when selecting the appropriate type of group work for your class.

- **Size**: Two to six people in a group is ideal. The smaller the group, the more likely each student will be to contribute to the discussion. Groups of two or three students are sufficient for simple tasks for which consensus should be reached quickly. Groups of four to six are better for more complex tasks in which a greater number of ideas may improve the final results.

- **Selection**: You should either assign students randomly to groups or select students so that each group has an equal distribution of talents. Do not let students choose their own teams, for they may team up with friends or form cliques that can get off topic. [Video on group formation](http://iucat.iu.edu/catalog/6278982) (running time 4:57).

- **Duration**: Use the groups for a brief discussion in class or for all semester. Long-term groups work more substantively and less superficially.

To derive the greatest benefit from the group interaction, you should spend a few minutes clarifying the students’ roles and the expectations for the group’s work.

Designating Roles in Groups

Groups that are created for in-class discussion can be easily organized around a four-person model based on roles. Each member of the group plays a specific role that supports the team’s collaborative effort. These roles include:
• **Leader:** Responsible for keeping the group on task, maintaining the schedule (meetings, deadlines), and maintaining contact information (phone numbers, emails).
• **Encourager:** Encourages conversation and inclusion of all opinions, and guides the discussion toward consensus.
• **Prober:** Ensures that the assumptions are correct and that there is sufficient evidence for the solution.
• **Recorder:** Writes down the group’s solution that will be submitted for the group grade.

While some people will tend to lead and some will tend to follow, everyone should be willing to compromise and modify their ideas in the interest of group unity. If the groups are going to be working together on a long-term project or multiple tasks, you may wish to modify these roles to emulate roles that one might encounter in your discipline. Ensure that the students rotate through these positions. Try to break a long project into at least as many tasks as there are people in each group and have the students rotate through the roles each time they start a new task.

**Sharing Group Results**

Students should share the results of their group with the class at large. This holds them accountable to show their work. Having to show the other groups what they did can increase their motivation to produce higher level work. While in the past, instructors were used to having groups report out their work either verbally or on newsprint posted on walls along with a walk-around format, for long-term projects, many social pedagogies now exist that can be employed, such as Prezi presentations or having students create a Public Service Announcement (PSA), blog, or a web page of their results. Do not forget to debrief students about the lessons they might have learned from the group work.

**Resources**

[Designing for Difficulty: Social Pedagogies as a Framework for Course Design](#)

Discussion can motivate students, especially when the activity involves authentic learning—that is, real world and messy—allowing students to collaborate, reflect on, and synthesize their learning. When planning the structure for a discussion, look for one that will hold students accountable to their peers, not just the instructor, in a public way (Bass & Elmendorf, 2011).

[IDEA Paper #49 Effective Classroom Discussion](#)

This paper sets out basic principles to create the expectation for student discussion, as well as the role of the instructor in fostering discussion in class.

**Team-Based Learning**

Team-Based Learning is an advanced form of group work in which content coverage is pushed outside of the class, with students using precious in-class time to take quizzes to show they have mastered the content and then practice the application of critical disciplinary skills such as problem-solving and argumentation. For more information, go to the TBL website, which has many videos, including ones on forming groups, the difference between groups and teams, and peer evaluation of team members.
Who is doing this at IUB?

The National Study of Student Engagement data show that 68% of IUB seniors engage in class discussion. Many IUB professors commonly use various discussion techniques. Some specific examples are listed below:

Prof. Jill Robinson (Chemistry) uses small groups for problem solving and “clickers” to collect student responses to get students to think deeply about fundamental chemical principles that can influence our climate. She does so even though she is teaching a large class (140-student C118: Principles of Chemistry and Biochemistry) and often teaching in a challenging classroom space.

Biology Professor and Carnegie Scholar Whitney Schlegel leads students to learn with their peers by engaging in discussion, problem-solving, and inquiry by using team members as a resource in classes of over 100. She utilizes a high-tech classroom so that students can show the products of their group work during class.

Informatics Professor Melanie Wu uses group work to move students beyond rote memorization of mathematical concepts. Having students work on team projects encourages them to help each other master the material and demonstrate the material’s relevance outside the course.

Lecture Techniques

Modeling: Effective Use of Lecture Time

What is lecturing good for? While lecturing is useful for conveying information, when students simply have to remember facts, they are operating at the lowest level of Bloom’s taxonomy.

Lecture time is more effective when used to model the kinds of thinking the instructor wants students to engage in. The instructor can simply perform that kind of thinking in front of the students by analyzing a text or showing them how to solve a problem. How does lecture as modeling differ from a traditional lecture? The instructor does not simply give an example, but in addition, provides metacomments about the why and how of doing it.

With training inexperienced instructors can teach a college class as well as or better than longtime professors who rely on lectures. Some research has shown that students learn up to twice as much when content coverage is moved outside the classroom, with the in-class time used for deliberate student practice at thinking scientifically, such as making and testing predictions and arguments, solving problems, and critiquing the reasoning of themselves and others (Deslauriers, Schelew, and Weiman, 2011). For more information on moving content coverage outside the classroom, see "Flipping" the Class.

Metaphors can be used in lectures to model disciplinary thinking, especially when students are struggling with a concept. Metaphors are powerful because they can connect unfamiliar concepts with existing knowledge in a way that students will understand and remember. The best metaphors are
based on something that is already familiar to the students, and the more vivid and concrete they are, the better.

**Who is doing this at IUB?**

The videos linked to below, provide two examples of professors using metaphors in their lectures to help their students make conceptual leaps.

1. Watch for the metaphor about marriage Professor Tony Ardizzone in the Creative Writing Program at IUB uses to model how to pick just the right word for a poem.

2. Professor Leah Shopkow in the History Department at Indiana University Bloomington created a metaphor from cooking to show students how to get the right balance of explanation and evidence for their historical writing. Students referred to the metaphor throughout the rest of the semester.

**References**


**Resources to Meet the Challenges of Lecturing**

**Effective Lectures**

*Characteristics of the Effective versus Ineffective Lecture* (Sullivan and MacIntosh, 1996)

This paper discusses interactive lectures, compares effective and ineffective lecture characteristic, and explores the question of when lecture is appropriate.

**Organizing a Lecture**

*IDEA Paper #46 Effective Lecturing*

This paper describes ways to organize a lecture. A basic tenet of lecturing is to, “Tell students what you are going to tell them, then tell them, and finally, tell them what you told them.”


A research-based guide to college teaching methods, this book has a useful section on lecturing, pages 57-73.

**Speaking Skills**

*IDEA Paper #24 Improving Instructor Speaking Skills*
An effective instructor does NOT want their lecture delivery to distract from the information being imparted. This paper spells out how to avoid having the voice and body distract during a lecture.

Classroom Authority

An instructor can be sure to avoid behaviors that could lessen authority and get clear about behaviors for [Enhancing Classroom Authority](#) by having a colleague or a CITL staff consultant use this [Classroom Authority Rubric](#) during a live or videotaped class session.

Building Rapport

Learning student names goes a long way toward developing a positive classroom dynamic and facilitating the students' overall learning experience. [Learning Student Names](#) is a compilation of over two dozen strategies and activities which will help instructors quickly learn students' names. Several of the methods encourage students to learn each others' names as well.

Clear Goals


Effective lecturers are clear about what they want students to DO by the end of the lecture. The Backward Design process starts with intended outcomes and works backwards from there to align course activities and content.

Attention Span

While the individual learning styles research has been debunked (Pashler, 2009), recent studies have found that human brains do benefit from variety during the learning process. Because students have an attention span of around 15 to 20 minutes at the start of class, instructors will do well to manage students' attention by interspersing mini-lectures with student practice, building a ‘change–up’ into class to restart the attention clock (Middendorf & Kalish, 1994). [The ‘Change-Up’ in Lectures](#) describes more than 20 practical strategies for breaking up lectures with activities that help keep students engaged in the learning.

Why lecture so much?


Many scientifically proven teaching strategies have been developed for teaching introductory courses. However, without support during implementation, faculty tend to choose traditional teaching methods (lecture and dumbing down the course) rather than moving in the direction of newer, research-based practices.

Peer Learning in Large Classes

[Confessions of a Converted Lecturer](#)

Eric Mazur (Physics/Harvard) explains in this video how he converted from lecturing to using his class for peer instruction. Students get their first exposure to the content outside of class, answering homework
questions. The questions they ask about the homework become the basis for his just-in-time lectures, which are interspersed with group discussion. Mazur rigorously tests his teaching techniques.

Science Labs

Preparing to Teach Science Labs

Adapted with permission from University of California Santa Barbara TA Handbook and Farris, 1985

Science labs provide students with the opportunity to practice science much in the way professionals do. This hands-on experience encourages students to develop a spirit of inquiry and allows them to be practicing scientists. Often, though, labs are presented as mere recipes in which students follow precise instructions to arrive at a conclusion whose importance is not clear. In order for labs to be effective, students need to understand not only how to do the experiment, but why the experiment is worth doing, and what purpose it serves for better understanding a concept, relationship, or process.

Labs are sometimes offered in conjunction with large lecture courses so that students may acquire technical skills and apply concepts and theories presented in lecture. Labs, however, are often “stand-alone” classes with no connection to a parent course. Even when they are related to another course, they often have their own agenda that may not be related to the lecture. The most important thing that associate instructors can do to ensure that their lab sections run smoothly is to be well prepared. Basic weekly planning for lab section might include the following strategies:

- Know exactly what the students are supposed to learn and why they have to learn these things.
- Research the relevance of the experiment, both the technique being taught and the applications of the theory being demonstrated.
- Read and study the theory on which the experiment(s) are based. Your understanding of the theoretical aspect of the lab should help you handle most student questions which don’t deal with concrete parts of the experiment(s).
- Perform the entire experiment in advance. Familiarize yourself with the equipment that your students will be using. By going through the lab yourself, you’ll be familiar with some of the stumbling blocks that your students may confront and you’ll know the subtler points of the process you are demonstrating.
- Be acquainted with the storeroom of the lab so that time won’t be lost during a lab looking for necessary equipment or materials.
- Know the location of the first aid kit, basic first aid rules, and procedures for getting emergency assistance. Demonstrate to students the proper technique—all of the precautionary measures you perform almost unconsciously. Safety takes on special importance when you are directly responsible for the health and well-being of 25 or more laboratory students. Most departments’ orientations cover safety procedures, but if they do not, the professor or lab coordinator in charge of the course will probably take responsibility for describing departmental policies.
- Talk to experienced instructors. They will often have very useful tips about things you are teaching.
• Ensure that students are familiar with the lab before they come to class. A pre-lab exercise, such as a statement of purposes and procedures or an explanation of why and how the experiment is relevant to the course, can be a valuable preparatory activity. Students who have no understanding of why the experiment is important will not derive much knowledge from conducting it, nor will they remember or be able to use much of what they do learn.

• Decide how to introduce the lab most effectively. Your initial introduction to the lab or the day’s first activity can set the tone and motivation for the rest of the lab. Will a 15-minute lecture about the theory and intent of the lab suffice? Will you need to demonstrate the procedures that they’ll be following? Is a handout with written instructions in order? What safety information do they need?

• Plan how you will guide students in preparing their lab reports. Obtain some sample data and work the calculations and answer the questions (without using the key).

References

The Teaching Resource Center at the University of Virginia has a webpage about teaching college-level laboratory courses.

The Center for Teaching Excellence at the University of Medicine and Dentistry of New Jersey has a collection of links to various online handbooks about science laboratory instruction: .


Who is doing this at IUB?

Ben Motz, Lecturer in the Department of Psychology and Brain Sciences, uses the Oncourse Wiki tool to help associate instructors build an archive of teaching strategies and resources (Teaching and Learning Gateway Faculty Showcase).

Associate instructors in the Departments of Biology, Chemistry, and Physics participate in microteaching opportunities during orientation in order to practice with laboratory introductions and solving problems.

Supervising Science Labs

The primary role of associate instructors in a science lab is to help students master the steps of scientific inquiry—recognizing and stating a problem so that it can be explored, forming and testing a hypothesis, collecting data, and drawing a conclusion. Helping students master the steps of scientific inquiry is not an easy task. The “11 steps of guided design” (Wales and Stager, 1977) provide a good approach to problem solving and a clear process for thinking through the complexities of real problems:

• identify the problem,
• state the problem objective,
• list constraints, assumptions, and facts,
• generate possible solutions,
determine the most likely solution,
analyze the solution,
synthesize the solution,
evaluate the solution,
prepare a report,
implement the plan,
check results.

Review the purposes and procedures of the experiment at the beginning of the lab. You might deliver a brief introduction explaining how the experiment relates to current developments in the discipline, or you might discuss the students’ statements of objectives. Ask for questions, clarify any ambiguities in the lab manual, and demonstrate safety precautions and special procedures.

Try to talk with each student at least once during the experiment. Technical and procedural matters can be handled quickly in a few words of advice or a very brief demonstration. If lab partners ask, “Why can’t we get this to come out right?” it’s very tempting to help students by saying, “Aha! I see where you went wrong.” But unless you resist the temptation, they are likely to falter at the same stage in the next experiment. Rather than simply explaining why the experiment failed, ask students a series of questions which leads them to discover the reasons for themselves. Of course sometimes the reason will be relatively simple (“You used hydrochloric instead of nitric acid.”), but just as often the reason will be more substantial—a matter of timing, sequence, proportion, or interpretation. Perhaps the student had the necessary data but has overlooked an important step in analyzing the results or is unable to synthesize a solution. Students may become frustrated if they can’t get a straight answer out of you, but they will also learn more.

References

The Teaching Resource Center at the University of Virginia has a webpage about teaching college-level laboratory courses.

The Center for Teaching Excellence at the University of Medicine and Dentistry of New Jersey has a collection of links to various online handbooks about science laboratory instruction: .


Who is doing this at IUB?

Associate instructors in the Departments of Biology, Chemistry, and Physics participate in microteaching opportunities during orientation in order to practice with managing laboratory situations.

Engaging Students in Problem-solving
Case Studies

Through short narratives, videos, data sets, historical artifacts, or other materials that are based in facts, concepts, principles, and paradigms, case studies present provocative questions and engage students in application of concepts and authentic problem-solving. The real or realistic observations and data provided in the case study help students develop skills in higher-order thinking, communication, and teamwork. Students discuss observations, make predictions, analyze data, offer interpretations, make decisions, critique existing solutions, and propose new avenues of investigation (Herreid, 1994).

Although case studies as instructional tools originated in business, law, and medicine, they can be used in any discipline where instructors want students to apply new terms and skills to real situations. Case studies can be an effective instructional tool as an “opener” (to introduce new concepts) or a “closer” (to allow students to apply and synthesize concepts) and can be taught through lecture, discussion, Socratic questioning, and small group cooperative learning.

References

The National Center for Case Study Teaching in Science has an extensive collection of peer-evaluated cases in all areas of science available for download. Also provided are training materials, teaching materials including notes, answer keys, and comments, and an extensive bibliography of research articles about case studies.


This article summarizes the history and instructional value of case study teaching, describes how to write a case, and provides strategies for teaching using the case method.

Who is doing this at IUB?

Students in Professor Simon Brassell's geology course use iPads in groups to visualize, analyze, and interpret patterns in rock outcrops. Prof. Brassell developed this activity as part of the 2010-2011 iPad Faculty Learning Community that investigated strategies for incorporating iPads into course instruction.

Students in the Human Biology Program study and interpret scientific cases within their social and cultural contexts. Students communicate their analyses through electronic portfolios.

Games for Learning

Games are a ubiquitous part of life in our culture, and experts suggest they will become even more deeply embedded in the coming years. Games help people develop a disposition toward collaboration, problem-solving, communication, experimentation, and exploration of identities, all attributes that promote success in a rapidly-changing, information-based culture (2011 Horizon Report). Research into the cognitive and socio-cultural aspects of gaming has exploded in the last decade as people have begun to realize the potential for game-based learning (Gee, 2003; Salen, 2007).
Some games aim to increase content knowledge by letting the players "live" the scenario. They may also create a sort of apprenticeship model in which players identify with experts and take on those roles as they move deeper into the game. Participation in so-called "serious games" has been shown to help change attitudes and affect players' actions in the real-world (TED Talk by Jane McGonigal). Games seem to be particularly successful in helping people develop problem-solving and decision-making skills and encouraging innovation. Without a doubt, gaming prompts people to do a tremendous amount of research and inspires participants to spend an extraordinary amount of time on task.

Using games in a class

- Consider using single- or multi-player serious games (see gamesforchange.org) as a warm-up for an in-class or online discussion.
- Have students play and critique a video game for content accuracy (Civilization series).
- Design roller coasters and other amusement park rides to explore forces and motion in physics (Roller Coaster Tycoon series).
- Have students build and run their own amusement parks (Roller Coaster Tycoon) or cities (SimCity series).
- Explore global issues and learn to take on differing identities in conflicts (Games for Change).
- Learn team-building and collaboration in multiplayer games.
- Have your students design a game. It doesn’t have to be a video game.

Who is teaching with games on the IUB campus?

- Anne Massey, Lee Sheldon, and Jeanne Johnston ran an Alternate Reality Game (ARG) called The Skeleton Chase during 2008-2009 to encourage a more active lifestyle.
- Ed Castronova does research on the economies of virtual worlds and massively multiplayer online role-playing games (MMORPGs). He calls them "petri dishes" for economics and other social sciences research.
- Keith Dayton uses simulations in his business classes.

References


Groundbreaking book on learning in games. Gee believes that good games embody good learning theory.


Eye-opening book with chapters from some of the giants in the field. Available free for download.

Team-Based Learning

Do students come to class having not done the reading? Does lecture tend to dominate the use of class time? Is there a delay in providing feedback to students on their performance? Does group work devolve into distributed, uneven pieces of a project? Team-based learning is a teaching strategy that addresses these challenges in several ways. First, students become members of small, permanent teams to hold
them accountable for each other’s learning. A student’s grade is based in part on their team’s performance during the course. In addition, students take regular quizzes on the reading (Readiness Assurance Tests, RATs), first as individuals and again as a team, to ensure their preparation for class. Because the RATs free the instructor from covering basic definitions and concepts, in-class activities then focus on team-based practice, application, and analysis. Finally, students provide regular feedback to their teammates on their relative contributions to the team’s performance. Many studies document the successes of team-based learning approaches, such as better student engagement in class, more collaboration among students, and deeper learning of complex skills.

References

The University of Texas has a video overview of the Team-Based Learning process.

The Team-Based Learning website has resources to support instructors through every step of designing and implementing a course using this approach.

Who is doing this at IUB?

Melanie Marketon, assistant professor in the Department of Biology, uses team-based learning in her 300-level biology lab course to encourage student collaboration and to help them develop deep understanding of the course concepts and excellent written communication skills.

Alice Lindeman, associate professor in the Department of Applied Health Science, School of Public Health Bloomington, uses team-based learning in her lecture courses on nutrition to ensure that students have read the background material ahead of time. Class time then is spent on more applied and creative tasks.

Dan Richert in informatics uses team-based learning in his Information Representation course. His students spend class time solving problems in their permanent teams, and Dan uses both RATs and CATs to ensure two-way communication between instructor and students.

Ways of Assessing & Evaluating Student Learning

Summative and formative assessment

Although many instructors think of assessing student learning as synonymous with the process of arriving at a grade for student work, assessment can be used for other purposes and in other ways as well:

- to evaluate students’ work or their understanding of course concepts
- to communicate to the student how well their work or understanding compares to stated criteria or to other students’ work
- to motivate students to work to understand course material
• to organize a course by providing a transition between major sections

The process of arriving at a grade for a student (either for a test or assignment, or for an entire course) is known as summative assessment. Summative assessments (e.g., exams or term papers) are formal, usually graded, and focused on letting students show a range of skills and knowledge. They require a considerable investment of time, both from students and from instructors, and are consequently often completed outside of class.

To design a good summative assessment, it is important to begin with the course goals. What skills and knowledge should students have gained in the course? (For more on this topic, refer to the CITL resource on Learning Outcomes.) Once this question has been answered, an instructor can create assignments that will allow students to demonstrate that they have reached the course goals. Good summative assessments are authentic, in the sense that they require students to think like practitioners of the discipline (Wiggins, 1998). To learn more about how to make an assignment authentic, see the CITL resource on Authentic Assessment.

In contrast, formative assessment is assessment of student learning that is designed to improve (rather than to evaluate) students’ skills or their understanding of specific course concepts. Formative assessments are typically done in class, can be anonymous, and are usually much more focused on particular skills or information. Formative assessments provide information to students as well as instructors about how well students understand specific course concepts, and are typically low-stakes, in the sense that they are often ungraded. The table below contrasts the two kinds of assessment.

<table>
<thead>
<tr>
<th>Formative assessment</th>
<th>Summative assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grading</strong></td>
<td>Usually graded</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Improvement: to give feedback to instructor and students about how well students understand specific material</td>
</tr>
<tr>
<td></td>
<td>Judgment: to derive a grade, and to allow students to work intensively with course material</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Very focused on whether students have acquired specific skills or information</td>
</tr>
<tr>
<td></td>
<td>Less focused on specific skills or information; instead, allows students to demonstrate a range of skills and knowledge</td>
</tr>
<tr>
<td><strong>Effort</strong></td>
<td>Requires little time from instructors or students; simple; done in class</td>
</tr>
<tr>
<td></td>
<td>Requires more time from instructors and students; complex; done outside of class</td>
</tr>
</tbody>
</table>

A classic type of formative assessment is Classroom Assessment Techniques, or CATs. CATs are learner-centered, teacher-directed, mutually beneficial formative assessments that can be tailored to specific disciplines and teaching contexts.
Another widely-used type of formative assessment is the Conceptest (Mazur, 2001). A Conceptest is a multiple-choice question that tests students’ conceptual understanding of material presented in class. For more information, see these videos:

- Erik Mazur’s talk “Confessions of a Converted Lecturer” about how he developed peer instruction
- “Developing problem-solving skills and logical thinking”

A well-designed course will have a balance of formative and summative assessments. An instructor might use CATs or other formative assessments while students are learning new material, to check on their understanding of the new concepts. The results of the formative assessments tell both the students and the instructor whether or not students are ready to move on to new material. After the instructor has determined that students have the knowledge and skills they will need, she can assign a summative assessment to allow them to show their new knowledge and skills.

References


This is the original classic (and encyclopedic) volume defining CATs. It describes 50 different CATS and includes examples of how each can be used in the classroom.


This website defines CATS and describes a variety of the most useful techniques.

http://www.flaguide.org/index.php

This website describes the Field-tests Learning Assessment Guide (FLAG), a primer on CATs and examples of many CATs for courses in the STEM disciplines (science, technology, engineering and math).


This article by Catherine Crouch and Erik Mazur summarizes data from 10 years of teaching using Mazur’s Peer Instruction methods (which includes Conceptests), demonstrating that students taught using Peer Instruction more effectively master course concepts.

Test construction

Most tests are a form of summative assessment; that is, they measure students’ performance on a given task. (For more information on summative assessment, see the CITL resource on formative and summative assessment.) McKeachie (2010) only half-jokes that “Unfortunately, it appears to be
generally true that the examinations that are the easiest to construct are the most difficult to grade.” The inverse is also true: time spent constructing a clear exam will save time in the grading of it.

**Closed-answer or “objective” tests**

By “objective” this handbook refers to tests made up of multiple choice (or “multi-op”), matching, fill-in, true/false, fill-in-the-blank, or short-answer items as objective tests. Objective tests have the advantages of allowing an instructor to assess a large and potentially representative sample of course material and allow for reliable and efficient scoring. The disadvantages of objective tests include a tendency to emphasize only “recognition” skills, the ease with which correct answers can be guessed on many item types, and the inability to measure students’ organization and synthesis of material.

Since the practical arguments for giving objective exams are compelling, we offer a few suggestions for writing multiple-choice items. The first is to find and adapt existing test items. Teachers’ manuals containing collections of items accompany many textbooks. However, the general rule is “adapt rather than adopt.” Existing items will rarely fit your specific needs; you should tailor them to more adequately reflect your objectives.

Objective-answer tests can be constructed to require students to apply concepts, or synthesize and analyze data and text. Consider using small “cases studies,” problems or situations. Provide a small collection of data, such as a description of a situation, a series of graphs, quotes, a paragraph, or any cluster of the kinds of raw information that might be appropriate material for the activities of your discipline. Then develop a series of questions based on that material, the answers to which require students to process and think through the material and question significantly before answering.

Here are a few additional guidelines to keep in mind when writing multiple-choice tests:

- As much of the question as possible should be included in the stem.
- Make sure there is only one clearly correct answer (unless you are instructing students to select more than one).
- Make sure the correct answer is not given away by its being noticeably shorter, longer, or more complex than the distractors.
- Make the wording in the response choices consistent with the item stem.
- Beware of using answers such as “none of these” or “all of the above.”
- Use negatives sparingly in the question or stem; do not use double negatives.
- Beware of using sets of opposite answers unless more than one pair is presented (e.g., go to work, not go to work).

**Grading multi-op exams**

Grading of hard-copy multiple choice exams is typically done through the use of computer scannable answer sheets available from your departmental office. Take completed answer sheets to IUB Evaluation Services and Testing (BEST) located in Franklin Hall M014; students will need number 2 pencils. If you have your test scored by BEST, they will provide statistics on difficulty and reliability, which will help you to improve your tests.
If the exam is administered during class, it is helpful to put up pertinent information required on the answer sheet (course name, course number, section number, instructor’s name, etc.). Also, remind students to fill in their university identification numbers carefully so that you can have a roster showing the ID number and grade for each student. (This roster should be used only by the instructor, and should not be posted where other students can see it.)

If you would like to consult with someone about developing test items, call the Center for Innovative Teaching and Learning at 855-9023. If you would like to consult with someone about how to interpret your test results, call BEST at 855-1595.

**Essay exams**

Conventional wisdom accurately portrays short-answer and essay examinations as the easiest to write and the most difficult to grade, particularly if they are graded well. You should give students an exam question for each crucial concept that they must understand.

If you want students to study in both depth and breadth, don’t give them a choice among topics. This allows them to choose not to answer questions about those things they didn’t study. Instructors generally expect a great deal from students, but remember that their mastery of a subject depends as much on prior preparation and experience as it does on diligence and intelligence; even at the end of the semester some students will be struggling to understand the material. Design your questions so that all students can answer at their own levels.

The following are some suggestions that may enhance the quality of the essay tests that you produce:

- Have in mind the processes that you want measured (e.g., analysis, synthesis).
- Start questions with words such as “compare,” “contrast,” “explain why.” Don’t use “what,” “when,” or “list.” (These latter types are better measured with objective-type items).
- Write items that define the parameters of expected answers as clearly as possible.
- Make sure that the essay question is specific enough to invite the level of detail you expect in the answer. A question such as “Discuss the causes of the American Civil War,” might get a wide range of answers, and therefore be impossible to grade reliably. A more controlled question would be, “Explain how the differing economic systems of the North and South contributed to the conflicts that led to the Civil War.
- Design the question to prompt students’ organization of the answer. For example, a question like “Which three economic factors were most influential in the formation of the League of Nations?”
- Don’t have too many questions for the time available.
- For take-home exams, indicate whether or not students may collaborate and whether the help of a Writing Tutorial Services tutor is permissible.

**Grading essay exams**

A more detailed discussion of grading student work is offered in Evaluating student written work and applies to handling essay exams as well.

However, unlike formal essays, essay exams are usually written in class under a time limit; they often fall at particularly busy times of the year like mid-term and finals week. Consequently, they are differently
stressful for students, and as a result you may encounter errors and oversights that do not appear in formal essays. Similarly, it is not unusual to find essays that do not provide responses we have anticipated.

Your grading changes in response. Adjustments to the grading scale may be necessary in light of exam essays that provide answers you had not anticipated. Comments may be briefer, and focused primarily on the product students have produced; that is, exams do not require suggestions for revision.

---

**Evaluating student written work**

As with test construction, the quality of a writing assignment or essay exam can often determine the quantity of time spent grading; a good assignment is easier and faster to evaluate. Constructing effective writing assignments requires some thought and preparation on your part, but such strategies also tend to improve your communication with students about expectations and their own performance on a given assignment.

**Designing writing assignments**

Assignments should give students an opportunity to demonstrate their having reached, exceeded or fallen short of the learning goals you’ve set for them. You may want them to have learned a set of principles, or to be able to apply a theory to new evidence; you may wish them to be able to sustain an argument, or synthesize conflicting sources. Perhaps your goal is as simple as wanting them to write clearly for a lay audience about a topic in your field. If you keep your goals in mind while constructing assignments, you will find students more likely to reach them, and your evaluation process easier and smoother.

Make sure your assignment clearly specifies the following information, which is often referred to by the acronym RAFTS (Role, Audience, Format, Task, Standards).

**Role:** What role is the student to take in writing this paper? If the student is writing a book review, for example, she takes on the role of critic.

**Audience:** Who is the audience for this paper? What can students assume about the knowledge and background of their readers? Often students have difficulty writing because they conceive of their audience solely as their professor: “the instructor already knows all this; what can I possibly say?” By imagining an audience to whom they can speak with authority, students can often write clearer, more interesting essays.

**Format:** In what format should this paper be written? Business memos, for example, typically open with standard headings and are very different from academic papers.

**Task:** What task is the student to accomplish? The task might be, for example, to summarize a text, to compare and contrast two theories, or to analyze an argument.

**Standards of evaluation:** what major items will you be looking for when grading? For example, “An answer to the question posed”; “Evidence drawn from the text”; “Proper section headings”; “Prose free
of major grammatical errors.” This list need not be exhaustive or define specific weights or points, but should indicate to students what primary traits the graders will consider.

**Making standards of evaluation clear to students**

When we respond to student writing we are evaluating the work, commenting on this particular piece of writing, and marking error at the sentence level.

Making your evaluative criteria clear ahead of time eases your students’ fears about the evaluation process to some extent. Moreover, students who know the standards against which their essays will be judged are more likely to try to meet those standards when they write. The more clearly you indicate what you want in your assignment, the more likely it is that you will get it.

**Grading rubrics**

Sometimes, instructors wish to make their standards more explicit to students. A systematic representation of grading criteria and their respective worth in the overall grade is called a rubric. These might be holistic scales that describe the characteristics of an “A” paper, a “B” paper, and so on, or may be based upon individual criteria that are each rated as part of the grade; this process is called Primary Trait Analysis (See Walvoord).

**Modeling your grading**

A simple, effective method to demonstrate your standards is to grade a paper in front of the class. The paper you grade might be one written in the previous semester (with the student’s name removed, of course). It is useful to perform this exercise with a paper which might receive an average grade rather than a superior one; the average paper that makes some interesting mistakes will teach students what to avoid, while a superior paper will only excite envy or hopelessness.

**Providing benchmark essays**

Students often learn best from examples. Providing a series of graded essays that represent a range for grades is one way of demonstrating the ways in which an A essay differs from a B essay. One caveat: providing benchmarks also means that you’re circulating essays that might be plagiarized. Consider working with benchmark essays in class and then collecting the copies, or using examples that are from a “second cousin” assignment to your own so that they do not serve as actual responses to an assignment.

Regardless of the method you choose, you are welcome to consult with the CITL Writing Program, 855-4928. Its staff members will help you to construct rubrics or provide student papers to grade in class.

**Commenting on written work**

We use comments to “teach in the margins.” Comments should reflect your readerly response to students’ success in meeting the demands of the assignment. Identify those issues that are most important to you—those items identified in the assignment sheet as important—and comment accordingly.

**Commenting on a first draft**
“First draft” implies revision. On a first draft, comments usually address higher-order concerns: Has the student addressed the question posed? Is there a clear thesis that anticipates the paper’s argument? Is the evidence appropriate and convincing? Is the organization clear?

At this stage, try the following strategies:

- Phrase your comments as questions that you, as a reader, would like the writer to address.
- Connect your comments to specific phrases or sentences in the student’s text and avoid vague directives such as “needs more,” “confusing,” or “expand.”
- Direct comments to the 2-3 strategies that can best improve this piece of writing over all.
- In the early stages of the writing process there is little point in addressing sentence-level problems, since after a revision many of those sentences may disappear. Focus on substantive issues.

Commenting on a final draft or essay exam

Comment on a final draft with a different purpose—to justify a grade, to point to sections that are particularly effective or ineffective, or to address sentence-level concerns that affect the overall quality of the piece, for example.

At this stage, try the following strategies:

- Begin with encouraging or positive remarks
- Avoid comments that assume a subsequent revision. These are not helpful to the student, and take far more time.
- Indicate those items that can help students with subsequent assignments, like “next time, make sure you address all parts of the assignment” or “your paragraphs tend to be too long to follow easily; try breaking them up more frequently.”

Marking sentence-level error

Avoid the trap of editing papers for students. The point is for students to learn to edit their own writing; tell them there is a grammatical problem in a line, but do not fix it for them. Written comments, especially about grammar and mechanics, do very little to improve the student’s next effort.

Richard Haswell advocates responding to surface error, grammar, and mechanics problems by indicating the presence of such an error “only with a check in the margin by the line in which it occurs.” One check per error, so two checks in the margin means two errors in the line. He marks these problems, records the number of them, and returns the essay to the student. He requires the student to correct checked errors and resubmit the essay for evaluation. No grade is recorded until this stage.

Here is a paragraph that is minimally marked (using “✗” rather than “✓”):
Haswell claims that with minimal marking a smaller proportion of his time is spent on surface error, allowing him to pay more attention to substance and saving time overall.

Assessing Student Progress Over Time

Pretests and posttests assess students' knowledge and skills at the beginning and end of a lesson or course. Differences between the pretest and posttest provide evidence of any learning that occurred. The more specific the assessment, the more solid the evidence. Although it is uncommon in some disciplines to give these tests numeric scores, doing so makes it easier for others to use your results.

The following are easy, straightforward pretest/posttest strategies. Those with an asterisk (*) are adapted from Nilson.

* First week writing and corrections

Give students an ungraded writing assignment on key concepts, principles and techniques, processes, or cause/effect issues related to your course content. At the end of the course, have students write a letter to their "pre-course self" correcting errors, poor reasoning, and misconceptions they may have written about in the first assignment.

* First-week final exam

One of the more controversial methods of measuring student learning is to have students take the final exam, without grading them on it, during the first week in class. At the end of the semester give them the same exam again and compare the results. While letting students see their final exam makes some faculty nervous, Nilson (2011) points out that most students won't remember any of the questions and,
if they do, what's the harm? Remembering some of the questions will simply help them focus on what you feel is important for them to know.

**Learning advice letter**

Here's a technique that attempts to measure students' metacognition. Ask students to answer this question on the first day of class: “Besides hard work, what will you need to do to be successful in this course?” Then, at the end of the course, ask students to write a letter to a future student telling them what they need to do to be successful in the course.

* Targeted essay

On the first day of class, have students write an answer to the following question: “What do you expect to gain from this course?” Then, at the end of the course, have students write an essay based on this question: "Pretend that you are on a job interview and the interviewer asks 'What are the three most important things you learned in your X course?' How would you answer?"

**Knowledge survey**

Survey students’ confidence about knowledge of course material at both the start and end of the course. In a knowledge survey, students do not answer the content questions; rather, they rank their confidence in their ability to answer each question. For more information on Knowledge Surveys, see the [article by Nuhfer and Knipp](http://www.facultyfocus.com/seminars/measuring-learning-the-ultimate-teaching-evaluation/).

**Classroom Assessment Techniques (CATs)**

Adapt any of the many [Classroom Assessment Techniques](http://www.facultyfocus.com/seminars/measuring-learning-the-ultimate-teaching-evaluation/) (Angelo & Cross, 1993) to the bottlenecks in your course. CATs are designed to gauge what students are learning and how well they are learning it. They are can measure a wide variety of knowledge, skills, and learner characteristics, including prior knowledge, analysis and critical thinking skills, creative thinking skills, problem solving skills, application skills, attitudes, and self-awareness.

**References**


Section 3: Creating a Positive Environment

Ensuring Civility

Classroom Atmosphere

Students who feel comfortable in a classroom and who have some positive rapport with the teacher are likely to have better learning outcomes. In one Indiana University study, students reported that one important condition of their achievement in class is that they feel their instructor “cares about them.” In the long run, an instructor will accomplish more learning by spending some time, especially in the first few classes, on creating a supportive environment by such actions as learning student names, smiling, and making encouraging statements to the class.

What is Incivility?

Student behavior that is disorderly, immature, or uncivil may not be intentionally rude. Teachers and students tend to see these behaviors differently. Boice (2000) discovered from his studies in actual classrooms that incivilities may be a two-way street and the patterns may be set from the first day. Faculty and students see different behaviors as uncivil. Both students and faculty dislike students conversing so loudly that the teacher cannot be heard, students confronting teachers with sarcastic comments, and the classroom “terrorist”. Students, but not faculty, dislike if the teacher is distant and uncaring, gives pop quizzes, arrives late or cancels class, or if the instructor allows a student to taunt or belittle other class members with no intervention. Teachers, but not students, dislike it if students are reluctant to participate, are unprepared, demand make-ups or extended deadlines, or students arrive late or leave early obtrusively. Boice observed that students tend to commit a few incivilities on the first day of class; depending on the reaction of the instructor, the incivilities will increase or lessen.

Instructor Behaviors to Avoid Incivilities

Knowing that an instructor’s own behaviors can reduce or prevent incivilities, what can be done besides an engaging lesson plan? According to Middendorf and McNary (2011) an instructor who wants to prevent incivilities should smile and make eye contact, move around the room and amongst the students, give full consideration to student spoken responses in class, use humor when possible (a stress reliever for all), and make encouraging comments to individuals and the class as a whole. There are also behaviors an instructor should avoid. An instructor should NOT point out and apologize for their own mistakes, humiliate students, accept weak answers, nor allow students to interrupt, challenge, or complain during class. Such behaviors indicate a lack of confidence that will signal to students that incivilities may be allowed.
For any uncivil student behavior, an instructor should not ignore it hoping it will go away or laugh off inappropriate comments or behavior. By acknowledging the problem right away instead of hoping things will just settle down (They don’t!), the effective instructor gives him or herself time to deal with the problem. The instructor may make an appointment to see the student at another time. Maybe he or she will use the chain of command or use some of the campus resources listed below. This may call for better class session planning or having one’s class videotaped and reviewed using the Classroom Authority Rubric. The main thing is to consider the possibility that something the instructor is doing in class is contributing to the problem.

**Assisting Emotionally Troubled Students**

Should a student show signs of serious emotional problems, or if a student makes comments in classes or in writing that give concern about mental health issues, the student should be referred to Counseling and Psychological Services at 855-5711. AIs should consult with a supervising professor first.

**References**


**Classroom Climate**

Students experience the classroom as not just an intellectual space, but also as a social, emotional, and physical environment. Classrooms that subtly or indirectly exclude certain groups of students tend to be common from the students’ perspectives; students have a particularly negative reaction to instructors who fail to acknowledge consequential local or national events (Huston and DiPietro, 2007). These implicitly marginalizing classrooms have a negative effect on students’ motivation to learn and cognitive development (Ambrose et al., 2010).
Instructors’ attentiveness to the intellectual, social, emotional, and physical environments creates a classroom climate conducive to student engagement with the content and skills of the discipline. In terms of the intellectual environment, instructors provide content in an organized and engaging manner and give students motivating and challenging practice so that they are able to do authentic tasks in the discipline. From the emotional aspect of classroom climate, instructors create an encouraging atmosphere where students feel safe taking risks, receive support when events intrude on learning, and believe they can succeed if they put forth effort. And instructors foster approachable and supportive social interactions with students and among students so that learning is a collaborative and not competitive endeavor. With respect to the physical environment, instructors reduce and remove disruptions and barriers to learning so that all students can equally access course material.

Classroom Climate Resources

- Possible classroom scenarios that deal with disruptive student behavior have been condensed into short case studies by Billie Hara, in the Prof Hacker blog of The Chronicle of Higher Education website. We have compiled many of these cases into the document "Case Studies: Disruptive Student Behavior," which is used in the classroom climate workshop each fall.
- Resources for inclusive teaching summarizes cultural, teaching and learning resources on campus that support inclusive educational practices.
- Counseling and Psychological Services (CAPS) brochure. Outlines the services offered by CAPS, including who seeks counseling and why, how to schedule an appointment, what to expect, etc.
- Guidelines for dealing with disruptive students in academic settings brochure. Defines disruptive behavior, sets guidelines for how to deal with in- and out-of-class disruptions, details the dean of students response, provides tips for dealing with disruptive students, and provides a list of campus resources.
- Strategies for sustaining classroom respect and civility brochure.
- Teacher student relationships: A Guide for student academic appointees brochure.
- Teaching and learning in a multicultural community brochure.
- Understanding sexual harassment brochure.

Who is doing this at IUB?
Faculty recently discussed workshops and strategies they use to educate graduate student instructors about learner-centered teaching approaches. Preparing graduate students: Learner-centered teaching

Cara Maffini, a graduate student in the School of Education, uses simple but powerful teaching strategies in her discussion-based course to promote all students’ self-confidence and to create a more inclusive and strength-based classroom environment.

Lara Lackey, in her class M333 Art Experiences for the Elementary Teacher, uses authentic assignments to reduce her students’ anxieties about art and doubt about the relevance of art to elementary education. Art and student learning: The benefits of art in a generalist classroom

References

See how instructors in an aquarium science course at Oregon Coast Community College create and encourage social interaction and value students’ experiences and knowledge. Creating a Community of Learners (running time 4:36).


Resources for faculty, instructional, and organizational development.


Ambrose et al. provide case studies, an overview of the research about how aspects of classroom climate affect student learning, and summaries of strategies for maintaining a classroom climate conducive to learning.

The annual Associate Instructor Workshop on Classroom Climate, sponsored by the Office of the Vice Provost for Undergraduate Education, is a campus-wide orientation in August that equips all new graduate student instructors with techniques for creating an inclusive classroom.

Teaching in the Face of Tragedy

Upsetting and sometimes tragic events that occur locally, nationally, or internationally can divert attention away from day-to-day learning and teaching. In these situations, instructors are faced not only with the challenge of coping with the events personally, but also with the task of managing the responses of their students. In response to previous tragic events, the higher education community has developed resources to help instructors address the concerns of their students.
Whether and how to broach the subject of a tragedy is always at the instructor’s discretion. However, as a most basic response, it can be helpful to acknowledge the event in class in a humane way to help students cope and focus on their coursework. Students can find a total lack of response from their instructors frustrating and disappointing. Furthermore, many students find it unhelpful for an instructor to say that the “class has to go on” or that “there is nothing we can do” without offering additional comment. An instructor does not have to have a discussion about the event in class, especially if he or she feels it is unrelated to the class topic or if he or she feels unprepared to have such a challenging discussion. However, there are simple teaching strategies which students find helpful during times of crisis (Huston and DiPietro, 2007):

- Offer extensions to students who request them.
- Offer to add review sessions or to revisit class information at a later date.
- Allow a minute or two of silence before proceeding with the course material.
- Give students a few minutes to write their thoughts down about the event. Instructors don’t need to collect these writings; they can simply be placeholders for students’ thoughts so that they can focus on the course material.
- Read an inspirational passage.
- Remind students of support structures on campus which are equipped to manage students in stress or shock. IUB’s office of Counseling and Psychological Services offers a walk-in service for students who need help.

If you choose to discuss the tragedy in class, set up discussion structures that support the emotional and psychological safety of students in the class.

Other resources:

- The office of Counseling and Psychological Services (CAPS) offers individual counseling, group counseling, couples counseling, and psychiatric consultation. Any kind of concern can be discussed confidentially with a counselor to enhance psychological growth and increase problem solving skills.
- Indiana University Bloomington has created the Emergency Preparedness and Continuity website as part of the campus’s ongoing emergency preparedness efforts. In the event of a disaster or emergency, the site will contain regularly updated news, instructions, and information.
- Other services for students are listed on the website of the Dean of Students.

References

If a student ever makes you or another student feel unsafe, appropriate university support should be contacted immediately, including campus police (dial 911). The following is quoted from Indiana University's *Guidelines for Dealing with Disruptive Students in Academic Settings* (adopted by the University Faculty Council).

"If a student becomes disruptive (e.g., refuses to quit talking; blocks an entry way; throws things; uses profane, intimidating, or abusive language; repeatedly interrupts others' speech; moves within the classroom without authorization) an instructor should first request compliance from the student, and, if it is not received, he/she may dismiss the student for the remainder of the class period. The student is expected to accede to this request and may subsequently contest this action using procedures established within each unit. If the student fails to leave after being directed to do so, the instructor should enlist the support of other university personnel (faculty members, academic administrators, and campus police) to help resolve the situation. Physical force, including touching, must be avoided, and the instructor must judge, based on the nature of the disruption, whether the class period can continue once the offending student departs."

Below is a list of tips for responding to disruptive students, from *Guidelines for Dealing with Disruptive Students in Academic Settings*.

1. Remain calm and request compliance from the student in concrete terms (e.g., "please lower your voice" or "please sit in your chair").
2. Ask the student to meet with you outside of class to discuss the concerns you both may have. It is recommended that an observer be present when this meeting occurs.
3. Acknowledge the emotions of the student ("I understand you are upset"). Do not engage the student in a debate.
4. Try to reach an agreement that is mutually satisfying; that is, you still have control of the academic setting and the student is not disgraced in front of his/her peers.
5. If the student refuses to comply, indicate that you will enlist the aid of others to stop the behavior and that the behavior is subject to disciplinary proceedings of the university.
6. If the student continues to refuse to comply, leave the academic setting to call for assistance or ask someone else in the vicinity to enlist the help of others. Be specific regarding whom you want called/contacted.
7. If a student is violent or threatening, remove yourself and instruct others to remove themselves from the situation and summon campus police as quickly as possible.

*If a disruptive student is armed, a person in the room should contact 911 immediately.* If there is no possibility of escape or hiding in a locked room, negotiating with the armed student may be possible. Attempts at over powering the student should be a last resort.

More about the university's guidelines for the roles and responsibilities of students and instructors in the classroom can be found at these websites:

- [Indiana University’s Code of Student Rights, Responsibilities, and Conduct](https://www.indiana.edu/~confree/StudentCode/).
• The Dean of Students website includes a list of services for students.

Ethics

Numerous aspects of teaching potentially involve ethical dilemmas of one sort or another. Indiana University has adopted a Code of Student Rights, Responsibilities, and Conduct, which presents the official definitions and policies on most of these issues. Instructors should consult with their Chair, Dean, Director of Undergraduate or Graduate Studies, or Associate Instructor coordinator about school- or department-specific policies and procedures.

Academic Integrity

Academic integrity requires both students and teachers alike to conduct themselves in a straightforward and honorable manner. Indiana University, like all academic institutions, exists for the advancement of knowledge, the pursuit of truth, the development of students, and the promotion of the general well being of society. We hold free inquiry, expression, and exchange of ideas as the foundations of academic pursuit, which consists of study, instruction, evaluation, or research.

Academic integrity is a joint endeavor. Instructors should be prepared for all student-teacher encounters, meet classes as scheduled, evaluate students’ work fairly and impartially, and be prompt for prearranged conferences and regularly scheduled office hours. Inappropriate language, off-color remarks, or jokes in class or conferences, as well as frequent deviations from the course topic have no proper place in the academy. In turn, students should fulfill in a reasonable way the requirements and expectations of the course as stated by the instructor.

Academic Misconduct

This and the following sections adapted with permission from the IU Code of Student Rights, Responsibilities, and Conduct

The Indiana University Code of Student Rights, Responsibilities, and Conduct defines academic misconduct “any activity that tends to undermine the academic integrity of the institution. . . . Academic misconduct may involve human, hard-copy, or electronic resources. . . . Academic misconduct includes, but is not limited to . . . cheating, fabrication, plagiarism, interference, violation of course rules, and facilitating academic misconduct.”

Within this shared enterprise, instructors have another responsibility: that of making certain students can function in an atmosphere free of academic dishonesty. Students need to know that if they work honestly, they will not suffer because of those who do not. Challenging a student you think may have cheated or plagiarized is not pleasant. If you feel uncomfortable in this area of responsibility, a thoughtful discussion of the topic can be found on pages 95-99 in Svinicki and McKeachie’s (2010) Teaching Tips. University policy states that the faculty member may assign an academic penalty
for academic misconduct, and that the faculty member must report all cases of academic misconduct to university officials. (*Procedures for Bloomington Campus*).

AIs: *If you have ample reason to suspect a student of misconduct, share the evidence with your supervising instructor, department head, or director before acting.*

Be certain of the facts before questioning the student(s), since academic misconduct can lead to serious sanctions. Even the suggestion of responsibility for academic misconduct is upsetting to students, particularly if they are innocent. According to the seriousness of the offense and any prior disciplinary history, the Dean of Students in consultation with the student’s academic dean may add to any sanctions that you may have imposed. Dean of Students sanctions may range from disciplinary probation to expulsion from the university.

**Reporting Misconduct**

Because a considerable number of misconduct reports concern students with one or more existing infractions, instructors are strongly encouraged to report all instances of misconduct in their courses. The specific procedures for reporting academic misconduct are found in Part III of the *Procedures for Implementation of the Code*, including specific procedures for the Bloomington campus.

Instructors may now submit academic misconduct forms online at [http://dsa.indiana.edu/cjp/formsdocs.html](http://dsa.indiana.edu/cjp/formsdocs.html).

Please direct questions or concerns about IU policy and procedure concerning academic misconduct to Student Ethics and Anti-Harassment Programs at [ethics@indiana.edu](mailto:ethics@indiana.edu) or 855-5419.

**Forms of Misconduct**

In addition to what is covered in this document, consult Part II of the *Code, “Student Responsibilities,”* for further details about forms of misconduct.

**Cheating and Facilitating Academic Misconduct**

According to the IU *Code of Student Rights, Responsibilities, and Conduct*, cheating is an “attempt to use or provide unauthorized assistance, materials, information, or study aids in any form and in any academic exercise or environment.” Egregious examples of cheating include having a substitute take a test, buying a term paper, or altering one’s grade. It is also an offense to knowingly help another student to cheat. While collaborative learning is often encouraged, working with others on projects explicitly assigned as individual is a form of cheating. It is therefore important to clarify for students—in writing—how you want students to collaborate, and what the limits of collaboration are.

**Preventing Cheating**
Preventing the possibility of cheating is always better than coping with the consequences. The Center for Innovative Teaching and Learning has a useful resource, “Academic Dishonesty Prevention and Detection Strategies,” that contains some ideas on how to reduce cheating in your classes. The CITL Writing Program has suggestions for designing writing assignments that discourage plagiarism.

Fabrication

While often more difficult to detect than plagiarism, fabrication is an equally serious act of misconduct. Students commit fabrication when they “falsify or invent any information or data in an academic exercise.” “Cooking the data” is not an acceptable practice, nor is inventing sources for a research project.

Plagiarism

Even after several semesters at IU, many students will not fully understand what plagiarism is. To plagiarize is to present “ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment”; i.e., to steal or pass off, in whole or in part, the work of another person as one’s own. Plagiarism should be defined for the students in the syllabus. It is also a good idea to provide some examples of plagiarized statements, and some models for citing sources properly. You can demonstrate the appropriate use of sources in lecture by showing and going over a sample in which the writer gives careful credit for ideas, making a point of calling students’ attention to how that writer has handled her sources.

Discouraging plagiarism

The Writing Tutorial Services (WTS) pamphlet, “Plagiarism: What It is and How to Avoid It,” provides material to use and talk about in class.

The CITL Writing Program also has suggestions for designing writing assignments that discourage plagiarism.

Interference

Students must not only perform their own work ethically, they “must not steal, change, destroy, or impede another student’s work.” Deleting others’ work or files in a collaborative space, ‘misplacing’ other students’ resources, or defacing materials and rendering them unusable constitute interference. While ripping pages from journals in our libraries may not necessarily be aimed at impeding specific students, this kind of action has the same result as more intentionally focused interference and should be discouraged.

Contacting the Office of Student Ethics and Anti-Harassment Programs

Anyone who wishes clarification regarding the Code of Student Rights, Responsibilities, and Conduct or who wishes to file a complaint against a student in regard to either personal or academic misconduct
may do so by contacting the Office of Student Ethics and Anti-Harassment Programs, 705 E. Seventh Street, 855-5419.

References

- IU's Code of Student Rights, Responsibilities, and Conduct
- Academic misconduct report form
- Academic misconduct information for faculty and students from The College
- What is Plagiarism at IU? A short concept lesson by Ted Frick, IU School of Education
- How to Recognize Plagiarism Lessons, practice tutorials, and test for students, designed by Ted Frick, IU School of Education.